

Empire Federal SWD 10 #5 BLM On-Site

Date of on-site: 1-21-2010

Attendees:

John Fast – BLM

Noel Olivas – COG

Don Quimby – Madron Surveying Inc.

On-site Determinations:

V-Door Southeast. 953' of new road from existing lease road to Southwest corner of pad.

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 Madron Surveying Inc., Carlsbad, 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 State Hwy 82 and CR 214 (Barnaval Draw Rd- Caliche), go North on CR 214 for 1.6 miles. Turn Right and go East 836'. Turn left and go North 0.8 miles to a road survey. Follow road survey 434' then Northeast 519' to the Southwest pad corner for this location. 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 953' 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, cattleguard, 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.

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 San Andres and Yeso formations.

4. Location of Existing and/or Proposed Facilities:

- A. COG Operating LLC will operate the SWD on location.
- B. Once the well is drilled, contemplated facilities will be as follows:
 - 1) Tank batteries will be set on the Empire Fed. SWD 10 #5 location. The facility location is shown in Exhibit #5.
 - 2) The tank battery and facilities including all flow lines and pipeline will be installed according to API specifications.
 - 3) Any additional caliche will be obtained from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.
 - 4) Proposed pipelines will follow an archaeologically approved route to the main Water Line tie in point that will be requested by a Right of Way Application.
 - 5) It will be necessary to run electric power after the well is drilled. Power will be provided by CVE, and they will submit a separate plan and ROW for service to the well location.

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 Madron Surveying Inc, is shown in Exhibit #4. Dimensions of the pad and pits are shown on Exhibit #6. V door direction is Southeast 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 not occur while SWD is in operation.
- 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 Bogel Farms, Lewis Derrick, P O Box 441, Artesia, NM.
- 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,	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)

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 31st day of March, 2010.

Signed



Printed Name: Mark Fairchild

Position: Sr. Operations Engineer

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

Telephone: (432) 686-3021

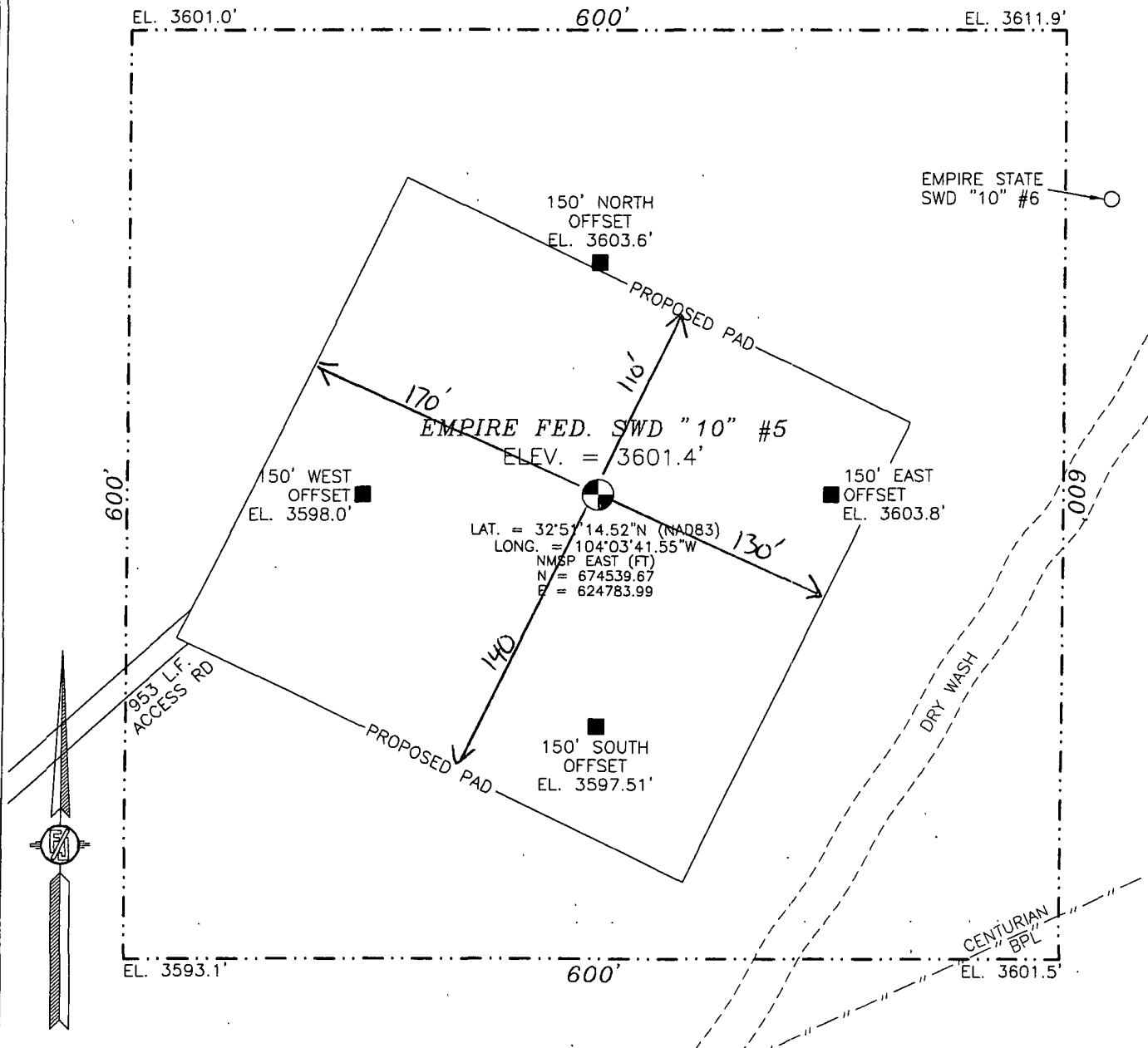
Field Representative (if not above signatory): Same

E-mail: mfairchild@conchoresources.com

Exhibits:

- | | |
|--------------------|--|
| Exhibit #1 | Wellsite and Elevation Plat |
| | Form C-102 Well location and acreage dedication plat |
| Exhibit #2 | Topographic Map (Madron) |
| Exhibit #3 | Vicinity Map and area roads |
| Exhibit #4 | Elevation Plat (Madron) |
| 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 |

SECTION 10, TOWNSHIP 17 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



0 10 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM STATE HWY 82 AND CR 214 (BARNAVILLE DRAW RD - CALICHE)
GO NORTH ON CR 214 1.6 MILES, TURN RIGHT AND GO EAST 836',
TURN LEFT AND GO NORTH 0.8 MILES TO A ROAD SURVEY, FOLLOW
FLAGS EAST 434' THEN NORTHEAST 519' TO THE SOUTHWEST PAD
CORNER FOR THIS LOCATION.

