Amended API

NM OIL CONSERVATION
ARTESIA DISTRICT
SECRETARY'S POTASH
JUL 22 2014
RECEIVED

14-613
OCD Artesia

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMNM 27279 — TES 7-29-14

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☑ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☑ Other SWD ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. Santo Nino 29 Federal SWD #1 <313534>

2. Name of Operator Mewbourne Oil Company <14744>

9. API Well No. 30-015-28698

3a. Address PO Box 5270, Hobbs, NM 88241

3b. Phone No. (include area code) 575-393-5905

10. Field and Pool, or Exploratory ~~Devonian~~ SWD; Devonian <96101>

4. Location of Well (Report location clearly and in accordance with any State requirements.*)

At surface 1932' FNL & 1923' FEL, Sec. 29 T18S R30E

At proposed prod. zone 1932' FNL & 1923' FEL, Sec. 29 T18S R30E

11. Sec., T. R. M. or Blk. and Survey or Area Sec. 29 T18S R30E

14. Distance in miles and direction from nearest town or post office* 25 miles NE of Carlsbad, NM

12. County or Parish Eddy

13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1923'

16. No. of acres in lease 1,751.53

17. Spacing Unit dedicated to this well 40

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Elliott #003

19. Proposed Depth 13,500'

20. BLM/BIA Bond No. on file NM-1693 nationwide, NMB-000919

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3453' GL

22. Approximate date work will start* 04/02/2014

23. Estimated duration 60 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Bradley Bishop — Name (Printed/Typed) Bradley Bishop — Date 7-28-14

Title

Approved by (Signature) /s/George MacDonell — Name (Printed/Typed) — Date JUL 18 2014

Title FIELD MANAGER — Office CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 22 2014
RECEIVED

Capitan Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
(575) 393-5905

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently 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 the company I represent, 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 28 day of Feb, 2014.

Name: NM Young

Signature: BRS for NM Young

Position Title: Hobbs District Manager

Address: PO Box 5270, Hobbs NM 88241

Telephone: 575-393-5905

E-mail: myoung@mewbourne.com

15/22

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-28698	96101	~~DEVONIAN~~ SWD; Devonian

Property Code	Property Name	Well Number
313534	SANTO NINO 29 FEDERAL SWD	#1

OGRID No.	Operator Name	Elevation
~~37020~~ 14744	MEWBOURNE OIL COMPANY	3453.2

Surface Location

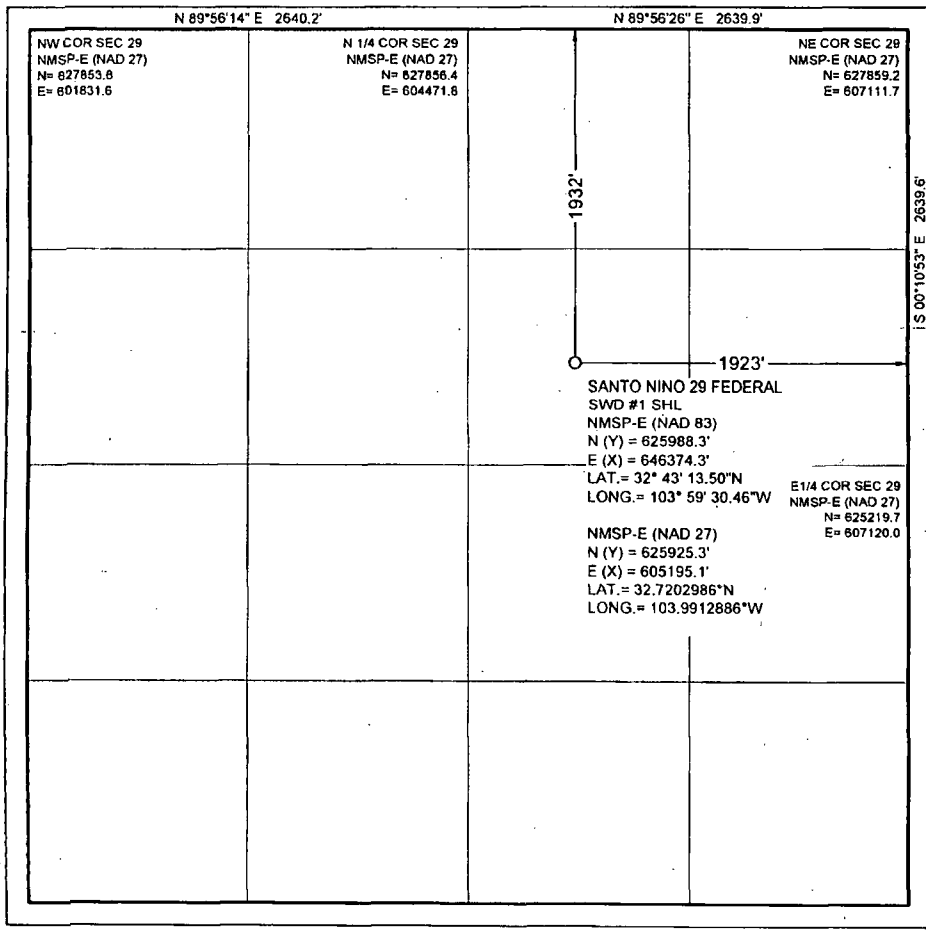
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	29	18S	30E		1932	NORTH	1923	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
Ø			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 2-28-14

BRADLEY BISHOP
Print Name

E-mail Address

SURVEYORS CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

FEBRUARY 27, 2014
Date of Survey

Signature and Seal of Professional Surveyor:

JAMES E. TOMPKINS
NEW MEXICO
14729
REGISTERED PROFESSIONAL LAND SURVEYOR

Job No.: WTC 49693

JAMES E. TOMPKINS 14729
Certificate Number

United States Department of the Interior
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name:	Mewbourne Oil Company
Street or Box:	P.O. Box 5270
City, State:	Hobbs, New Mexico
Zip Code:	88241

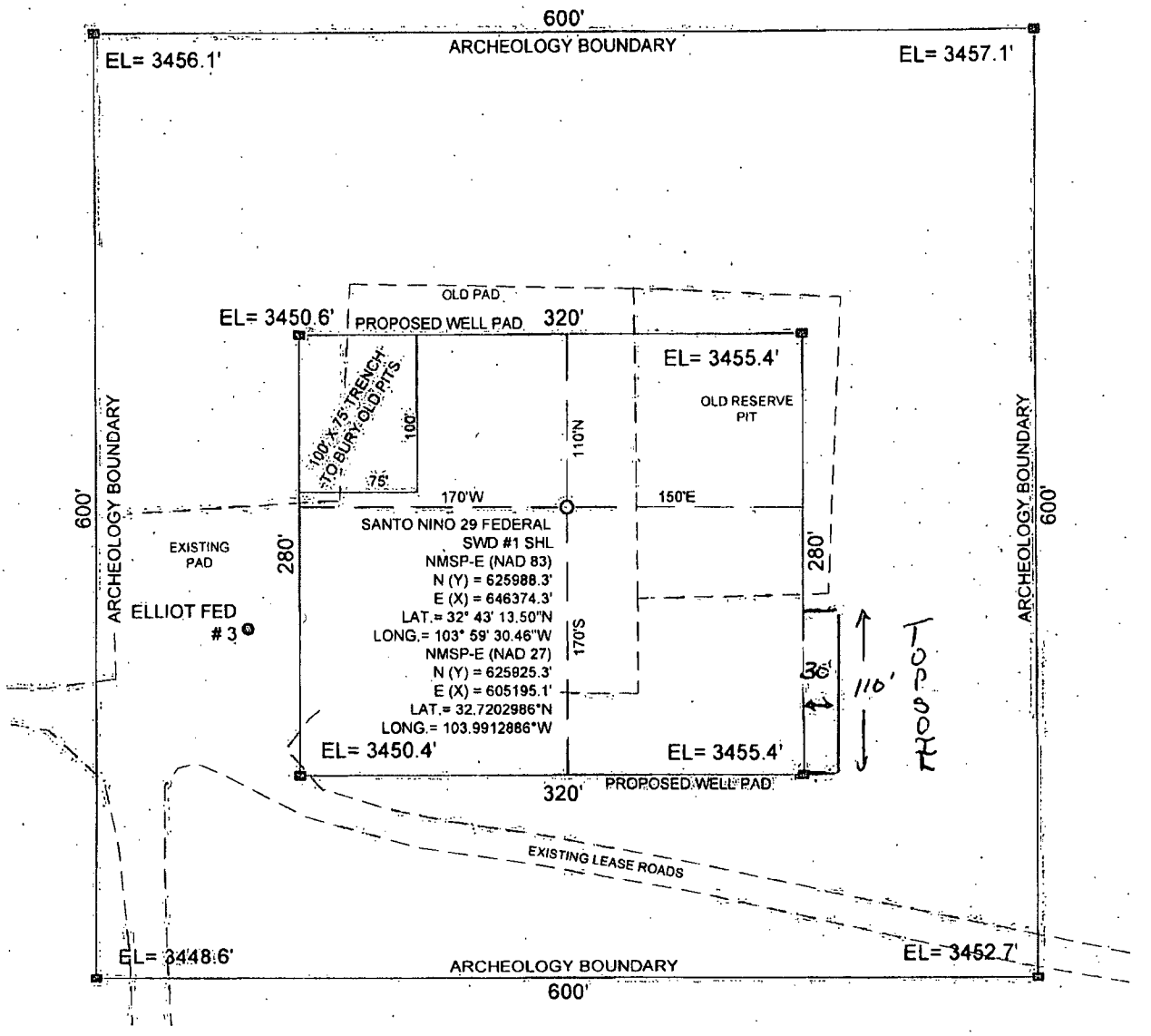
The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted of the leased land or portion thereof, as described below.

Lease Number:	NMNM 27279 (SL & BHL)
Legal Description of Land:	Section 29, T-18S, R-30E Eddy County, New Mexico. Location @ 1932' FNL & 1923' FEL.
Formation (if applicable):	SWD
Bond Coverage:	$150,000
BLM Bond File:	NM1693 Nationwide, NMB 000919

Authorized Signature: BB for NM Young
Name: NM (Micky) Young
Title: District Manager
Date: 2-28-14

Exhibit "3"

SITE LOCATION



0 50 100 200

GRAPHIC SCALE 1" = 100'

SECTION 29, T 18S, R 30E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1932' FNL & 1923' FEL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: SANTO NINO 29 FEDERAL SWD-#1

DRIVING DIRECTIONS:

FROM THE INTERSECTION OF HWY 360 AND GRUBBS ROAD, GO EAST ON GRUBBS ROAD FOR 3.1 MILES AND TURN LEFT. THEN GO 1.2 MILES AND LOCATION IS ON THE RIGHT.

