

Surface Use Plan

COG Operating, LLC

High Lonesome 24 Federal #2

SHL 1980' FSL & 330' FWL, UL L BHL 1980' FSL & 330' FEL, UL I

Section 24, T-16-S, R-29-E

Eddy County, New Mexico

30-015-39228

# Surface Use & Operating Plan

## High Lonesome 24 Federal #2

- Surface Tenant: Bogel Farms, Lewis Derrick
- New Road: approx. 1349'
- Flow Line: approx. 100'
- Facilities: High Lonesome 24 Federal Tank battery (to be built onsite)

### Well Site Information

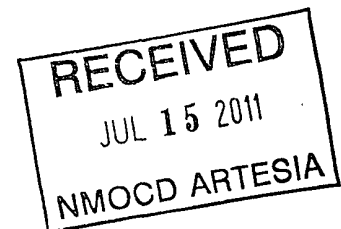
V Door: North

Topsoil: West

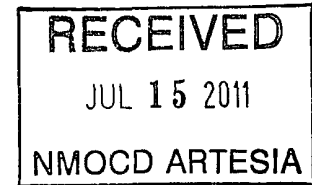
Interim Reclamation: South & West

### Notes

-N/A



**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 Basin Surveys in 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.
- C. Directions to Location From the junction US Highway 82 and Kewanee, Go North on Kewanee turning into a lease road for 5.6 miles to well pad and proposed lease road. See Vicinity Map, Exhibit #3.
- 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 1349' 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. No culverts, cattle guard, gates, low water crossings or fence cuts are 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 caliche pit.
- F.

**3. Location of Existing Well:**

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

As shown on this plat there are numerous wells producing from the Wolfcamp formation.

**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:
  - 1) Production will be sent to the High Lonesome 24 Federal Tank Battery located at the High Lonesome 24 Federal #2 In Sec 24, T16S, R29E, Unit L. The facility location is shown in Exhibit #5.
  - 2) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.
  - 3) 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.
  - 4) Proposed flow lines, will follow an archaeologically approved route to the High Lonesome 24 Federal Tank Battery located at the High Lonesome 24 Federal #2 In Sec 24, T16S, R29E, Unit L. The facility location is shown in Exhibit #5. The flowline will be SDR 7 3" poly line laid on the surface and will be approximately' in length. Tank Battery will be built onsite.
  - 5) 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.
  - 6) If the well is productive, rehabilitation plans will include the following:
    - a) 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 along side 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 or 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. 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 Basin Surveys, is shown in Exhibit #4. Dimensions of the pad and pits are shown on Exhibit #6. V door direction is North. 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 recontoured 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 after work is complete.

- 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 revegetated 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 for this site is Bogle Farms, Attn: Lewis Derrick, P.O. Box 441, Artesia, NM 88210.
- 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.**

*Surface Use Plan*  
*COG Operating, LLC*  
*High Lonesome 24 Federal #2*  
*SHL 1980' FSL & 330' FWL, UL L    BHL 1980' FSL & 330' FEL, UL I*  
*Section 24, T-16-S, R-29-E*  
*Eddy County, New Mexico*

**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,	Erick Nelson.
Drilling Superintendent	Division Operations Manager
COG Operating LLC	COG Operating LLC
550 W. Texas, Suite 1300	550 W. Texas, Suite 1300
Midland, TX 79701	Midland, TX 79701
Phone (432) 683-7443 (office)	Phone (505) 746-2210 (office)
(432) 631-9762 (cell)	(432) 238-7591 (cell)

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Eddy County, New Mexico

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 18th day of February, 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

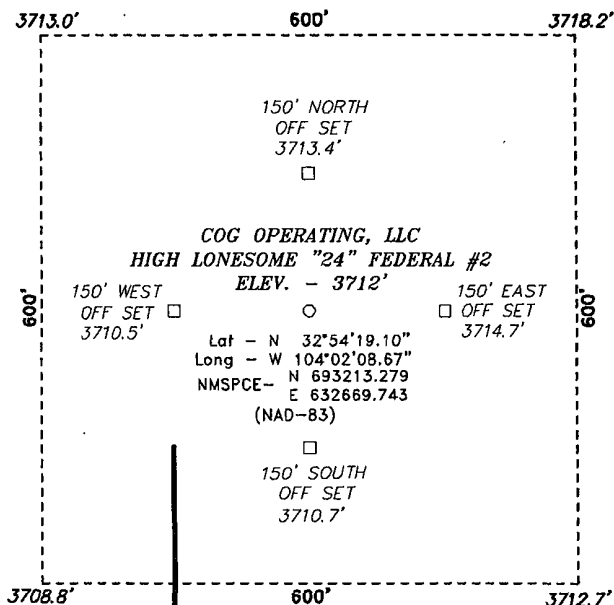
E-mail: cbird@conchoresources.com

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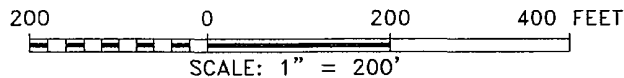
**Exhibits:**