COG OPERATING, LLC
EMPIRE FED. SWD "10" #5
LOCATED 850 FT. FROM THE NORTH LINE
AND 2310 FT. FROM THE EAST LINE OF
SECTION 10, TOWNSHIP 17 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

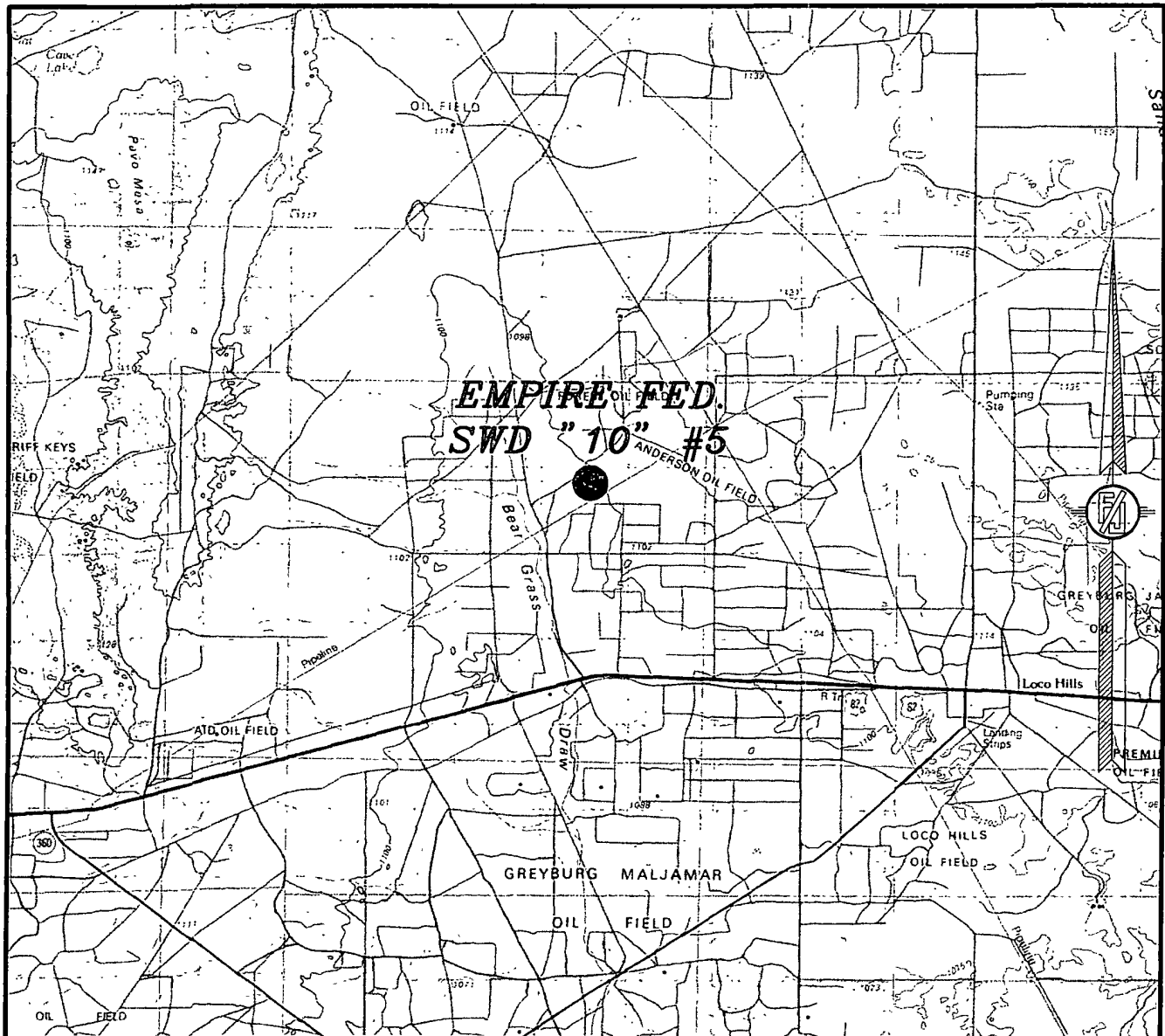
NOVEMBER 15, 2010

SURVEY NO. 297

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 887-5830 CARLSBAD, NEW MEXICO

TEN 4/27/11

SECTION 10, TOWNSHIP 17 SOUTH, RANGE 29 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

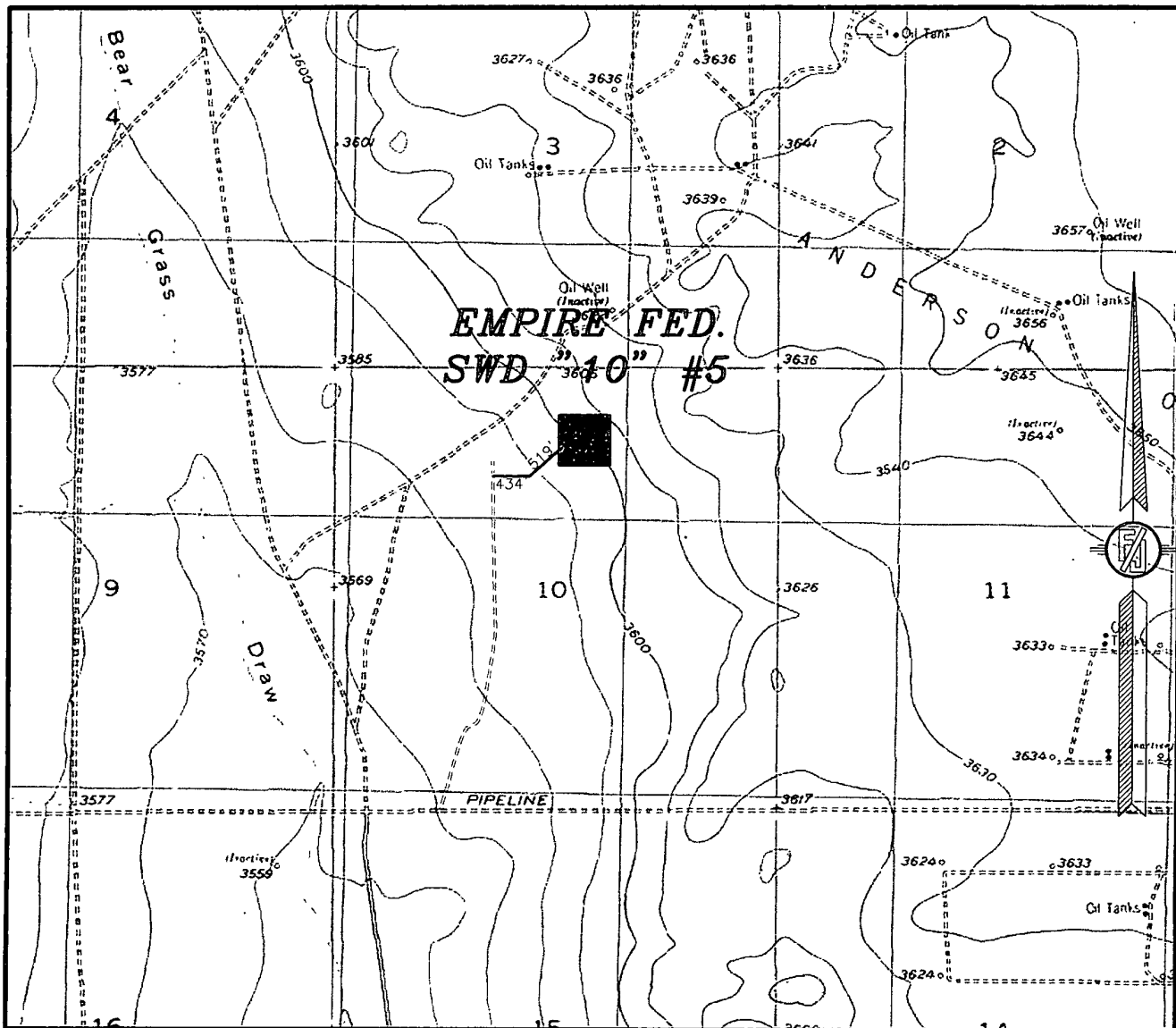
COG OPERATING, LLC
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 EDDY COUNTY, STATE OF NEW MEXICO