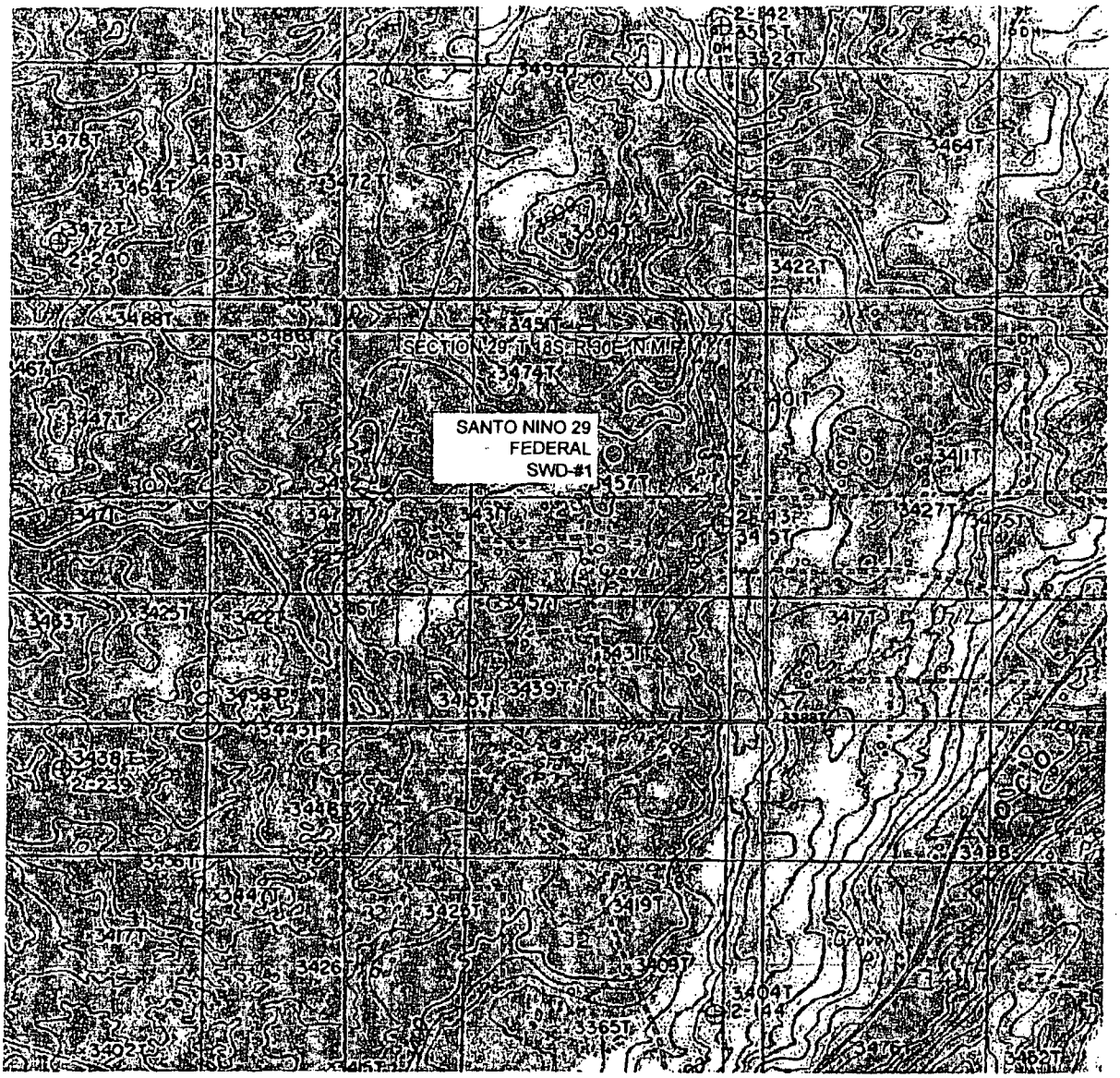
WTC, INC.
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

MEWBOURNE OIL COMPANY

JOB No.: WTC 49693

"3A"

LOCATION VERIFICATION MAP



0 1000 2000 4000

GRAPHIC SCALE 1" = 2000'

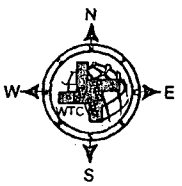
SECTION 29, T 18S, R 30E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1932' FNL & 1923' FEL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: SANTO NINO 29 FEDERAL SWD-#1



DRIVING DIRECTIONS:

FROM THE INTERSECTION OF HWY 360 AND GRUBBS ROAD, GO EAST ON GRUBBS ROAD FOR 3.1 MILES AND TURN LEFT. THEN GO 1.2 MILES AND LOCATION IS ON THE RIGHT.

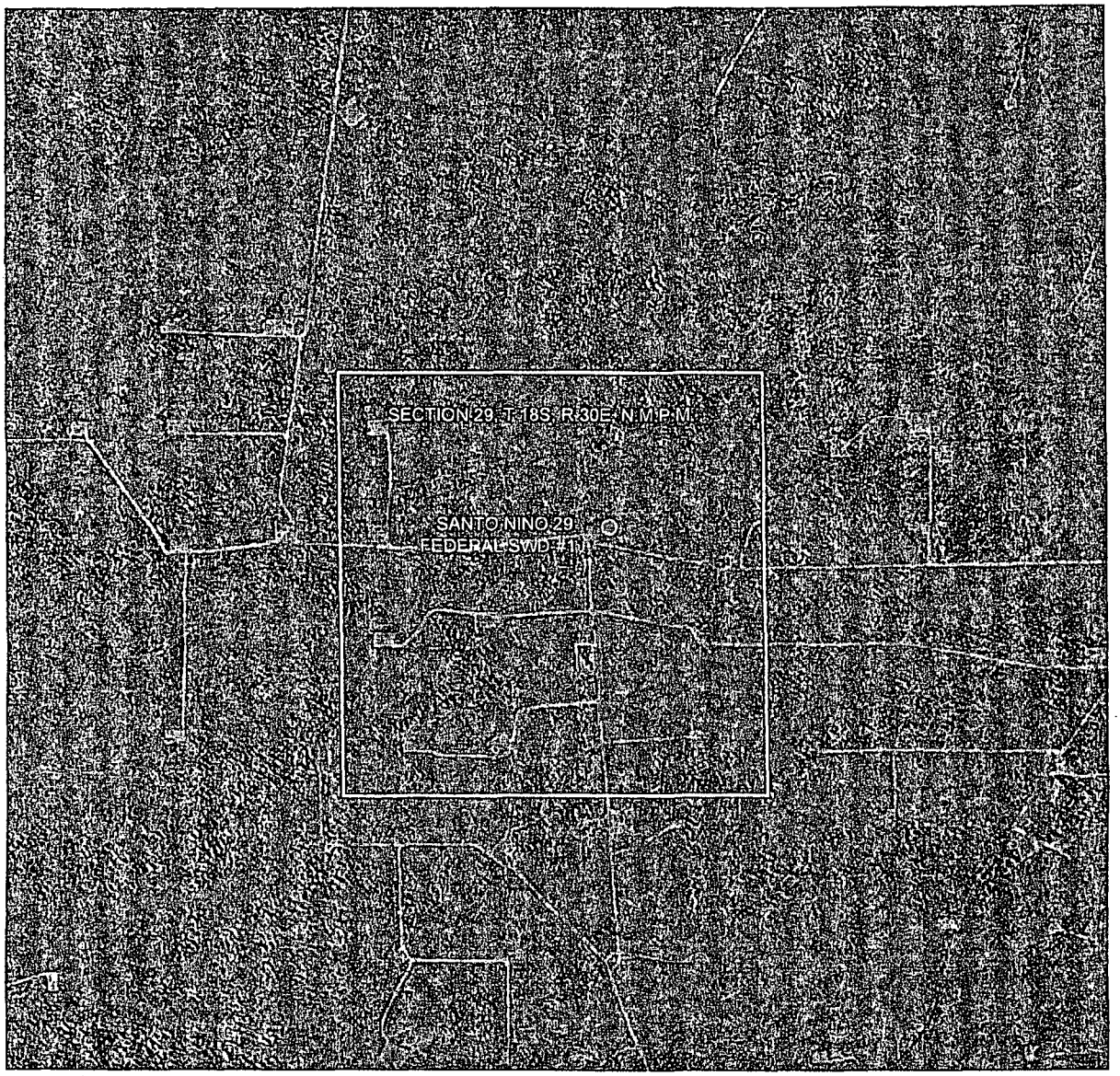
WTC, INC.
405 S.W. 1st STREET
ANDREWS, TEXAS 79714
(432) 523-2181
TEXAS REGISTERED ENGINEERING FIRM F-2746
TEXAS REGISTERED SURVEYOR FIRM #100792-00

MEWBOURNE OIL COMPANY

JOB No.: WTC 49693

"38"

AERIAL MAP



0 1000 2000 4000

GRAPHIC SCALE 1" = 2000'

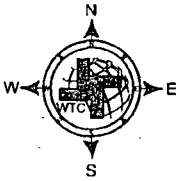
SECTION 29, T 18S, R 30E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1932' FNL & 1923' FEL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: SANTO NINO 29 FEDERAL SWD-#1