- |                    |   |
|--------------------|---|
| <b>Exhibit #1</b>  | <b>Wellsite and Elevation Plat</b>                            |
|                    | <b>Form C-102 Well location and acreage dedication plat</b>   |
| <b>Exhibit #2</b>  | <b>Topographic Map (Basin Surveys)</b>                        |
| <b>Exhibit #3</b>  | <b>Vicinity Map and area roads</b>                            |
| <b>Exhibit #4</b>  | <b>Elevation Plat (Basin Surveys)</b>                         |
| <b>Exhibit #5</b>  | <b>Topographic extract showing wells, roads and flowlines</b> |
| <b>Exhibit #6</b>  | <b>Pad Layout and orientation</b>                             |
| <b>Exhibit #7</b>  | <b>H2S Signage</b>  |
| <b>Exhibit #8</b>  | <b>H2S Equipment location</b>                                 |
| <b>Exhibit #9</b>  | <b>BOP and Choke diagrams</b>                                 |
| <b>Exhibit #10</b> | <b>Form C-144 NMOCD pit permit application</b>                |

SECTION 24, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



PROPOSED LEASE ROAD 993.4'



Directions to Location:

FROM THE JUNCTION OF HWY 82 AND KEWANEE, GO NORTH ON KEWANEE TURNING INTO A LEASE ROAD FOR 5.6 MILES TO WELL PAD AND PROPOSED LEASE ROAD.

**COG OPERATING, LLC**

REF: HIGH LONESOME "24" FEDERAL #2 / WELL PAD TOPO

THE HIGH LONESOME "24" FEDERAL #2 LOCATED 1980'

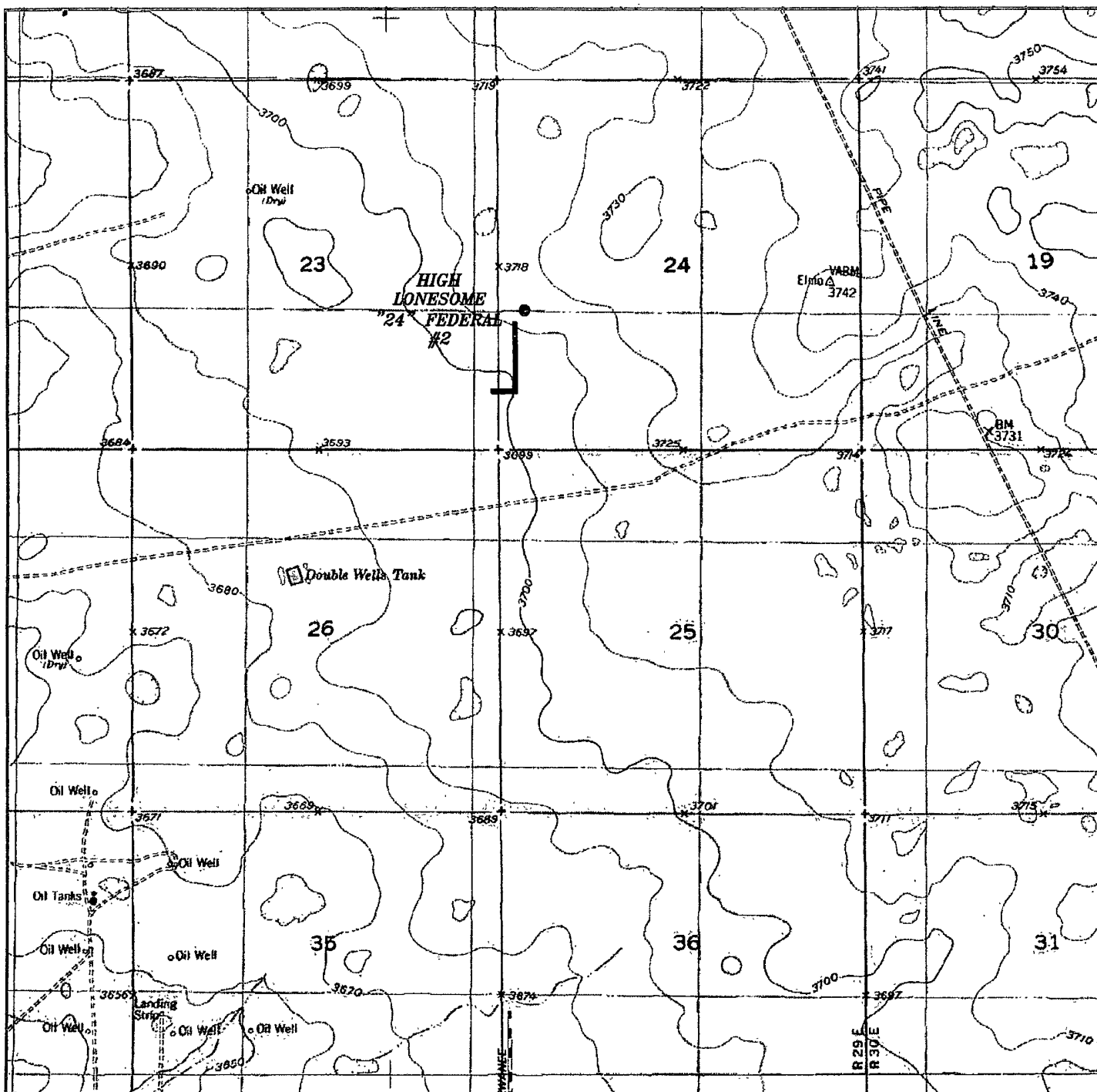
FROM THE SOUTH LINE AND 330' FROM THE WEST LINE OF,  
SECTION 24, TOWNSHIP 16 SOUTH, RANGE 29 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 22426 Drawn By: J. SMALL