NOVEMBER 15, 2010

SURVEY NO. 297

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
 (575) 887-5830

LOCATION VERIFICATION MAP



NOT TO SCALE

COG OPERATING, LLC
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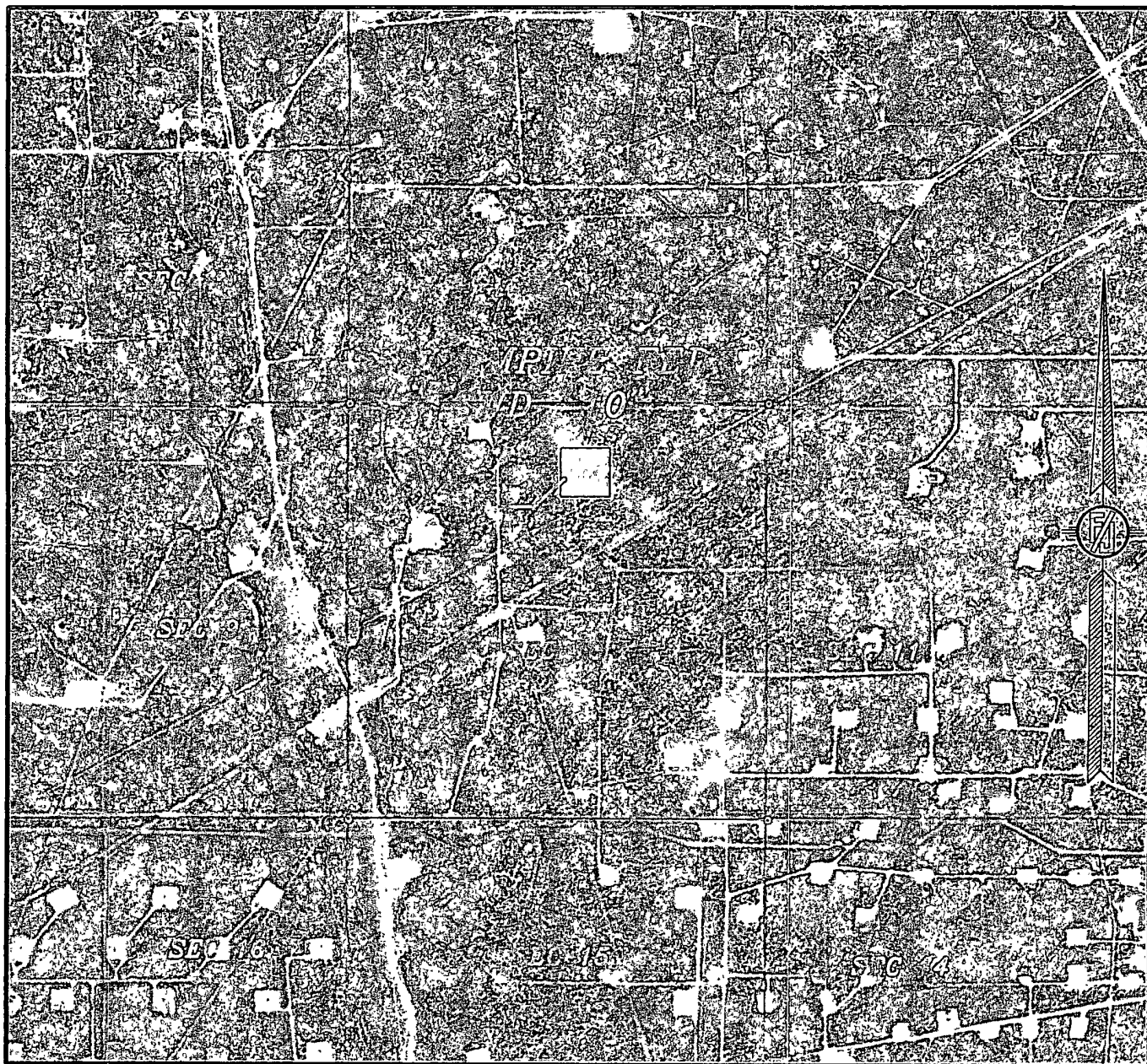
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SECTION 10, TOWNSHIP 17 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