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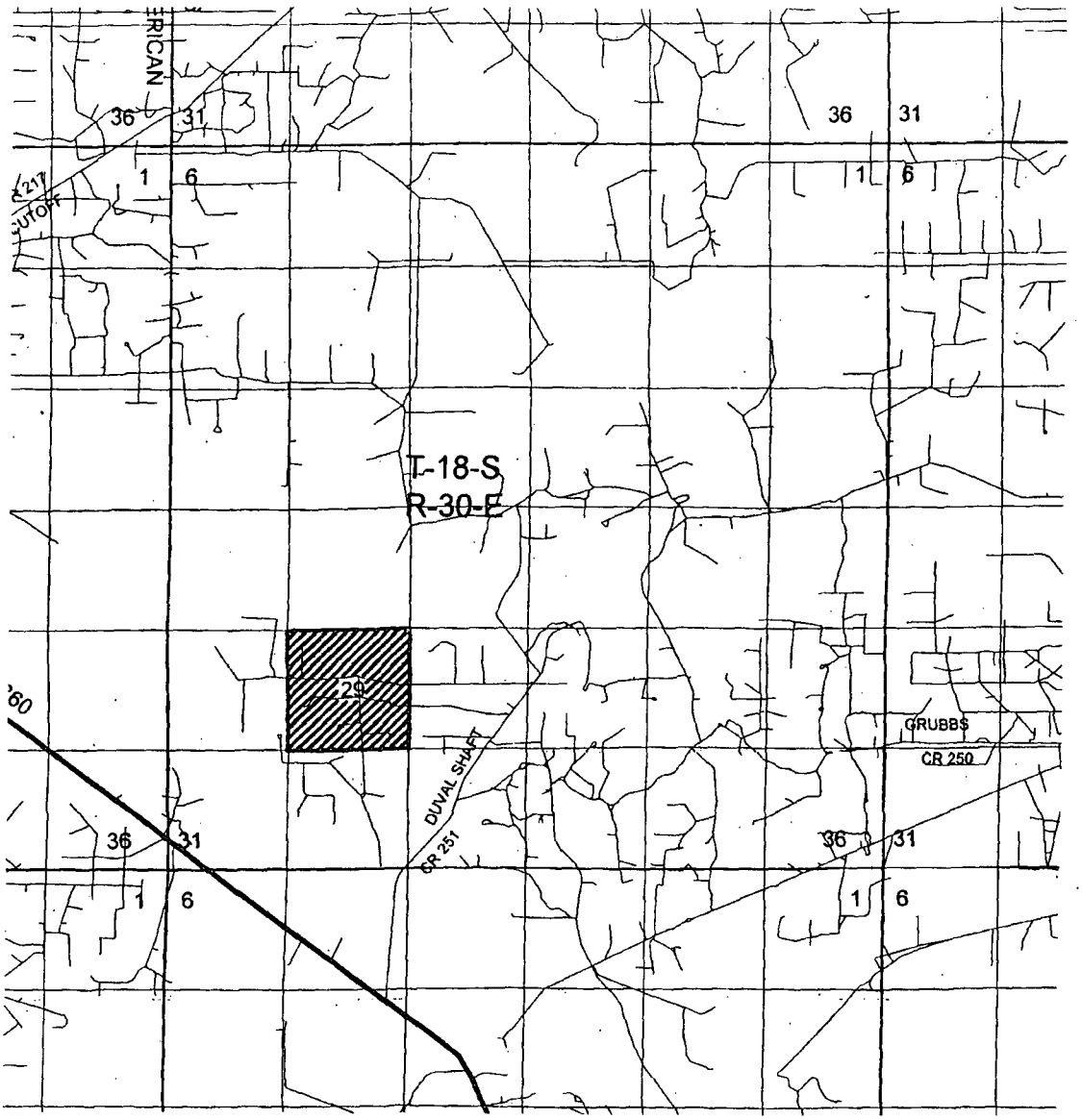
W T C, INC.
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181
TEXAS REGISTERED ENGINEERING FIRM F-2746
TEXAS REGISTERED SURVEYOR FIRM #100792-00

MEWBOURNE OIL COMPANY

JOB No.: WTC 49693

"3C"

VICINITY MAP



GRAPHIC SCALE 1" = 1 MILE

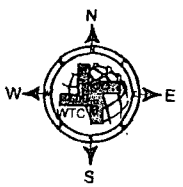
SECTION 29, T 18S, R 30E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1932' FNL & 1923' FEL

OPERATOR: MEWBOURNE OIL COMPANY

WELL NAME: SANTO NINO 29 FEDERAL SWD-#1



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WTC, INC.
405 S.W. 1st. STREET
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TEXAS REGISTERED ENGINEERING FIRM F-2746
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MEWBOURNE OIL COMPANY

JOB No.: WTC 49693

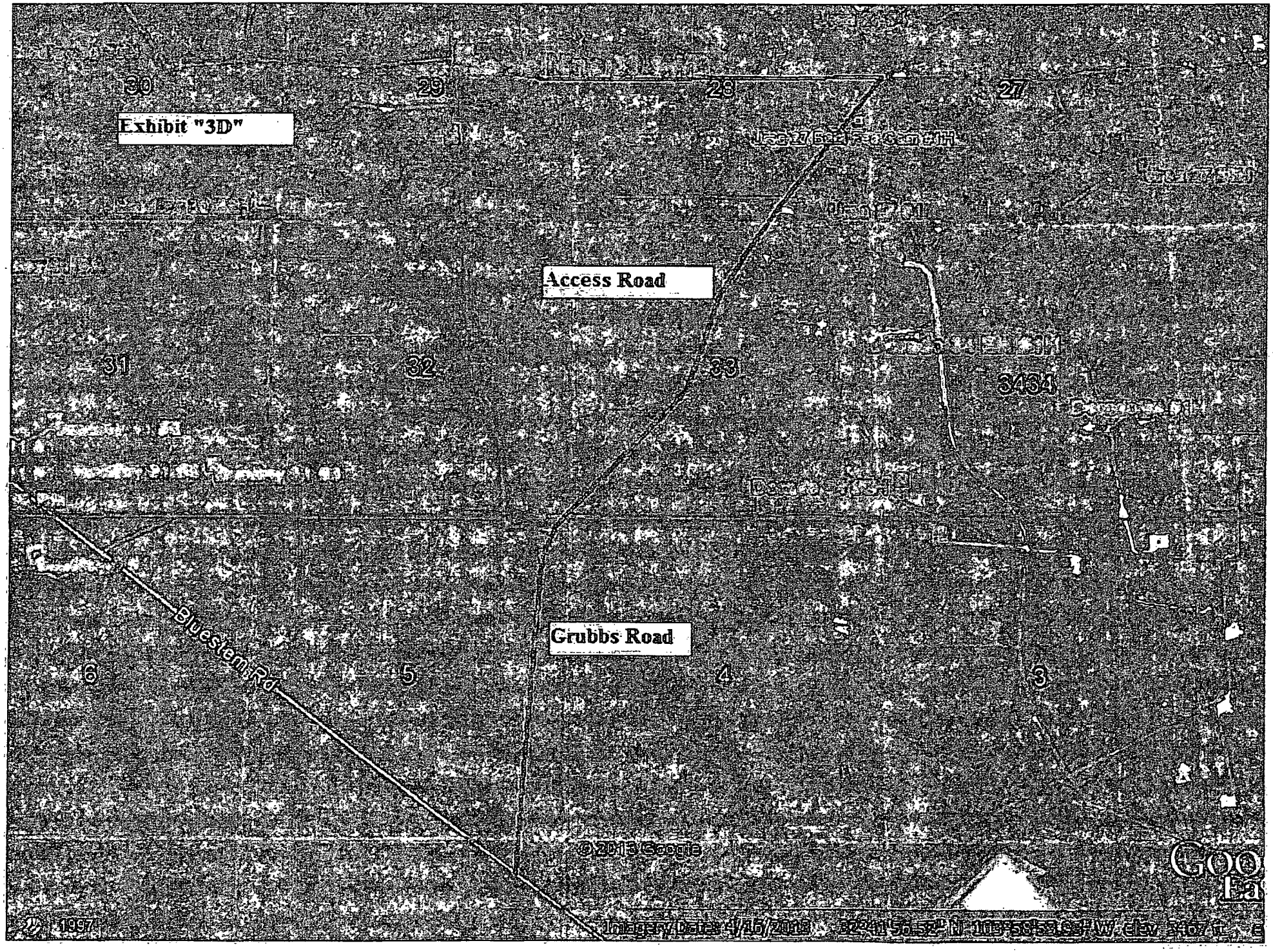
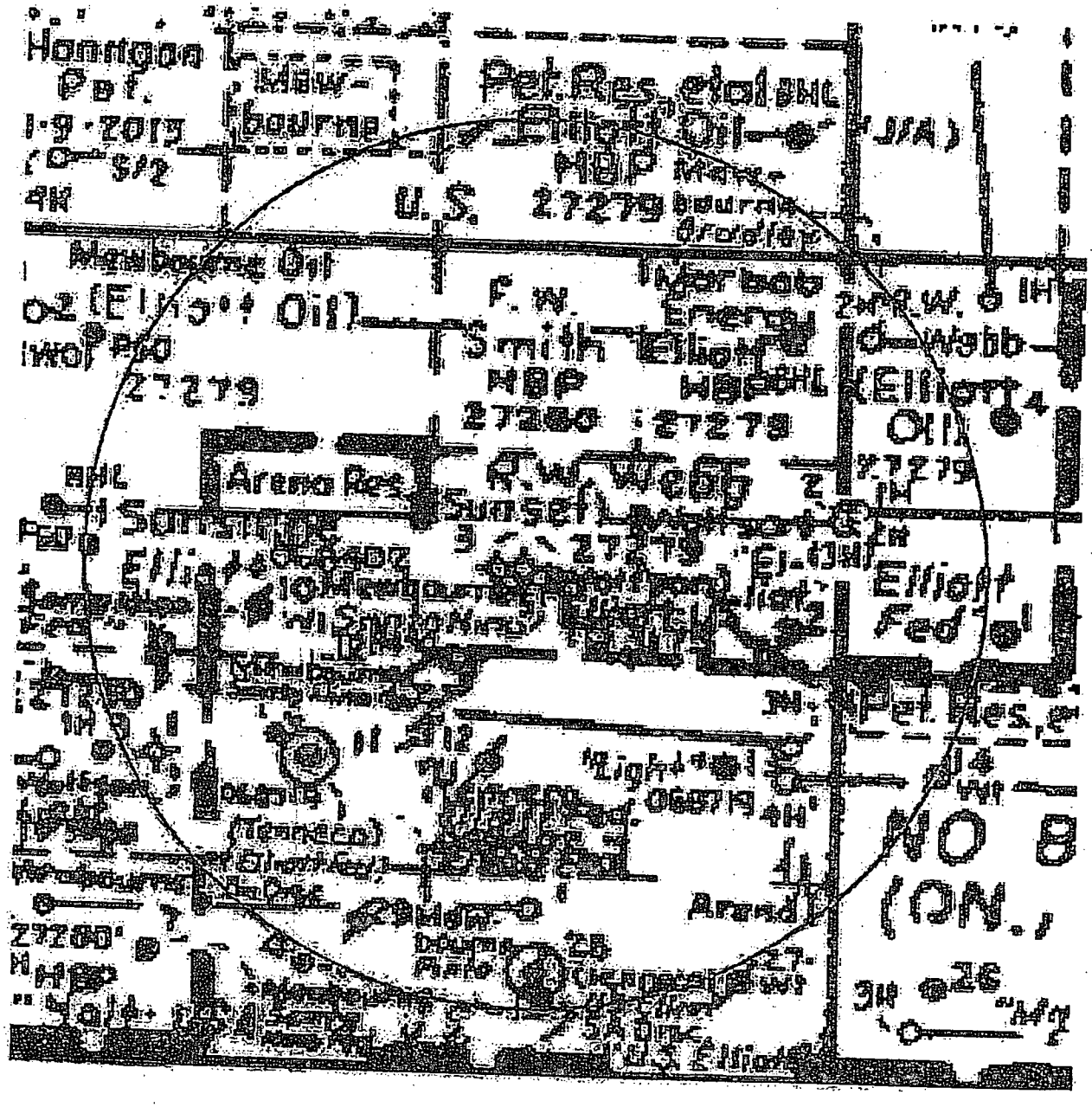