Date: 03-30-2010 Disk: JMS 22426

Survey Date: 03-29-2010 Sheet 1 of 1 Sheets



**HIGH LONESOME "24" FEDERAL #2**  
 Located 1980' FSL and 330' FWL  
 Section 24, Township 16 South, Range 29 East,  
 N.M.P.M., Eddy County, New Mexico.

**basin**  
**surveys**

focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

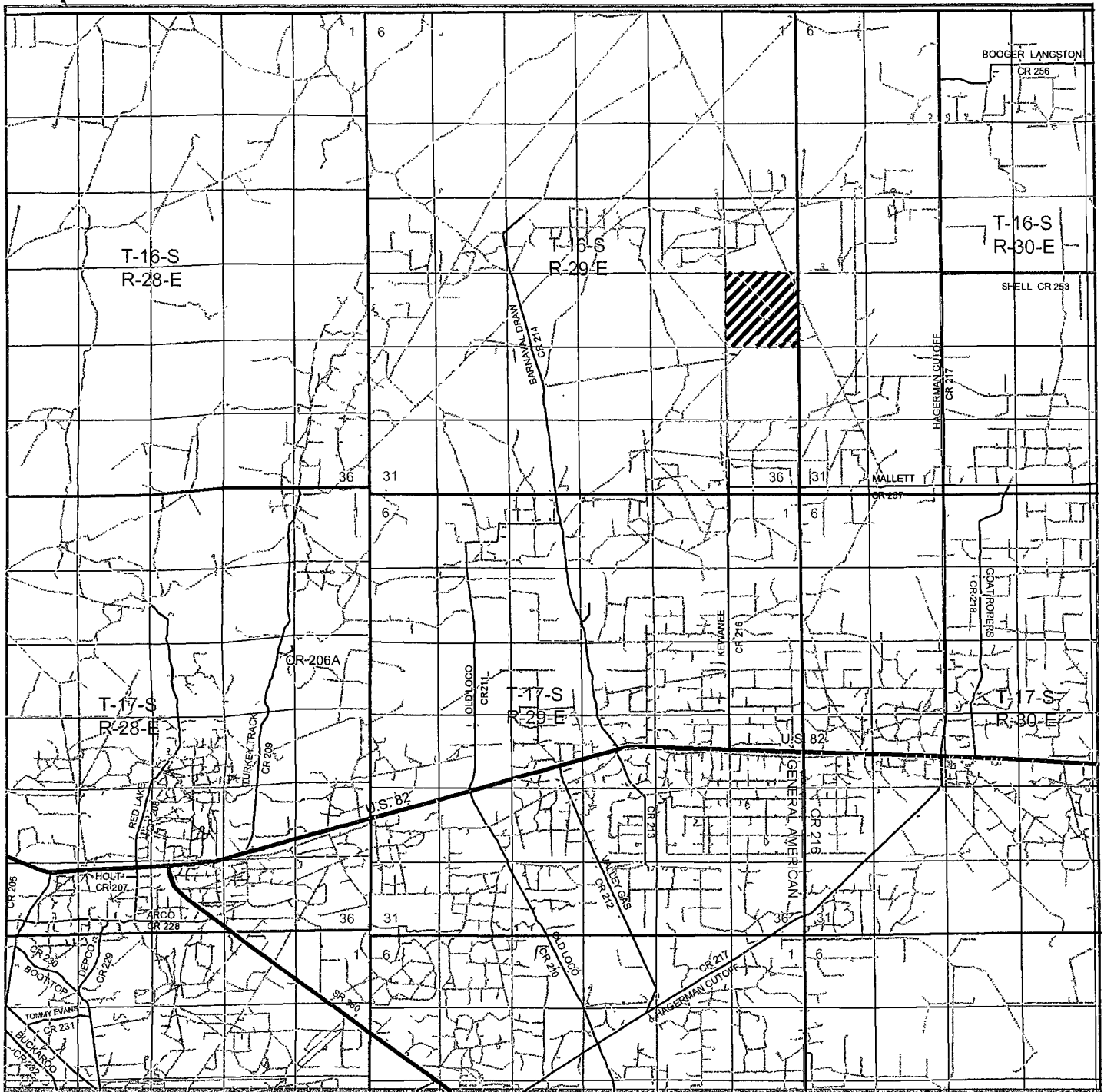
W.O. Number: JMS 22426

Survey Date: 03-29-2010

Scale: 1" = 2000'

Date: 03-30-2010

**COG**  
**OPERATING,**  
**LLC**



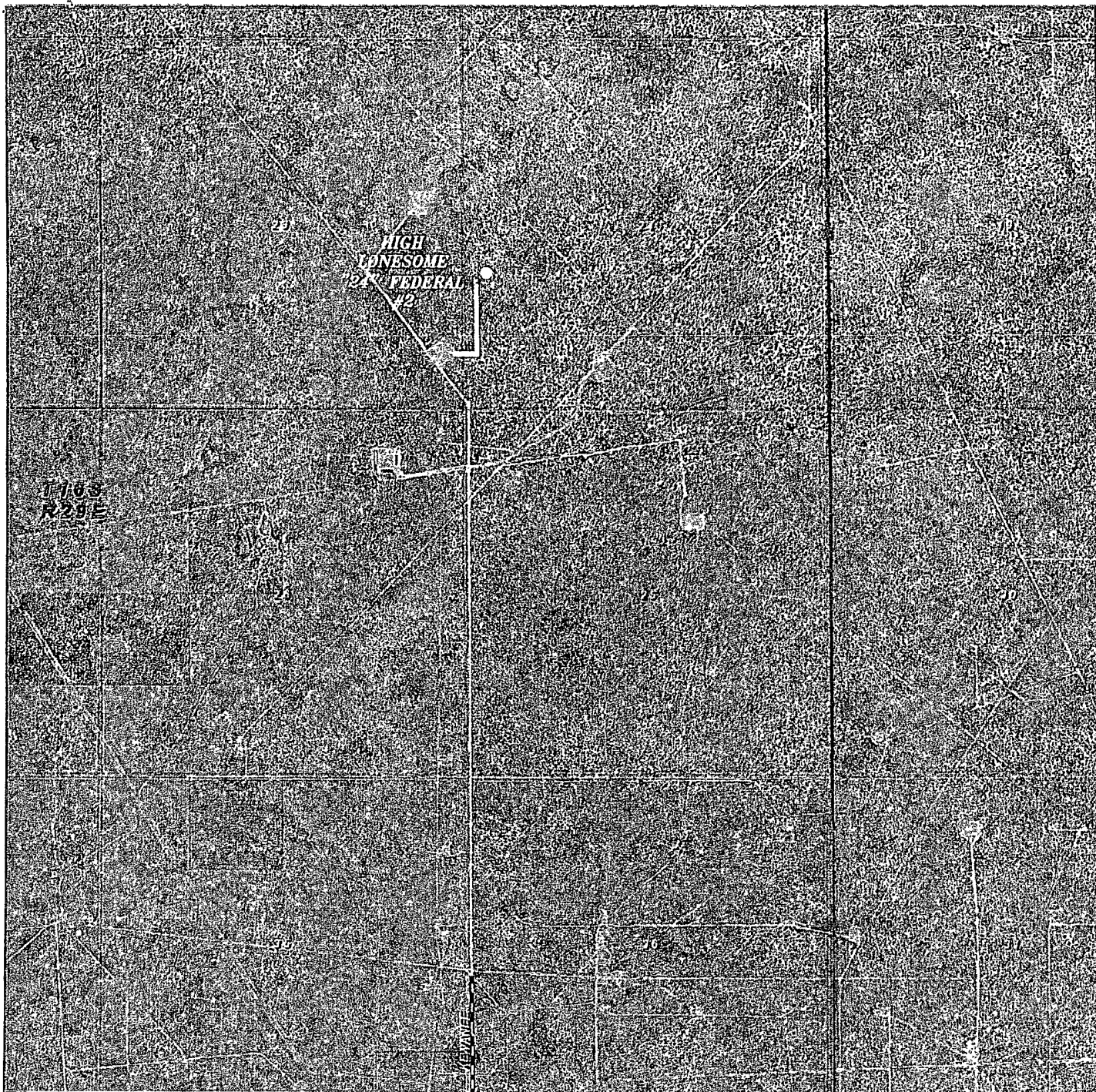
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 basin-surveys.com