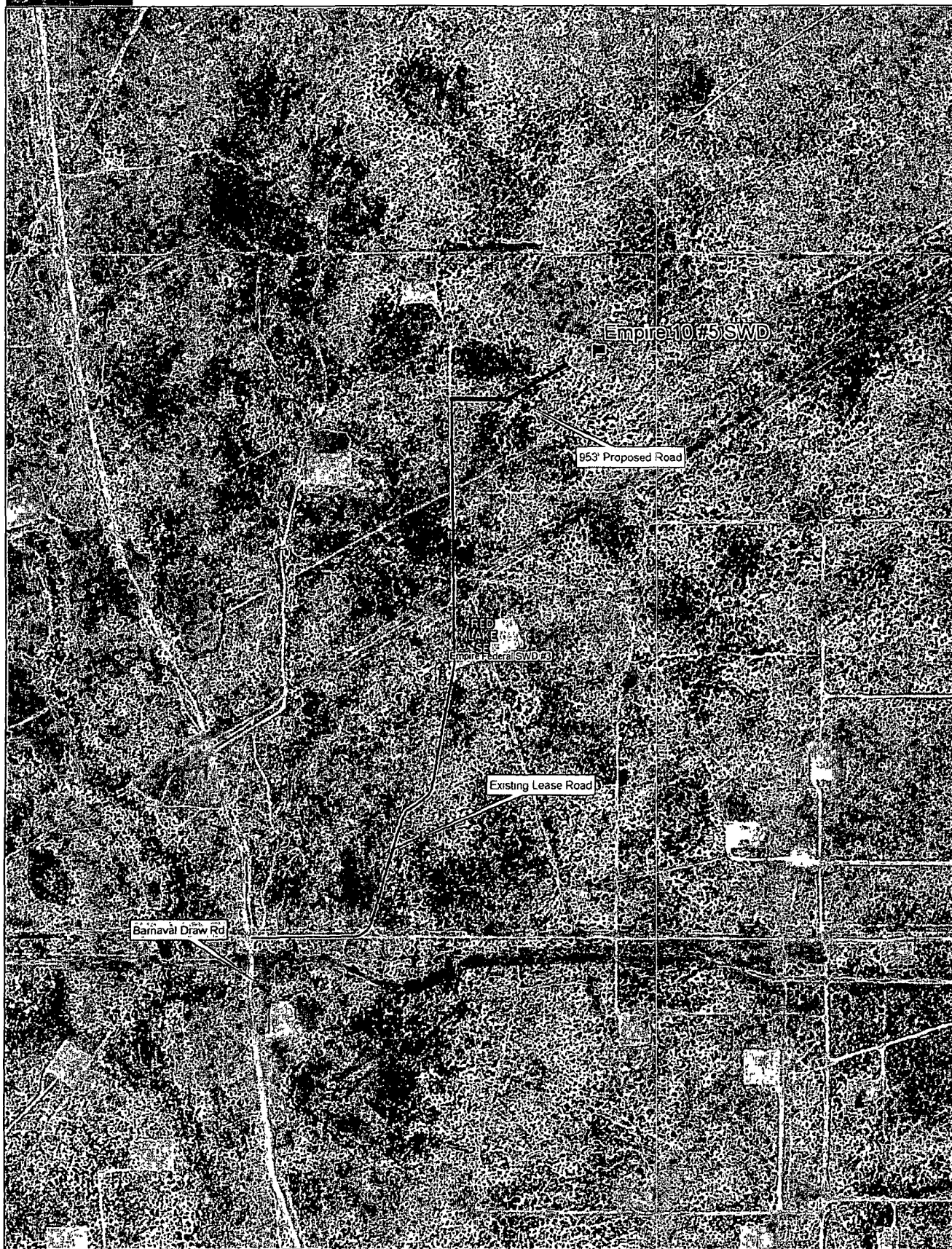
NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
USDA - AUG, 2009

COG OPERATING, LLC
EMPIRE FED. SWD "10" #5
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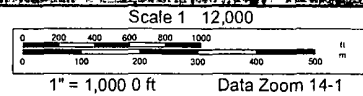
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
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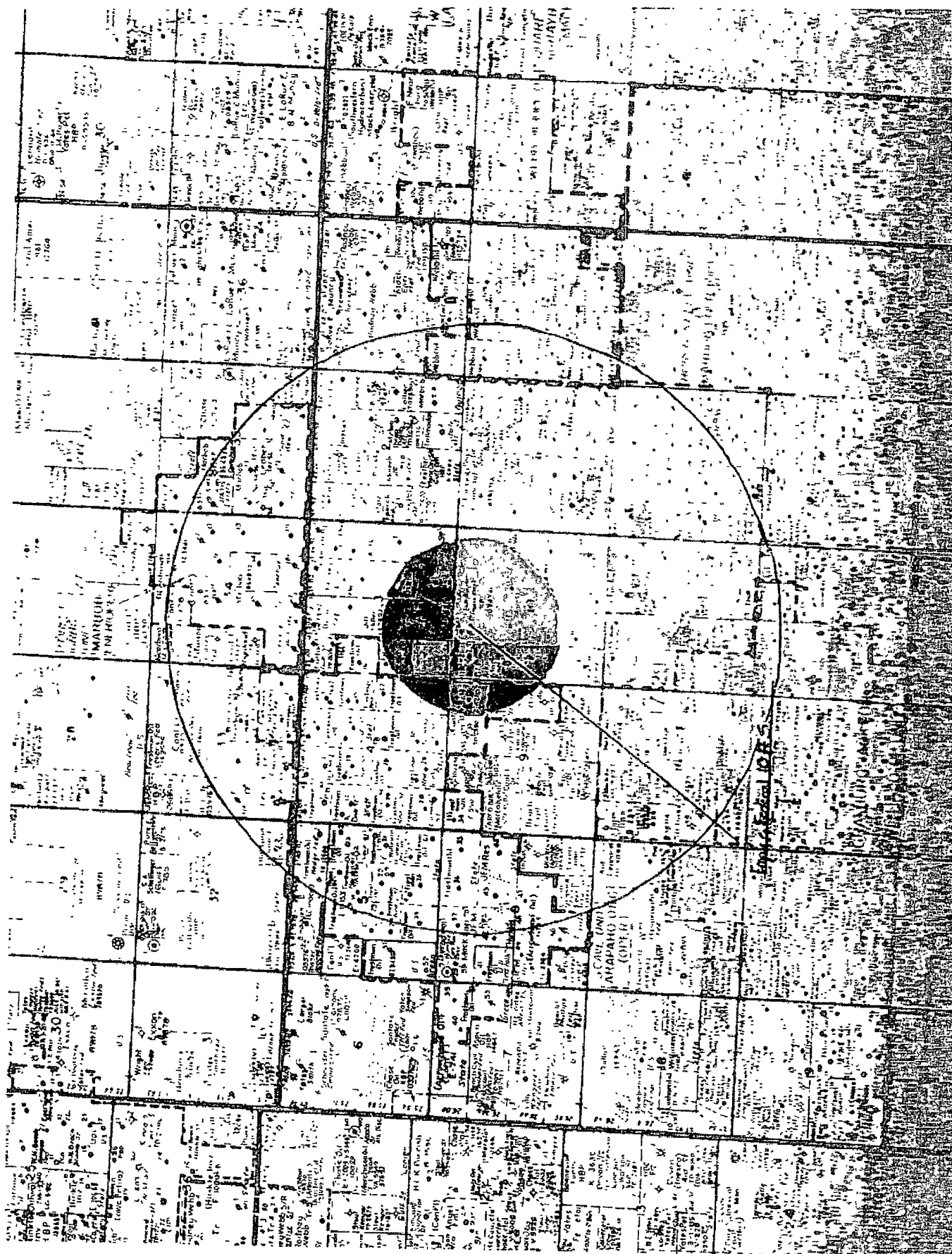
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- ☐ --Cockburn Barney ☐ -Continental Oil ☐ -JEM Resources ☐ -Bill L. Miller ☐ --John Dublin & Son/CO Fulton