Exhibit "3D"
Access Road
Grubbs Road
Bluestem Rd
30
29
28
27
31
32
33
3434
6
5
4
3
© 2013 Google
Imagery Date: 4/15/2013

Exhibit-4

one mile radius



Drilling Program
Mewbourne Oil Company
Santo Nino 29 Federal SWD #1
1980' FNL & 1980' FEL (SHL)
Sec 29-T18S-R30E
Eddy County, New Mexico

1. The estimated tops of geological markers are as follows:

Rustler	309'
Top Salt	457'
Base Salt/Tansill	1250'
Yates	1431'
Seven Rivers	1910'
Queen	2570'
Capitan	NP
Grayburg	3000'
San Andres	3508'
Delaware	4326'
*Bone Springs	4715'
*Wolfcamp	9084'
*Strawn	10500'
*Atoka	10763'
*Morrow	11005'
Mississippian	11962'
Devonian	12750'
Ellenburger	13750' – Will not penetrate.

2. Estimated depths of anticipated fresh water, oil, or gas:

Water	Fresh water will be protected by existing casing. Freshwater depth is at 45'.
Hydrocarbons	Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as necessary.

3. Pressure control equipment:

A 5000# WP Double Ram BOP and 5000# WP Annular will be installed before drilling out cement plugs. Pressure tests will be conducted prior to drilling out cement plugs. BOP controls will be installed prior to drilling and will remain in use until completion of drilling operations. BOPE will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use.
Will test BOPE to 5000# and the Annular to 2500# with a third party testing company before drilling out cement plugs, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2

4. Existing casing and cement plugs:

A. Casing Program:

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
17 ½"	13 ⅜" (existing)	54.5#	J55	0'-400'	ST&C
12 ¼"	8 ⅝" (existing)	24#	J55	0'-1954'	LT&C

B. Existing cement plugs:

Surface - 50' – 30 sks Class "c" neat, circulated 10 sks to surface.
360' - 450' – 30 sks class "c" neat.
1835' – 2000' – 45 sks class "c" neat w/ 3% CACL2
4280' – 4380' – 35 sks class "c" neat
7200' – 7300' – 35 sks class "c" neat

Safety Factors of existing casing:

Casing Size	API Burst	Pipe Collapse	Ratings Tension
13 3/8"	1730	770	322,000
8 5/8"	2950	1370	244,000

5. Existing and proposed casing and cementing program:

A. Casing Program:

Hole Size	Casing	Wt/Ft.	Grade	Setting Depth	Jt Type
17 ½"	13 3/8"	48#	J55	0-400'	ST&C
12 1/4"	8 5/8"	24#	J55	0-1954'	ST&C
7 7/8"	5 ½" (new)	17#	HCP110	0 - 12750'	LT&C
7 7/8"	NA	NA	NA	12750' - 13500' open hole	

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.
*Subject to availability of casing.

B. Cementing Program:

13 3/8 String
Lead 200 sacks Class C light cement with additives (12.4 ppg & 1.97 CU-FT). Tail with 200 sacks Class C cement (14.8 ppg & 1.32 CU-FT). Circulated 156 sacks to pit. **Existing string.**

8 5/8" String
Lead 700 sacks Class H light cement with additives (12.4 ppg & 2.27 CU-FT). Tail with 200 sacks Class H cement (14.8 ppg & 1.32 CU-FT). Circulated 133 sacks to pit. **Existing string.**

5 ½" String

External casing packer & DV tool @ 12750' for 1st stage cmt.
1st Stage: 330 sacks Class H light cement with fluid loss, LCM, & salt additives. Yield at 2.12 cuft/sk. Mix water @ 11.32 gal/sk. Tail with 100 sacks Class H cement containing fluid loss additives. Yield at 1.18 cuft/sk. Mix water @ 5.22 gal/sk. Calculated w/25% excess.

See COA

DV Tool @ 9000' for 2nd stage cmt.
2nd Stage: 850 sacks Class H light cement with fluid loss, LCM, & salt additives. Yield at 2.12 cuft/sk. Mix water @ 11.32 gal/sk. Tail with 100 sacks Class H cmt. Yield at 1.18 cuft/sk. Mix water @ 5.22 gal/sk. Cmt circulated to surface w/25% excess.

6. Mud Program:

Interval	Type System	Weight	Viscosity	Fluid Loss

0' - 9000'	FW	8.4-8.6	28-32	NA
9000' - 13,500	Brine water w/Polymer	9.6-10.0	32-35	15

**Visual mud monitoring system shall be in place to detect volume changes indicating loss or gain of circulation fluid volume. Sufficient mud materials will be kept on location at all times to combat abnormal conditions.

7. Evaluation Program:

Samples: None
Logging: None

8. Downhole Conditions

Zones of abnormal pressure: None anticipated
Zones of lost circulation: Anticipated in surface and intermediate holes
Maximum bottom hole temperature: 145 degree F
Maximum bottom hole pressure: 5,900 psi

9. Anticipated Starting Date:

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 40 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

11" 5M BOPE & Closed Loop Equipment Schematic

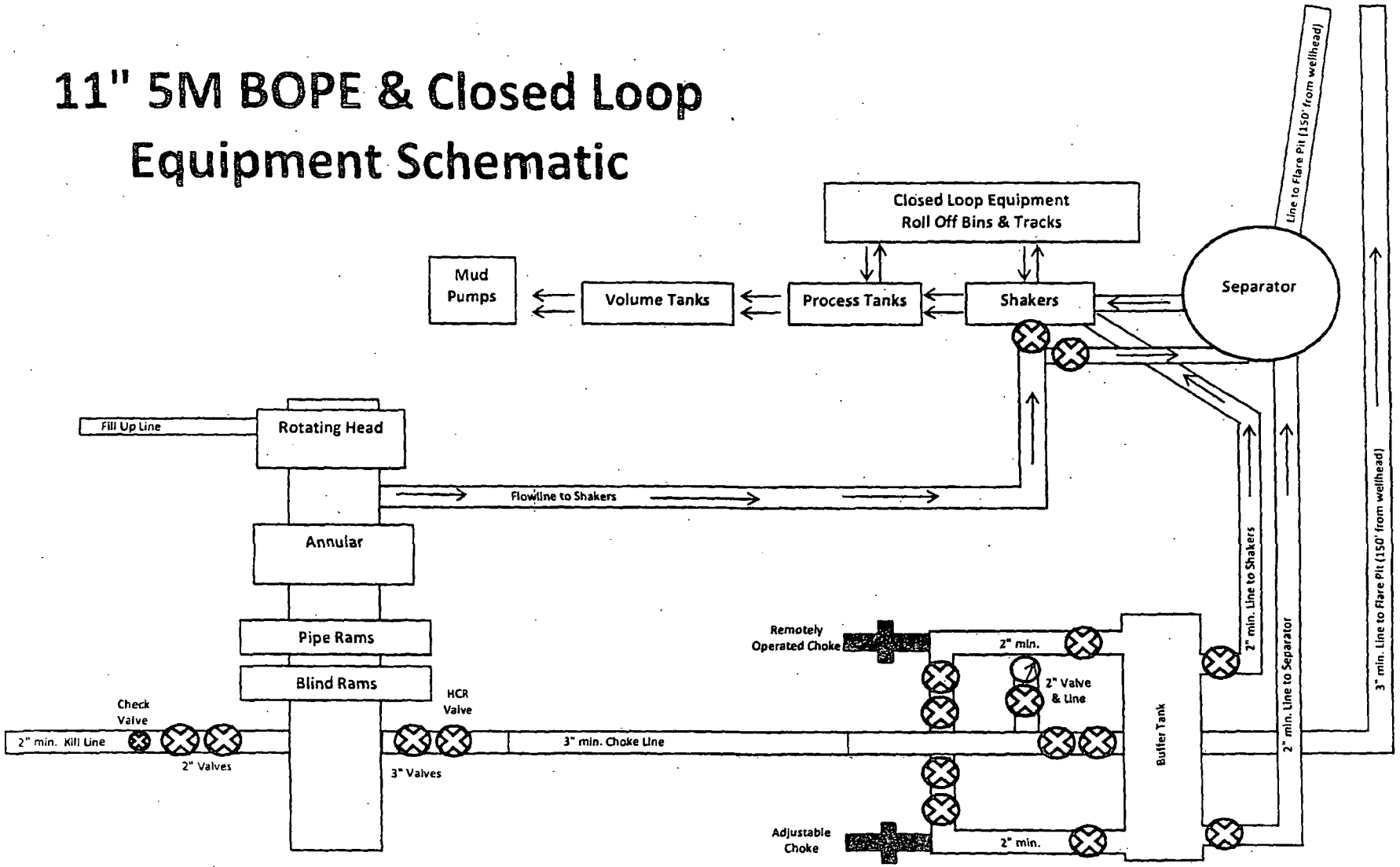


Exhibit "2"
Santo Nino 29 Fed SWD #1

Note: All valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary.

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Santo Nino 29 Federal SWD #1
1932' FNL & 1923' FEL (SHL)
Sec 29-T18S-R30E
Eddy County, New Mexico

I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.

II. Blowout preventer and all fittings must be in good condition with a minimum 2000 psi working pressure on 13 3/8" casing and 3000 psi working pressure on 9 5/8" & 7" casing.

See COA

III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 3000 psi working pressure.

IV. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.

V. A kelly cock shall be installed on the kelly at all times.

Blowout preventer closing equipment to include and accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.