W.O. Number: JMS 22426  
 Survey Date: 03-29-2010  
 Scale: 1" = 2 Miles  
 Date: 03-30-2010

**COG**  
**OPERATING,**  
**LLC**



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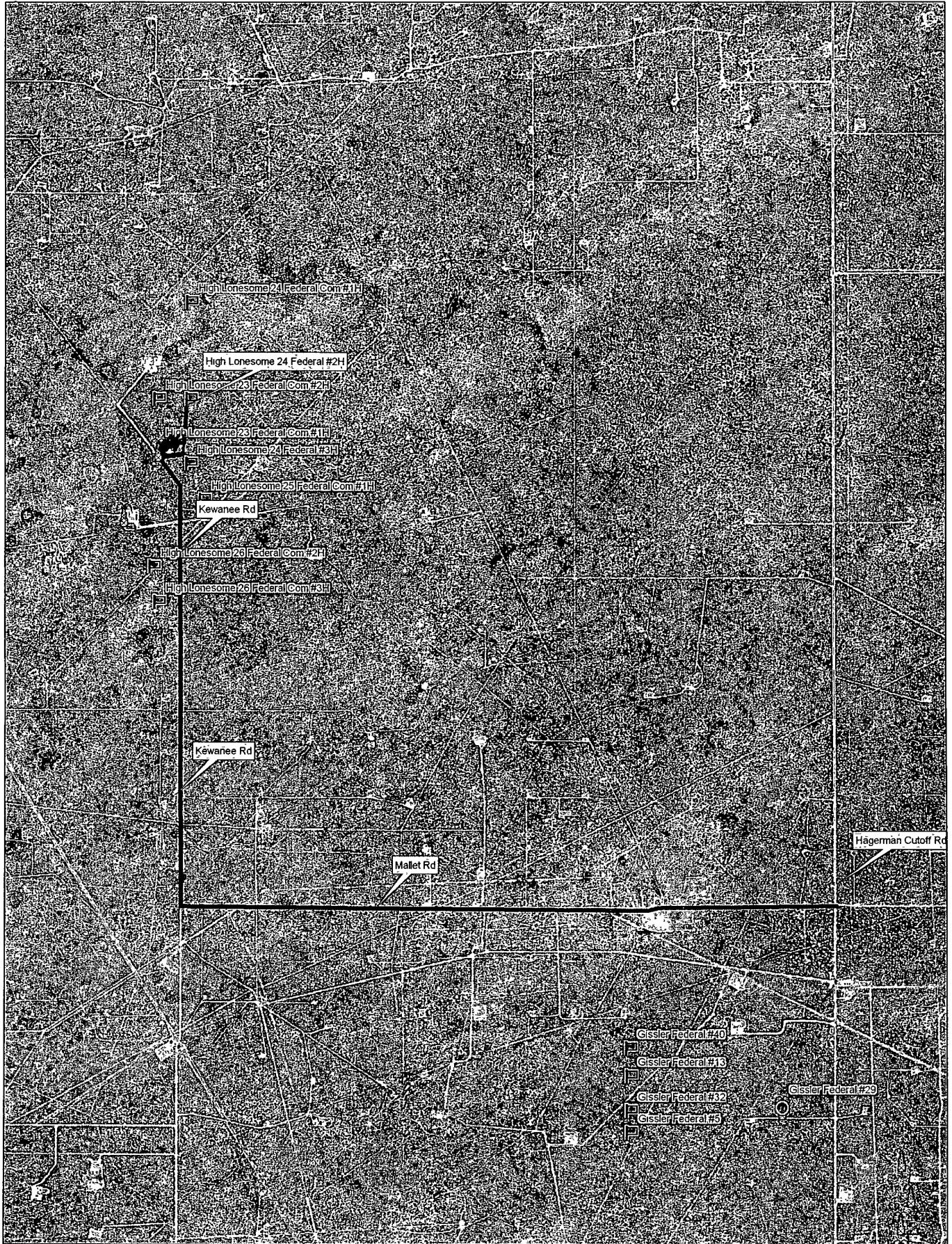
W.O. Number: JMS 22426