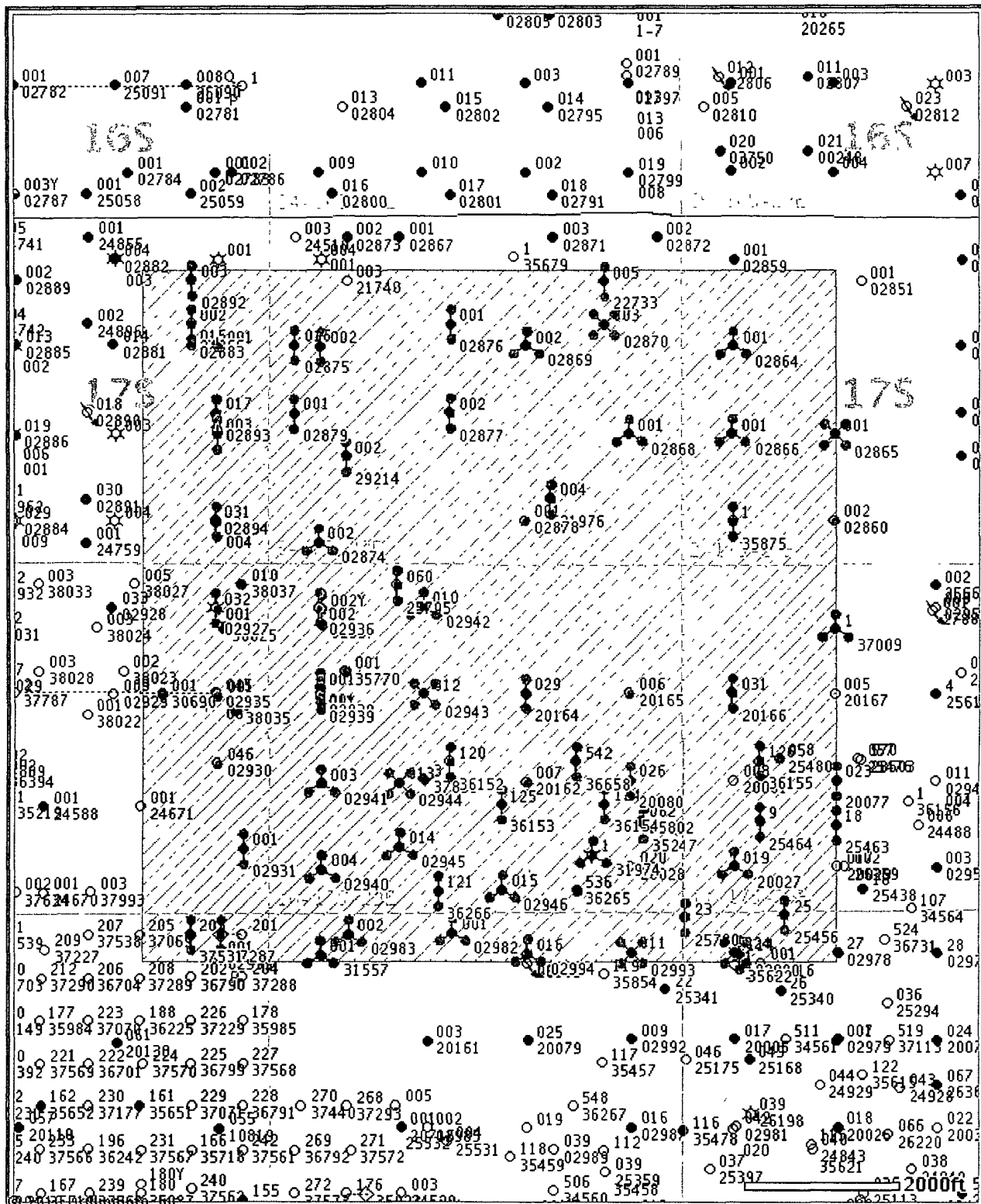
Offset wells to Empire Fed SWD "10" #5

API#	Operator	County	Legal	Lease	Well#	Date Issued	Permitted Depth	Permit TVD	Images	Doc	Total Depth	Well Type	Well Status	Permit#
30-015-38025	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	THREADTAIL 9 STATE	004	7/26/2010	6,000		Yes	link	6,000	PO	Active Permit	TEMP390033305
30-015-38035	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	EMERALD 9 STATE	005	7/26/2010	6,000		Yes	link	6,000	PO	Active Permit	TEMP1068556877
30-015-38037	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	EMERALD 9 STATE	010	7/26/2010	6,000		Yes	link	6,000	PO	Active Permit	TEMP752235273
30-015-37831	COG OPERATING LLC	EDDY	S 10, T 17S, R 29E	EMPIRE FEDERAL SWD	3	5/5/2010	9,200		Yes	link	9,200	U	Active Permit	TEMP35829904
30-015-37531	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	203	2/2/2010	5,550		Yes	link	5,575	O	Active Permit	TEMP570048247
30-015-37287	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	201	9/30/2009	5,550		Yes	link	5,504	O	Active Permit	TEMP207246675
30-015-37009	MEWBOURNE OIL COMPANY	EDDY	S 11, T 17S, R 29E	ORCA 11 FEDERAL COM	1	3/19/2009	10,950		Yes	link	10,975	G	Active Permit	TEMP562133154
30-015-36658	MARBOB ENERGY CORPORATION or MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	DODD FEDERAL UNIT	542	7/11/2008	5,000		Yes	link	5,000	PO	Active Permit	TEMP13843167
30-015-36266	MARBOB ENERGY CORPORATION or MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	DODD FEDERAL UNIT	537	4/1/2008	5,000		Yes	link	5,000	O	Active Permit	TEMP2030025557
30-015-36152	MARBOB ENERGY CORPORATION or MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	DODD FEDERAL UNIT	540	2/26/2008	5,000		Yes	link	4,480	O	Active Permit	TEMP1928062287
30-015-36153	MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	DODD FEDERAL UNIT	541	2/26/2008	5,000		Yes	link	5,000	O	Active Permit	TEMP121063859
30-015-36154	MARBOB ENERGY CORPORATION or MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	DODD FEDERAL UNIT	543	2/26/2008	5,000		Yes	link	5,000	O	Active Permit	TEMP896335047
30-015-36155	MARBOB ENERGY CORPORATION or MARBOB ENERGY CORP	EDDY	S 11, T 17S, R 29E	DODD FEDERAL UNIT	545	2/26/2008	5,000		Yes	link	5,000	O	Active Permit	TEMP636535816
30-015-36265	MARBOB ENERGY CORPORATION or MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	DODD FEDERAL UNIT	536	1/3/2008	5,000		Yes	link	5,000	PO	Active Permit	TEMP975264023
30-015-35875	MEWBOURNE OIL CO or MEWBOURNE OIL COMPANY	EDDY	S 2, T 17S, R 29E	TERRA 2 STATE COM	001	10/19/2007	10,900		Yes	link	10,970	G	Active Permit	TEMP13569703
	OXY USA WTP LIMITED			OXY SALAMANDER										