H2S Diagram
Closed Loop Pad Dimensions 280' x 320'

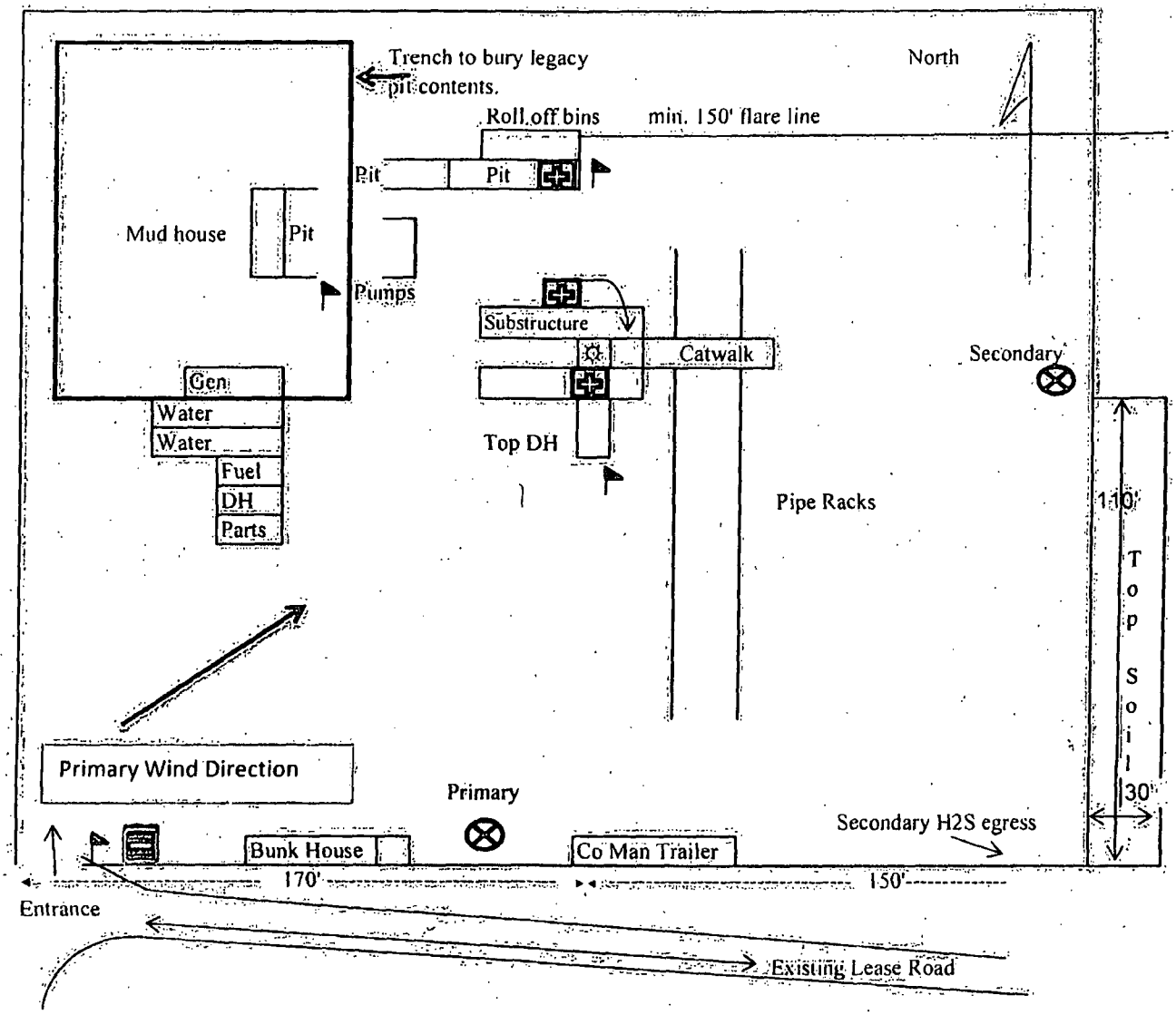
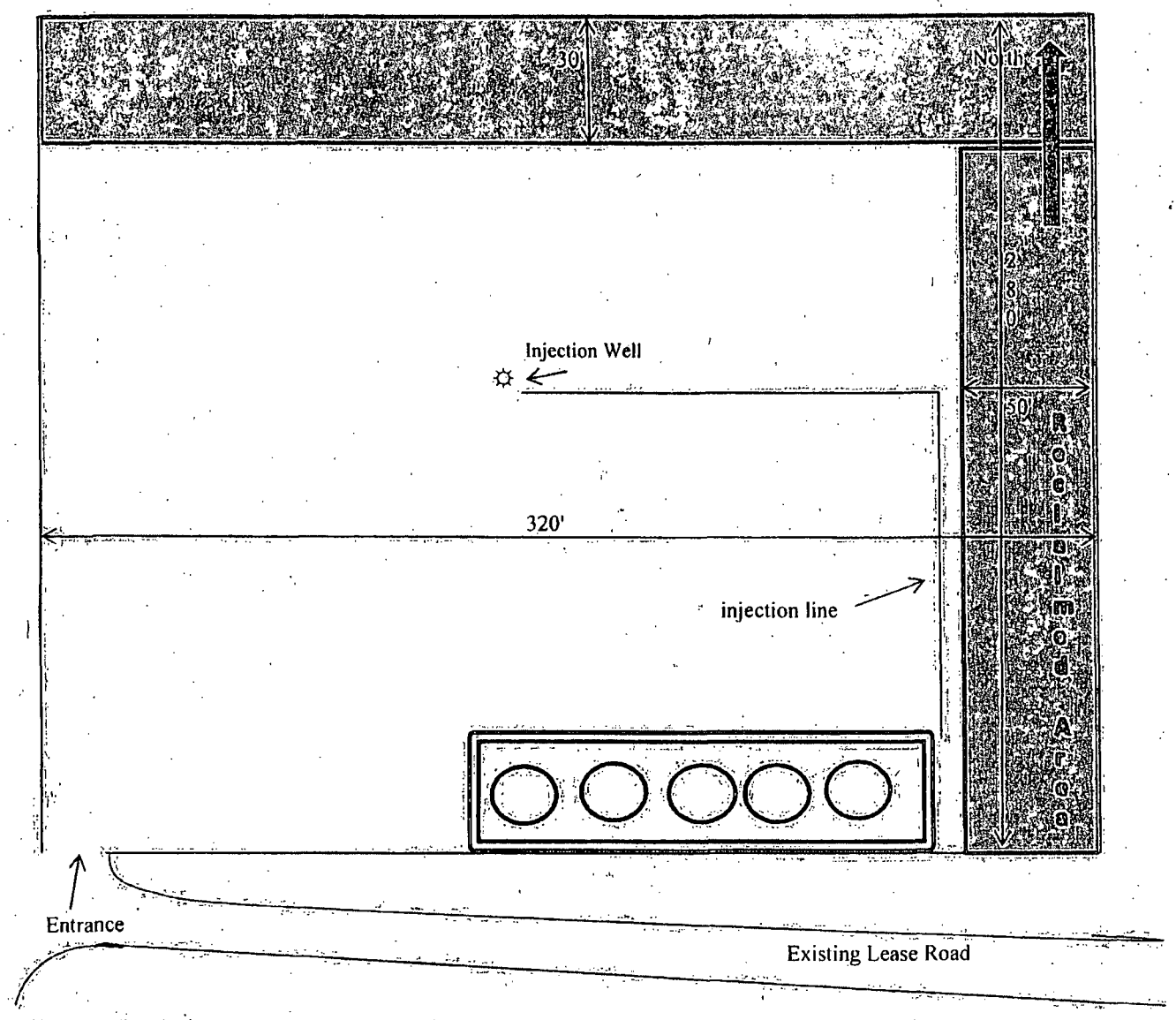


Exhibit 5

Mewbourne Oil Company
Santo Nino 29 Federal SWD #1
1932' FNL & 1923' FEL
Sec. 29 T18S R30E
Eddy County, NM

Closed Loop Pad Dimensions 280' x 320'



Mewbourne Oil Company
Santo Nino 29 Federal SWD #1
1932' FNL & 1923' FEL
Sec. 29 T18S R30E
Eddy County, NM

Exhibit 6

Santo Nino 29 Fed SWD #1

Procedure for building location upon old reserve pit "legacy pit"

1. Within the designated area of the location (shown on well site diagram), MOC will cut a trench 15' deep across the location. The area of the trench will be 100' x 75'.

2. The trench will be lined with 20 mil plastic liner on bottom & sides with enough extra to cover the top. The excavated contents of the trench will be stored onsite for later use.

3. Begin leveling legacy pit putting removed dirt into trench on top of liner.

4. Remove dirt from legacy pit 2' below level elevation of location, contents removed will go into the lined trench. (Legacy pit contents will be placed in the trench up to 4 feet below the well pad surface.)

5. Place the extra liner over top the legacy pit contents in the trench ensuring all the contents are covered by the plastic liner. The top of the liner will be no less than 4 feet below the top of the well pad surface. Backfill with part of the dirt from the excavated trench contents then caliche on top.

6. Line legacy pit area with 20 mil plastic liner ensuring that the edges of the liner are angled downward to allow water to travel off the plastic liner.

7. Backfill legacy pit area with part of the dirt from the excavated trench contents and then caliche will be used to cover the remaining void.

8. Caliche will be used to surface the well pad over the legacy pit to level the pad.

9. During interim reclamation and for final reclamation, the top 6" of caliche will be removed from legacy pit area and topsoil will be placed on top of the legacy pit area to be reseeded.

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Santo Nino 29 Federal SWD #1

1932' FNL & 1923' FEL

Sec 29-T18S-R30E

Eddy County, New Mexico

1. General Requirements

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H2S were found. MOC will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

1. The hazards and characteristics of hydrogen sulfide gas.
2. The proper use of personal protective equipment and life support systems.
3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

1 The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.

2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.

3 The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the intermediate casing.

1. Well Control Equipment
   - A. Choke manifold with minimum of one adjustable choke/remote choke.
   - B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
   - C. Auxiliary equipment including annular type blowout preventer.
2. Protective Equipment for Essential Personnel
   Thirty minute self contained work unit located in the dog house and at briefing areas.

Additionally: If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas. If higher concentrations of H2S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed to comply with Onshore Order 6.

3. Hydrogen Sulfide Protection and Monitoring Equipment
Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

4. Visual Warning Systems
A. Wind direction indicators as indicated on the wellsite diagram.
B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

6. Communications

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

Eddy County Sheriff's Office	**911 or 575-887-7551**
Ambulance Service	**911 or 575-885-2111**
Carlsbad Fire Dept	**911 or 575-885-2111**
Loco Hills Volunteer Fire Dept.	**911 or 575-677-3266**
Closest Medical Facility - Columbia Medical Center of Carlsbad	**575-492-5000**

Mewbourne Oil Company	**Hobbs District Office**	**575-393-5905**
	Fax	**575-397-6252**
	2nd Fax	**575-393-7259**
District Manager	**Micky Young**	**575-390-0999**
Drilling Superintendent	**Frosty Lathan**	**575-390-4103**
	Bradley Bishop	**575-390-6838**
Drilling Foreman	**Wesley Noseff**	**575-441-0729**

MEWBOURNE OIL COMPANY
P. O. BOX 7698
TYLER, TEXAS 75711

Lease	Santo Nino 29 Federal SWD		**Well No**	1	**Location**		
County	Eddy	**ST** NM	**Section**	29	**TwnShp**	18S	**Rng** 30E
Section		**Blk**	**Survey**				
Filename						**Page**	1
		API No.					