Scale: 1" = 2000'

YELLOW TINT - USA LAND  
BLUE TINT - STATE LAND  
NATURAL COLOR - FEE LAND



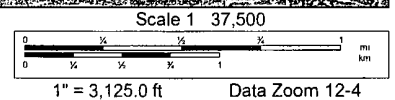
COG  
OPERATING,  
LLC



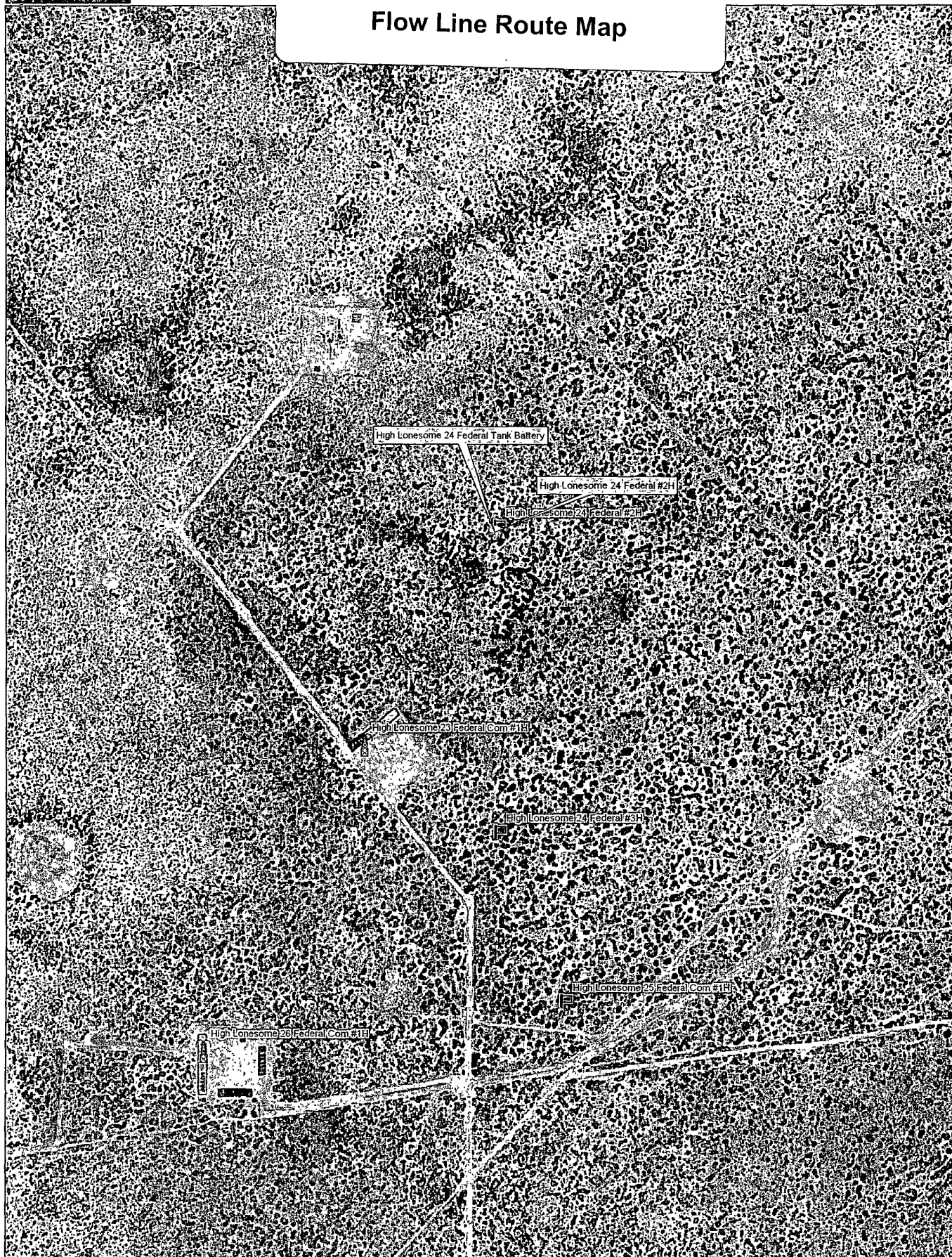
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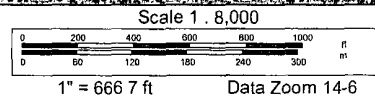
# Flow Line Route Map