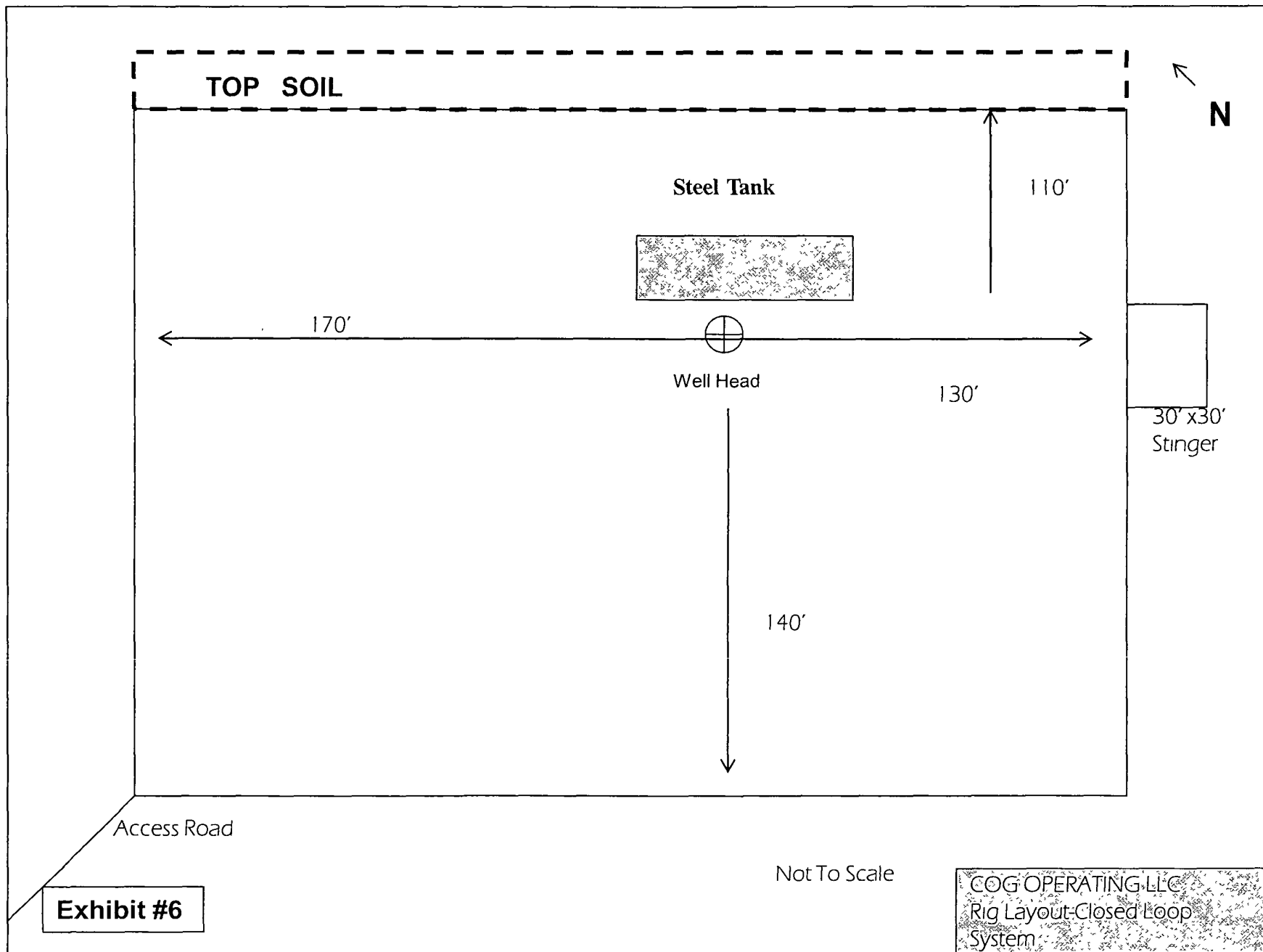
30-015-35770	PARTNERSHIP	EDDY	S 10, T 17S, R 29E	FEDERAL	1	8/23/2007	11,000		Yes	link	11,000	PG	Active Permit	TEMP694565218
30-015-35622	MARBOB ENERGY CORPORATION or MARBOB ENERGY CORP	EDDY	S 14, T 17S, R 29E	DODD FEDERAL UNIT	523	5/11/2007	5,000		Yes	link	5,000	O	Active Permit	TEMP241121080
30-015-35247	MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	DODD FEDERAL UNIT	520	11/21/2006	5,000		Yes	link	5,000	O	Active	TEMP462382425
30-015-02931	HANSON ENERGY	EDDY	S 9, T 17S, R 29E	SINCLAIR STATE	001	5/1/2003	0		No	link	2,560	O	Pumping	TEMP1970743159
30-015-02937	HANSON ENERGY	EDDY	S 10, T 17S, R 29E	FEATHERSTONE	002Y	5/1/2003	0		No	link	0	O	Pumping	TEMP1997290833
30-015-02938	HANSON ENERGY	EDDY	S 10, T 17S, R 29E	FEATHERSTONE	001Y	5/1/2003	0		No	link	0	O	Pumping	TEMP2134261442
30-015-02940	HANSON ENERGY	EDDY	S 10, T 17S, R 29E	FEATHERSTONE	004	5/1/2003	0		No	link	0	O	Pumping	TEMP1768365238
30-015-02941	HANSON ENERGY	EDDY	S 10, T 17S, R 29E	FEATHERSTONE	003	5/1/2003	0		No	link	0	O	Active	TEMP1893023882
30-015-31974	DOMINION OKLAHOMA TEXAS EXPL & PROD INC	EDDY	S 10, T 17S, R 29E	DURANGO 10 FEDERAL	001	8/28/2001			No	link	10,925	G	Flowing	TEMP1569032171
30-015-31557	MARBOB ENERGY CORP	EDDY	S 15, T 17S, R 29E	DURANGO 15 STATE COM	001	6/21/2001			No	link	10,900	U	Active	TEMP344954045
30-015-31557	DOMINION OKLAHOMA TEXAS EXPL & PROD INC or LOUIS DREYFUS NATURAL GAS CORPORATION	EDDY	S 15, T 17S, R 29E	DURANGO "15" STATE COM	1	1/18/2001	11,000		Yes	link	10,900	U	Active	TEMP671541126
30-015-30690	EOG RESOURCES INC	EDDY	S 9, T 17S, R 29E	CONOCO 9 STATE COM	001	7/1/1999			No	link	10,960	PG	Unknown	TEMP1741148152
30-015-02869	C O FULTON	EDDY	S 3, T 17S, R 29E	DUBLIN	002	12/4/1996	0		No	link	0	O	Active	TEMP1178265444
30-015-29214	BILL L MILLER	EDDY	S 3, T 17S, R 29E	BROWN STATE	002	10/9/1996			No	link	2,570	O	Active	TEMP1106481915
30-015-02865	C F M OIL CO or C F M OIL CO DBA LOUIS AND JUDY FULTON	EDDY	S 2, T 17S, R 29E	STATE B	001	1/1/1995	0		No	link	2 586	O	Active	TEMP1299846097
30-015-02875	MARKS AND GARNER PRODUCTION LTD CO	EDDY	S 3, T 17S, R 29E	CAVE POOL UNIT	016	12/1/1994	0		No	link	0	O	Temporarily Abandoned	TEMP817755725
30-015-02892	MARKS AND GARNER PRODUCTION LTD CO	EDDY	S 4, T 17S, R 29E	CAVE POOL UNIT	003	12/1/1994	0		No	link	0	O	Temporarily Abandoned	TEMP1574172063
30-015-02893	MARKS AND GARNER PRODUCTION LTD CO	EDDY	S 4, T 17S, R 29E	CAVE POOL UNIT	017	12/1/1994	0		No	link	0	O	Temporarily Abandoned	TEMP1375713079
30-015-02927	MARKS AND GARNER PRODUCTION LTD CO	EDDY	S 9, T 17S, R 29E	CAVE POOL UNIT	032	12/1/1994	0		No	link	0	O	Temporarily Abandoned	TEMP1391046910
	MARKS AND GARNER PRODUCTION			RED TWELVE										