DATE	DAILY REPORTS
FEB 14 2014	Met with Tanner Nygren (BLM) & WTC Surveying. Well located @ **1932' FNL & 1923' FEL, Sec 29, T18S, R30E,** Eddy Co., NM (Elevation @ 3453'). This appears to be a drillable location with pits to the north. Approx. 40' of new road will be on SW corner heading SW to existing road. Reclaim north 30' and east 50'. Battery will be on south side. Archeologist will be required due to nearby arc site. (BPS)

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
MEWBOURNE OIL COMPANY
Santo Nino 29 Federal SWD #1
1932' FNL & 1923' FEL (SHL)
Sec 29-T18S-R30E
Eddy County, New Mexico

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 restoring the surface so that a complete appraisal can be made of the environmental impact associated with the proposed operations.

1. Existing Roads:

A. Exhibit #3 is a road map showing the location of the proposed well. Existing roads are highlighted in black. Exhibits #3-#3A are maps showing the location of the proposed well and access road. Existing and proposed roads are highlighted in black.

B. Directions to location from the intersection off HWY 360 & Grubbs Road, go east on Grubbs for 3.1 miles and turn left on lease road. Then go 1.2 miles and location is on the right.

C. Existing roads will be maintained in a condition the same as or better than before operations begin.

2. Proposed Access Road:

A. No new road is needed.

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 road will be surfaced with rolled and compacted caliche.

C. Mewbourne Oil Co. will cooperate with other operators in the maintenance of lease roads.

3. Location of Existing Wells:

There are producing wells within the immediate vicinity of the well site. Exhibit #4 shows the proposed well and existing wells within a one mile radius.

4. Location of Existing and/or Proposed Facilities:

A. Tank Battery will be located on the South side of location.

B. Production vessels that will remain on this location will be painted to conform to BLM painting stipulations within 180 days of installation.

C. A 4" & 6" surface poly line will be laid from this SWD existing MOC wells following existing lease roads with in 5'. This line will be under 120 lbs. A ROW for this line will be filed at a later date.

5. Location and Type of Water Supply

The well will be drilled with a combination of fresh water and brine water based mud systems. The water will be obtained from commercial suppliers in the area and/or hauled to the location by transport trucks over existing and proposed roads as indicated in Exhibit #3.

6. Source of Construction Materials

All material required for construction of the drill pad and access roads will be obtained from private, state, or federal pits. The construction contractor will be solely responsible for securing construction materials required for this operation and paying any royalties that may be required on those materials.

7. Methods of Handling Waste Disposal:

A. Drill cuttings not retained for evaluation purposed will be hauled to a permitted off-site facility.
B. Water produced during operations will be hauled to an off-site permitted SWD in the area.
C. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
D. Sewage and gray water will be safely contained on-site, and then waste will be disposed at an approved off-site facility.
E. All trash, junk, and other waste materials will be stored in proper containers to prevent dispersal and will be removed to an appropriate facility within one week of cessation of drilling and completion activities.
F. MOC will utilize a closed loop system during drilling operations.

8. Ancillary Facilities

There are no ancillary facilities within the immediate vicinity of the proposed well site.

9. Well Site Layout

A A diagram of the drill pad is shown in Exhibit #5. Dimensions of the pad and location of major rig components are shown.
B. The pad dimension of 280' x 320' has been staked and flagged.
C. An archaeological survey has been conducted on the proposed well pad.

10. Plans for Restoration of Surface

A. Within 90 days of cessation of drilling and completion operations, all equipment not necessary for production operations will be removed. The location will be cleaned of all trash and junk to assure the well site is left as aesthetically pleasing as reasonably possible.
B. Interim reclamation:
    i. All areas not needed for production operations will be reclaimed.

ii. Caliche will be removed, the land will be re-contoured, and the top soil from stockpile will be spread over these areas.
iii. The disturbed area will be restored by re-seeding during the proper growing season.
iv. Any additional caliche required for production facilities will be obtained from the area shown in exhibit #6 as interim reclamation.

C. Final Reclamation:

i. Upon cessation of the proposed operations, if the well is abandoned, all equipment and trash will be removed and taken to a proper facility.
ii. The location and road surfacing material will be removed and used to patch area lease roads. The entire location will be restored to the original contour as much as reasonable possible. The top soil used for interim reclamation will be spread over the entire location. All restoration work will be completed within 180 days of cessation of activities.

11. Surface Ownership:

Surface ownership is owned by BLM.

12. Other Information:

A. The primary use of the surface at the location is for grazing of livestock.

13. Operator=s Representative:

A. Through APD approval, drilling, completion and production operations:

Robin Terrell, District Manager
Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
575-393-5905

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☑ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☑ Offset Operators, Leaseholders or Surface Owner

[C] ☑ Application is One Which Requires Published Legal Notice

[D] ☑ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☑ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

TRAVIS CUDE	Travis Cude	RESERVOIR ENGINEER	11/20/08
Print or Type Name	Signature	Title	Date

tcude@mewbourne.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? ___X____Yes _____No

II. OPERATOR: **Mewbourne Oil Company**

ADDRESS: **500 W. Texas Suite 1020**
Midland, TX 79701
CONTACT PARTY: **Travis Cude** PHONE: **580-571-7442**

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes ____X____No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: **Travis Cude** TITLE: **Reservoir Engineer**

SIGNATURE: _____ DATE: 11/20/13

E-MAIL ADDRESS: **tcude@mewbourne.com**

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

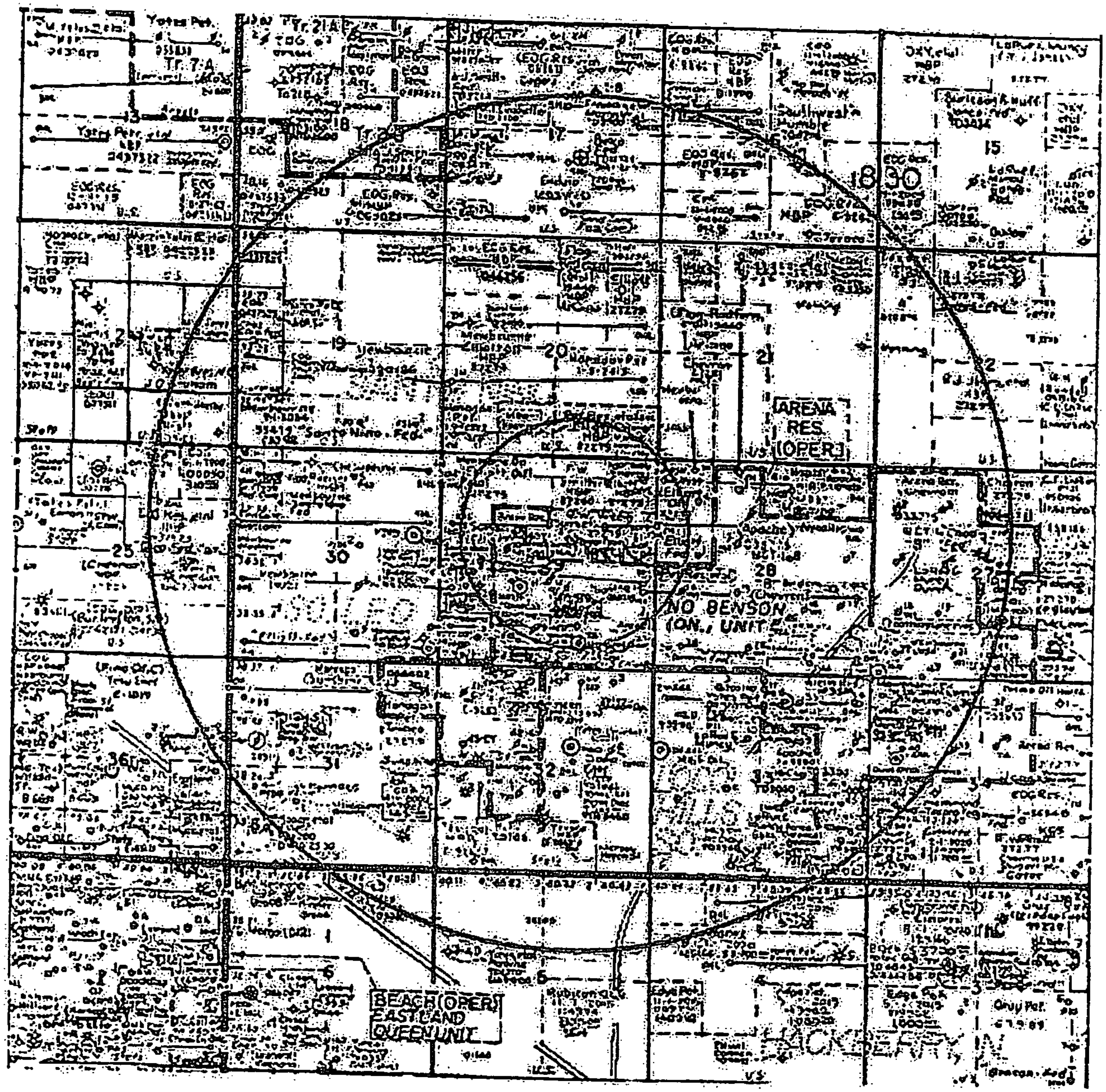
(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.