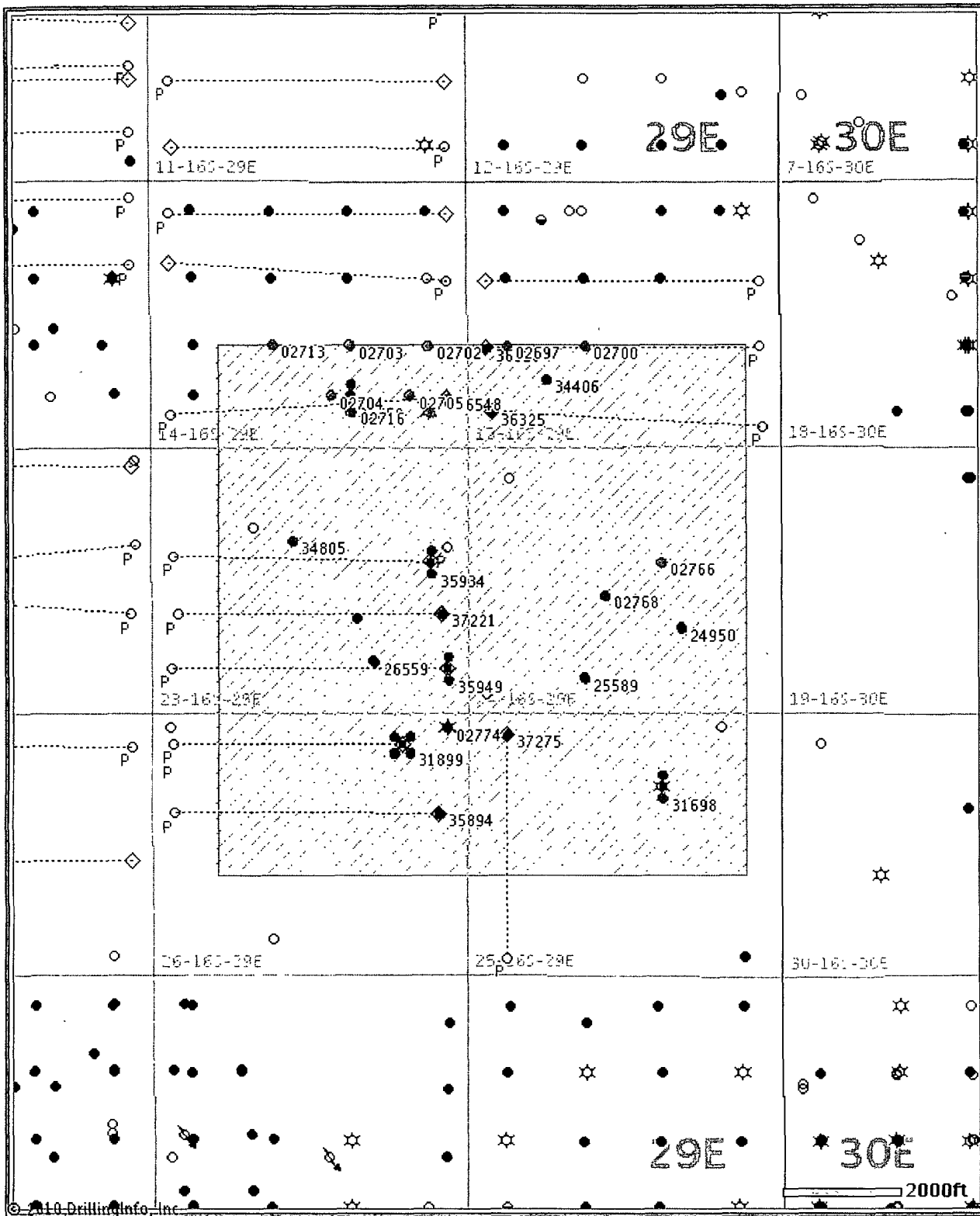
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## Offset Wells to High Lonesome 24 Federal #2



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## Offset Wells to High Lonesome 24 Federal #2