30-015-24966	LTD CO	EDDY	S 4, T 17S, R 29E	STATE	002	12/1/1994			No	link	3,565	O	Shut-in	TEMP1833542368
30-015-25790	MARBOB ENERGY CORP	EDDY	S 14, T 17S, R 29E	M DODD B	061	12/1/1987			No	link	4,495	O	Pumping	TEMP497971381
30-015-25464	MARBOB ENERGY CORP	EDDY	S 11, T 17S, R 29E	M DODD B	056	2/1/1987			No	link	4,517	O	Pumping	TEMP372007179
30-015-25705	MARBOB ENERGY CORP	EDDY	S 10, T 17S, R 29E	M DODD B	060	2/1/1987			No	link	4,675	PO	Pumping	TEMP1112987588
30-015-25456	MARBOB ENERGY CORP	EDDY	S 14, T 17S, R 29E	M DODD B	054	12/1/1986			No	link	4,650	O	Pumping	TEMP1342343905
30-015-25463	MARBOB ENERGY CORP	EDDY	S 11, T 17S, R 29E	M DODD B	055	1/1/1986			No	link	4,512	O	Pumping	TEMP387781883
30-015-22733	C O FULTON	EDDY	S 3, T 17S, R 29E	DUBLIN STATE	005	3/1/1979	0		No	link	2,712	O	Pumping	TEMP2123739632
30-015-21976	C O FULTON	EDDY	S 3, T 17S, R 29E	DUBLIN STATE	004	11/1/1978	0		No	link	2,989	O	Pumping	TEMP771666052
30-015-20027	MARBOB ENERGY CORP	EDDY	S 11, T 17S, R 29E	M DODD B	019	1/1/1970			No	link	2,700	O	Pumping	TEMP831235377
30-015-25480	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S 11, T 17S, R 29E	PRE-ONGARD WELL	058	1/1/1970			No	link		PO	Active Permit	TEMP1279202722
30-015-25802	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S 10, T 17S, R 29E	PRE-ONGARD WELL	062	1/1/1970			No	link		PO	Active Permit	TEMP923084658