ARENA
RES.
(OPER.)
NO BENSON
(ON.) UNIT
BEACH (OPER)
EAST LAND
QUEEN UNIT
18 30

Side 1

INJECTION WELL DATA SHEET

OPERATOR: **Mewbourne Oil Company**

WELL NAME & NUMBER: **Santo Nino 29 Federal SWD #1** (Originally: Santo Nino 29 Federal Com #5) API 30-015-28698

WELL LOCATION: **1980' FNL & 1980' FEL** | **F** | **29** | **18S** | **30E**

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC (See Attached)

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: **17 1/2 "**

Casing Size: **13 3/8" @ 400'**

Cement with: **400 sx**

Top of Cement: **Surface**
(156 sx circulated to pit)

Intermediate Casing

Hole Size: **12 1/4"**

Casing Size: **8 5/8" @ 1954'**

Cement with: **900 sx**

Top of Cement: **Surface**
(133 sx circulated to pit)

Intermediate Casing

Hole Size: **7 7/8"**

Casing Size: **7" @ 12750'**

Cement with : **1200 sx**
DVT @: 9500'

Top of Cement: **Surface**

TD @ 13500'

Injection Interval

Open Hole Completion from 12750'-13500'

Side 2

INJECTION WELL DATA SHEET

Tubing Size: **3 1/2"9.3# L80** Lining Material: **TK99 IPC**

Type of Packer: **Arrowset 1X (nickel plated)**

Packer Setting Depth: **+/- 12,700**

Other Type of Tubing/Casing Seal (if applicable): **N/A**

Additional Data

1. Is this a new well drilled for injection? **No**

   If no, for what purpose was the well originally drilled? **Bone Spring Test**

2. Name of the Injection Formation: **Devonian, Open Hole Completion**

3. Name of Field or Pool (if applicable): **Santo Nino Bone Spring**

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

   Plug @ 7200'-7300' (35 sx), 4280'- 4380' (35 sx), 1900'-2000' (45 sx), 350'-450' (30 sx), 0'-50' (30 sx, 10 sx circulated to surface).

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Overlying producing zone – **2nd Bone Spring, 7450'**

   Underlying producing zone – **N/A**

Mewbourne Oil Company

Well Name: Santo Nino 29 Federal Comm #5

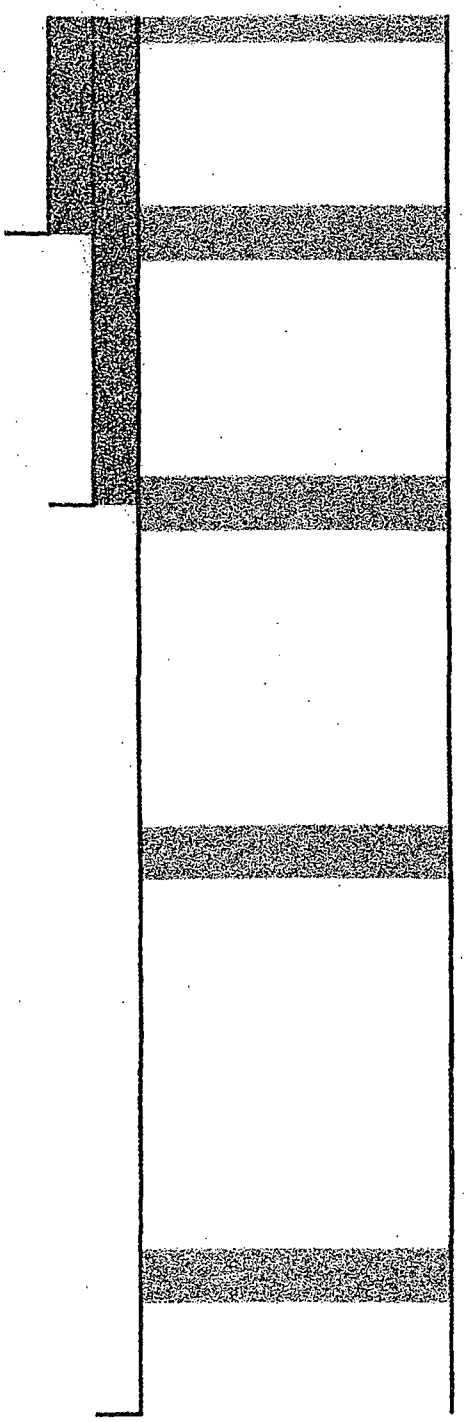
Last Updated by: T Cude on 11/19/13

Spud Date: 2/20/96

17 1/2" x 13 3/8" 48# J-55
Set @ 400'
Cmt w/ 400 sx, 156 sx to surface

12 1/4" x 8 5/8" 24# J55 LT&C
Set @ 1954'
Cmt w/ 900 sx, circ 133 sx to pit

7 7/8" Open Hole
TD @ 8450'



20 sx f/ surface - 60'

30 sx f/ 350'-450'

45 sx f/ 1835'-2000'

35 sx f/ 4280'-4380'

35 sx f/ 7200'-7300'

Mewbourne Oil Company

Well Name: Santo Nino 29 Federal SWD #1

Last Updated by: T Cude on 11/19/13

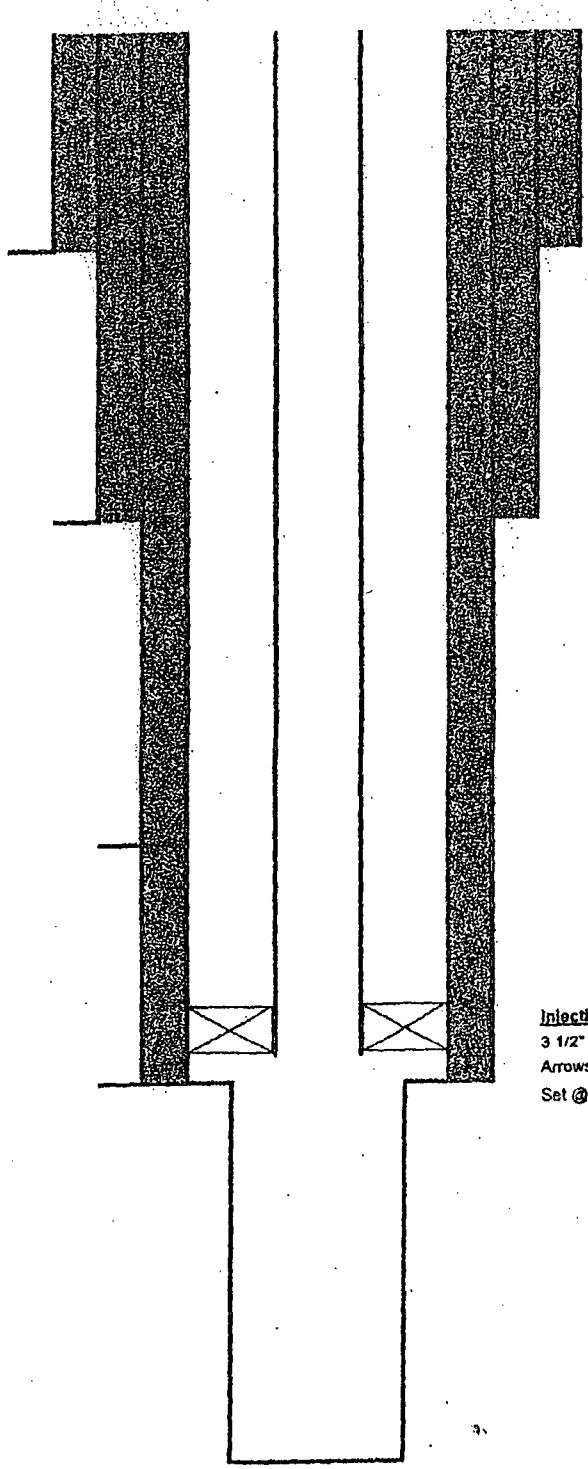
Spud Date: 2/20/96

Surface
17 1/2" x 13 3/8" 48# J-55
Set @ 400'
Cmt w/ 400 sx, 156 sx to surface

Intermediate
12 1/4" x 8 5/8" 24# J-55 LT&C
Set @ 1954'
Cmt w/ 900 sx, circ 133 sx to pit

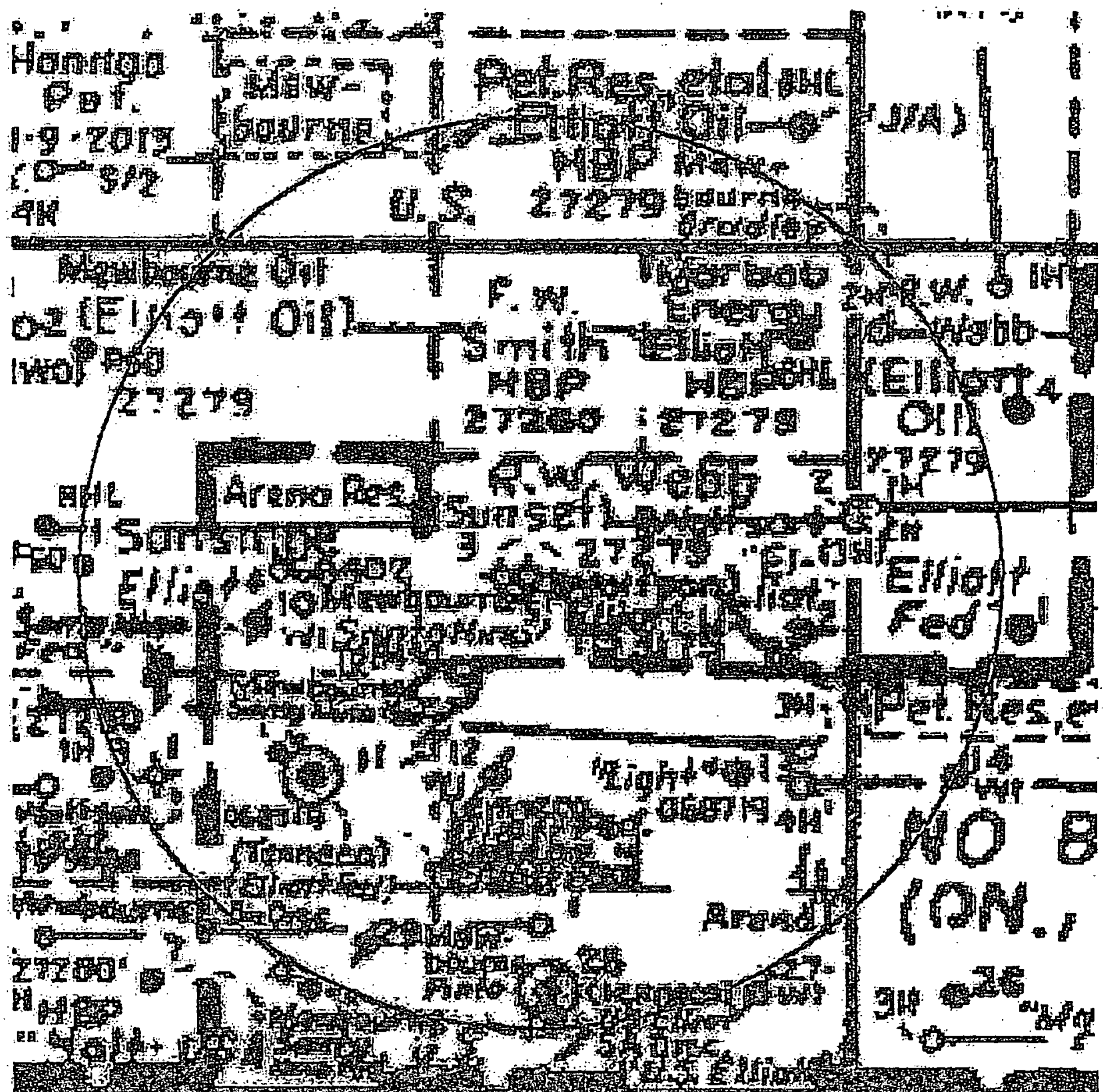
DV Tool 9500'