API#	Operator	County	Legal	Lease	Well#	Date Issued	Permitted Depth	Permit TVD	Images	Doc	Total Depth	Well Type	Well Status	Permit#
30-015-35934	CIMAREX ENERGY CO. OF COLORADO	EDDY	S 23, T 16S, R:29E	HIGH LONESOME "23" FEDERAL	1	8/19/2010	11,526	7,225	Yes	link	11,640	PO	Active Permit	TEMP1569184030
30-015-37275	COG OPERATING LLC	EDDY	S 25, T 16S, R 29E	HIGH LONESOME "25" FEDERAL COM	1H	9/8/2009	11,634	7,320	Yes	link	11,634	PO	Active Permit	TEMP343472311
30-015-37221	COG OPERATING LLC	EDDY	S.23, T:16S, R 29E	HIGH LONESOME 23 FED	2H	8/12/2009	11,627	7,330	Yes	link	11,627	PO	Active Permit	TEMP1158663429
30-015-36920	CIMAREX ENERGY CO OF COLORADO	EDDY	S:13, T:16S, R:29E	BLASTING CAP "13" FEDERAL COM	2	1/29/2009	11,788	7,300	Yes	link	11,788	PO	Active Permit	TEMP1132883939
30-015-36548	CIMAREX ENERGY CO. OF COLORADO	EDDY	S.14, T:16S, R:29E	DYNAMITE 14 FEDERAL COM	2	8/2/2008	11,814	7,300	Yes	link	11,814	PO	Active Permit	TEMP1303930035
30-015-36325	CIMAREX ENERGY CO. OF COLORADO	EDDY	S.13, T 16S, R:29E	BLASTING CAP 13 FEDERAL	1	4/30/2008	11,711	7,300	Yes	link	11,711	PO	Active Permit	TEMP1092322021
30-015-35949	COG OPERATING LLC	EDDY	S:23, T 16S, R:29E	HIGH LONESOME "23" FED COM	1H	11/29/2007	11,950	7,330	Yes	link	11,400	O	Active Permit	TEMP530730554
30-015-35934	CIMAREX ENERGY CO. OF COLORADO	EDDY	S 23, T 16S, R:29E	HIGH LONESOME 23 FEDERAL	1	11/15/2007	11,640		Yes	link	11,640	PO	Active Permit	TEMP1771058846
30-015-35893	COG OPERATING LLC	EDDY	S:26, T 16S, R 29E	HIGH LONESOME "26" FED COM	1H	10/27/2007	7,283		Yes	link	7,283	PO	Active Permit	TEMP716743048
30-015-35894	COG OPERATING LLC	EDDY	S:26, T 16S, R 29E	HIGH LONESOME "26" FED COM	2H	10/27/2007	7,323		Yes	link	7,323	PO	Active Permit	TEMP1783854251
30-015-31899	COG OPERATING LLC	EDDY	S:26, T.16S, R 29E	HIGH LONESOME "26" FED COM	1H	10/27/2007	11,200	7,283	Yes	link	10,860	PG	Active	TEMP963547429
30-015-34805	POGO PRODUCING CO	EDDY	S 23, T.16S, R 29E	CIMARRON 23 FEDERAL	006Q	4/19/2006	5,300		No	link	5,300	PO	Active Permit	TMP0000000080030
30-015-34406	GRUY PETROLEUM MANAGEMENT CO or CIMAREX ENERGY CO OF COLORADO	EDDY	S 13, T 16S, R 29E	JACK FEDERAL COM	002	10/26/2005	11,000		No	link	11,000	PG	Active Permit	TEMP984167374

30-015-31659	LIMARK CORPORATION or NORTHSTAR OPERATING COMPANY	EDDY	S 14, T:16S, R:29E	DIVERSE FEDERAL	003	8/20/2002	3,200		No	link	3,200	O	Active	TEMP371855303
30-015-31659	LIMARK CORPORATION or NORTHSTAR OPERATING COMPANY	EDDY	S 14, T:16S, R:29E	DIVERSE FEDERAL	003	7/31/2002			No	link	3,200	O	Active	TEMP1550957081
30-015-31899	EOG RESOURCES INC	EDDY	S 26, T:16S, R:29E	HIGH LONESOME 26 FEDERAL COM	001	7/13/2001	11,000		Yes	link	10,860	PG	Active	TEMP2055855783
30-015-31698	SOUTHWESTERN ENERGY PRODUCTION COMPANY or CHEVRON USA, INC	EDDY	S:25, T:16S, R:29E	LONESOME DOVE 25 FEDERAL	001	4/5/2001			No	link	10,856	G	Flowing	TEMP1183406503
30-015-02774	EOG RESOURCES INC	EDDY	S:26, T:16S, R:29E	SIMMONS FEDERAL	003	3/1/1997			No	link	2,510	G	Temporarily Abandoned	TEMP55351971
30-015-25589	MCCLELLAN OIL CORPORATION	EDDY	S 24, T:16S, R:29E	GOLDEN BEAR FED	001	3/7/1986			No	link	10,000	O	Pumping	TEMP1170097061
30-015-24950	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S:24, T:16S, R:29E	PRE-ONGARD WELL	004	1/1/1970			No	link		PO	Active Permit	TEMP356226935
30-015-26559	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S:23, T:16S, R:29E	PRE-ONGARD WELL	006	1/1/1970			No	link		PO	Active Permit	TEMP890568180