Offset wells to Empire Fed SWD "10" #5



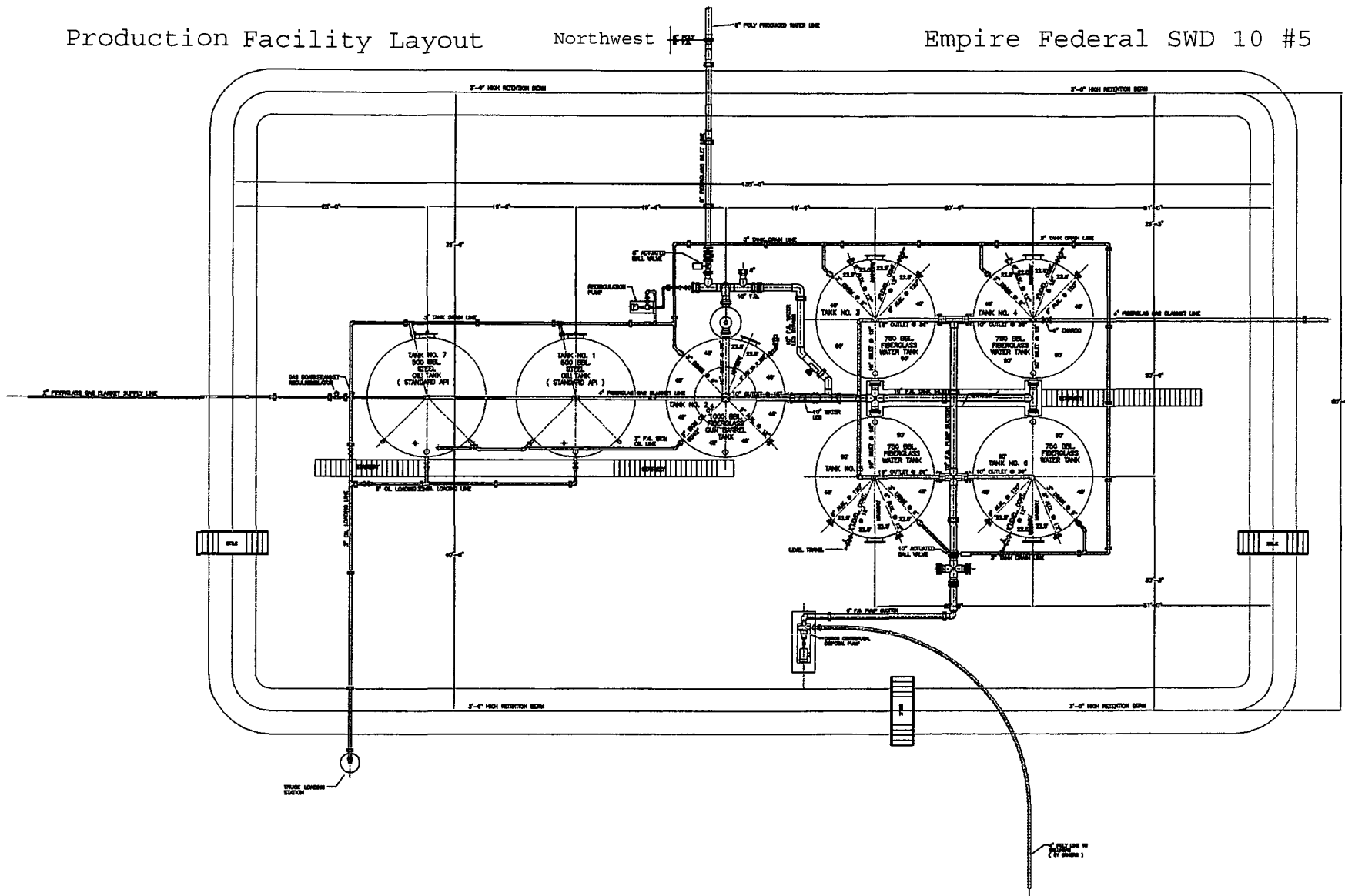
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Production Facility Layout

Northwest

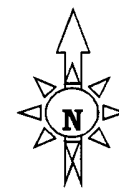
Empire Federal SWD 10 #5



Empire Federal SWD 10 #5

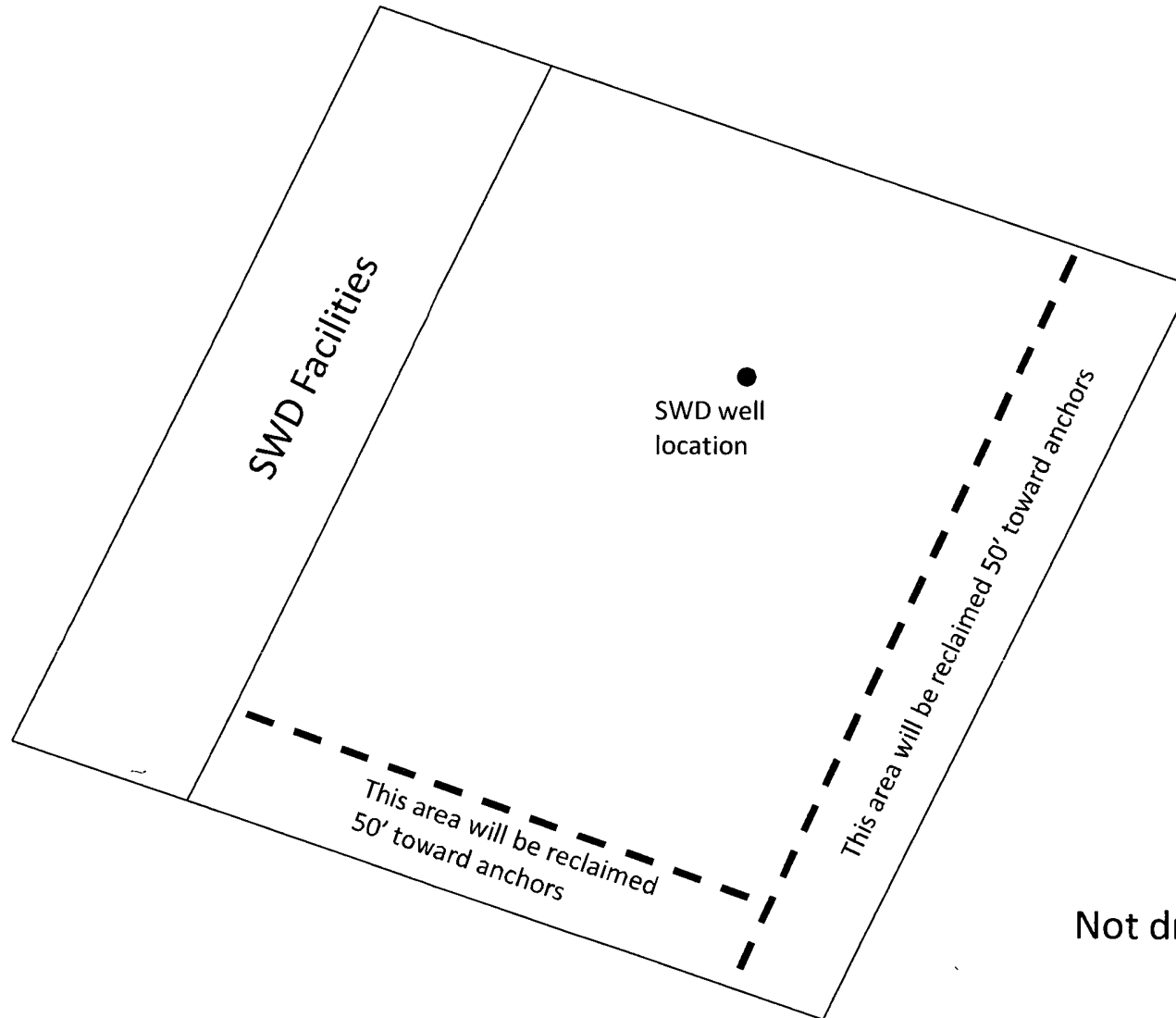
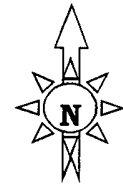
SWD Facilities

● SWD well



Not drawn to scale

Empire Federal SWD 10 #5 Reclamation



Not drawn to scale