Intermediate
7 7/8" x 7" 26# P-110
Set @ @ 12750'
Cmt w/ 1200 sx to surface



Injection String
3 1/2" 9.3# L80 tbg
Arrowset 1X Nickel Plated Packer
Set @ 12,700'

Open Hole
6 1/8" TD @ 13,500'


Pet. Res. et al
Elliott Oil
HBP
U.S.
27279
(Elliott Oil)
F. W.
Smith
Marbob
Energy
Elliott
HBP
27280
27279
R. W. Webb
Arena Res
Sunset
(Elliott
Oil)
Elliott
Fed
Pet. Res.
NO B
(ON.
Arena
27280
HBP

Bradley 29 SWD #1 C-108
Additional Details

VI. There are no wells penetrating the disposal formation within the area of review.

VII. 1. Proposed average rate of 5000 bwpd and maximum rate of 20,000 bwpd.

2. Closed system.

3. Proposed average injection pressure is unknown and the maximum injection pressure is approximately 2550 psi (0.2 psi/ft x 12,750 ft).

4. Injection fluid will be formation water from the Mewbourne Oil Company operated Bone Spring producing wells in the area. Attached is a water analysis from the Bradley 36 PM St Com 1H (36-18S-29E) taken 10/16/2013.

5. We will be injecting into the Devonian formation. Devonian formation water is known to be compatible with Bone Spring formation water; however, water analysis for the Devonian was not available in the area.

VIII. 1. The proposed injection interval is within the Devonian formation which is a porous dolomitic limestone from 12,750' to 13,650'.

2. The underground fresh water aquifers (unnamed) are present at shallow depths <250'. There are no known fresh water intervals underlying the injecting formation.

IX. The proposed stimulation is an open-hole acid treatment of 20000 gallons of 15% HCL.

IX. Well logs are currently on file with the Division, and the appropriate log data will be filed upon re-entry and deepening of the well.

X. There are currently no water wells on file with the State Engineers Office in the area of interest.

XI. Mewbourne Oil Company has examined geologic and engineering data and has found that there is no evidence of faulting between the proposed disposal zone and any underground sources of drinking water.

XII. See attached Proof of Notice

MEWBOURNE OIL COMPANY
P. O. BOX 7698
TYLER, TEXAS 75711

Lease	Bradley "36" PM State Com	**Well No**	1H	**Location**	380' FSL & 330' FEL		
County	Eddy	**ST**	NM	**Section**	36	**TwnShp**	18S	**Rng**	29E
Section		**Blk**		**Survey**			
Filename						**Page**	1

API No. 30-015-40069

DATE	DAILY REPORTS
OCT 17 2013	**Water analysis from 10/16/13:** SG @ 1.135, Temp 70°, pH 6.80, Na 61730, Ca 5200, Mg 2160, Fe 0.2, CL 110000, SO_4 300, HCO_3 93 (all in Mg/L).

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mewbourne Oil Company**
LEASE NO.:	**NMNM-27279**
WELL NAME & NO.:	**Santo Nino 29 Federal SWD 1**
SURFACE HOLE FOOTAGE:	**1932' FNL & 1923' FEL**
LOCATION:	**Section 29, T. 18 S., R 30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Reserve Pit Reclamation (Prior to Pad Construction)
The operator must properly stabilze the old reserve pit contents prior to well pad construction. The procedure that the operator will use is in the APD. The entire old reserve pit area to be reclaimed is identified in the survey plat of the APD. Once the old reserve pit contents have been properly stabilized with the procedure in the APD, the well pad can be constructed.

Interim Reclamation of Old Pad Area
During interim reclamation, the operater must reclaim the remaining old pad that is located outside of the north edge of the proposed well pad. This area outside the proposed north edge of the pad is about 35-45 feet in width.

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

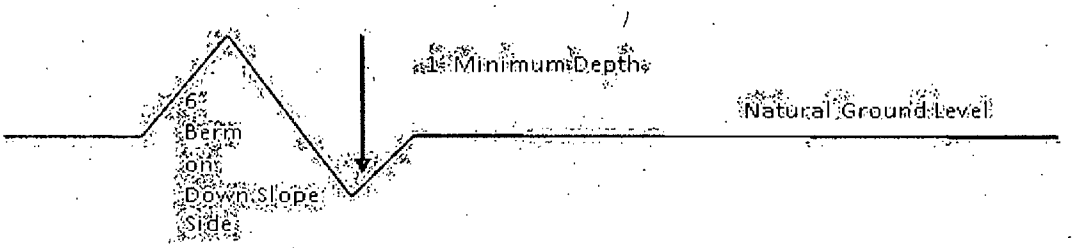
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

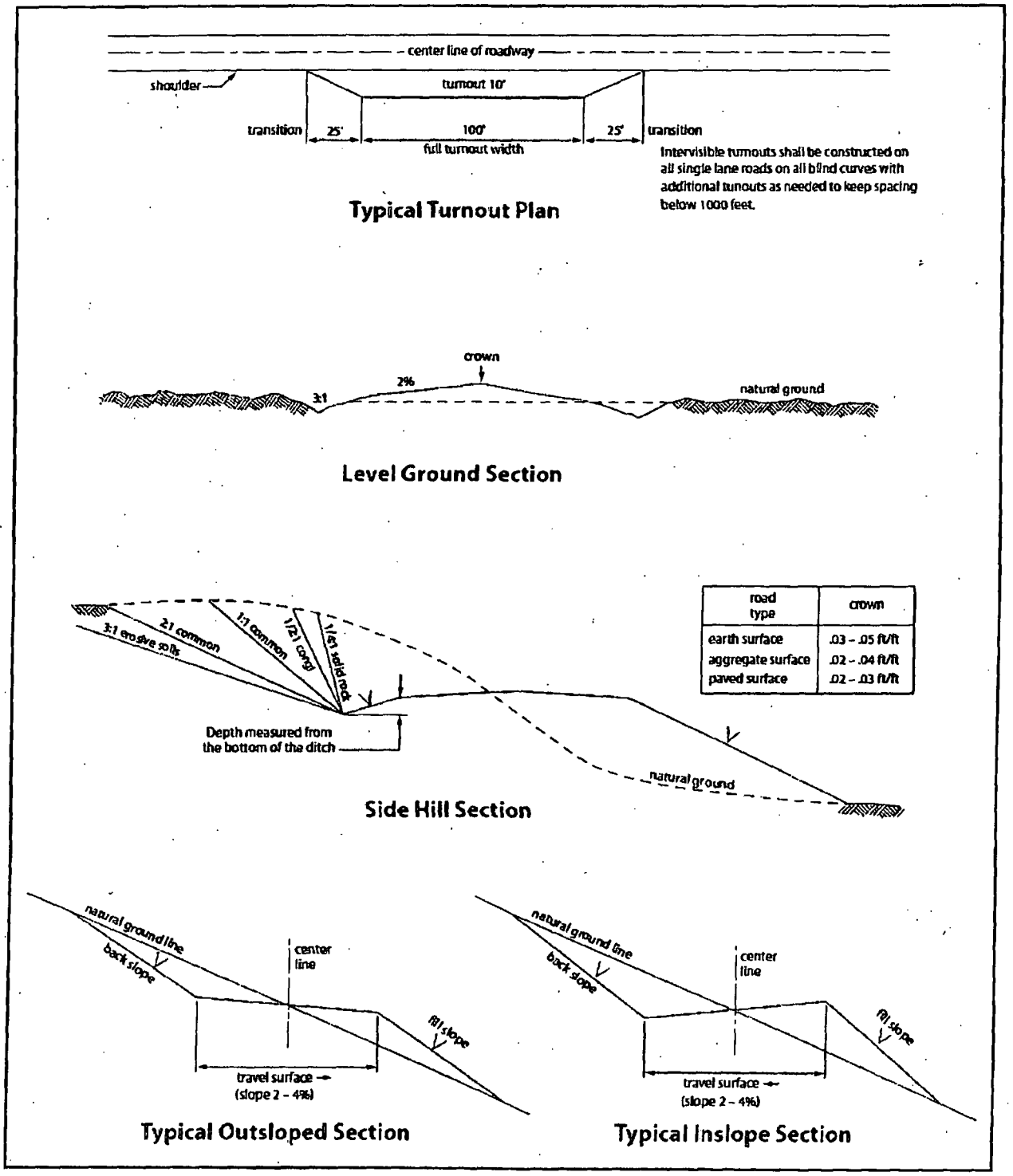


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING -Re-entry

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. CIT test
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe plug and a Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Bone Spring formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

Secretary's Potash
Possibility of water flows in the Delaware and Bone Springs Lime.
Possibility of lost circulation in the San Andres, Delaware, and Bone Springs Lime.
Potential high pressure in the Wolfcamp and Pennsylvanian group.

1. The 13-3/8" surface casing is set at 400 feet with cement circulated to surface.

2. The 8-5/8" intermediate casing is set at 1954 feet with cement circulated to surface.

A CIT is to be performed on the 8-5/8 inch casing per Onshore Oil and Gas Order 2.III.B.1.h prior to drilling the last shoe plug.

Operator shall monitor directional survey every 200' until reaching the Bone Spring formation to ensure there is no deviation as another well is in close proximity.

Formation below the 8-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

1. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Operator has proposed two DV tools at depths of 12750' and 9000'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

a. First stage to DV tool:

☒ Cement to circulate to 2nd DV tool located at 9000'. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 20% - Additional cement may be required.**

4. Cement not required on the **7-7/8"** section as it is OH completion.

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. **Prior to drilling surface plug, the BOP is to be tested.** Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5,000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

d. The results of the test shall be reported to the appropriate BLM office.

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WELL COMPLETION

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. **Properly evaluate the injection zone utilizing open hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.**
2. **Restrict the injection fluid to the approved formation.**

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

G. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.