13-82

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MAR 13 2013
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OCD Artesia

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM-102917 3/13/2013

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 ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. RDX FEDERAL 21-44 <390727

2. Name of Operator RKI EXPLORATION & PRODUCTION, LLC. <246289?

9. API Well No. 30-015-41193

3a. Address 210 PARK AVENUE, SUITE 900 OKLAHOMA CITY, OK. 73102

3b. Phone No. *(include area code)* 405-996-5748 (BRENT UMBERHAM)

10. Field and Pool, or Exploratory BRUSHY DRAW DELAWARE EAST <8050

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 990 FSL & 990 FEL
At proposed prod. zone 1150 SAME

11. Sec., T. R. M. or Blk. and Survey or Area SECTION 21, T. 26 S., R. 30 E.

14. Distance in miles and direction from nearest town or post office* 15 MILES SOUTHEAST OF MALAGA, 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) 990'	16. No. of acres in lease 640	17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1145'	19. Proposed Depth 7400'	20. BLM/BIA Bond No. on file NLM-NMB-000460
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3019.1' GL	22. Approximate date work will start*	23. Estimated duration 25 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 Barry W. Hunt	Name *(Printed/Typed)* BARRY W. HUNT	Date 10/15/12
Title PERMIT AGENT FOR RKI EXPLORATION & PRODUCTION, LLC.		
Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)* /s/ Don Peterson	Date MAR 11 2013
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)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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
30-015-41193	8090	BRUSHY DRAW DELAWARE EAST

Property Code	Property Name	Well Number
39072	RDX FEDERAL 21	44

OGRID No.	Operator Name	Elevation
246289	RKI EXPLORATION & PRODUCTION	3027'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	21	26 S	30 E		1150	SOUTH	990	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.
40			

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.

RDX FEDERAL 21 44
NMSP-E (NAD 83)
Y = 372702.3' N
X = 681559.5' E
N LAT.= 32° 01' 25.79"
W LONG.= 103° 52' 51.14"

NMSP-E (NAD 27)
Y = 372645.0' N
X = 640373.3' E
N LAT.= 32.023706507°
W LONG.= 103.880394103°

990'
1150'

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.

Barry W. Hunt 3/5/13
Signature Date

Barry W. Hunt
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 24, 2013
Date of Survey

Signature and Seal of Professional Surveyor:

JAMES E. TOMPKINS NEW MEXICO 14729 REGISTERED PROFESSIONAL LAND SURVEYOR

James E. Tompkins

Job No.: WTC48507
JAMES E. TOMPKINS 14729
Certificate Number

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or RKI Exploration and Production, 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 15th day of October 2012.

Signed: Barry W. Hunt

Printed Name: Barry Hunt
Position: Agent for RKI Exploration & Production, LLC.
Address: 1403 Springs Farm Place, Carlsbad, NM 88220
Telephone: (575) 361-4078
E-mail: specialtpermitting@gmail.com

RKI Exploration & Production LLC
3817 NW Expressway, Suite 950, Oklahoma City, OK 73112
405-949-2221 Fax 405-949-2223

June 25th, 2012

To Whom It May Concern:

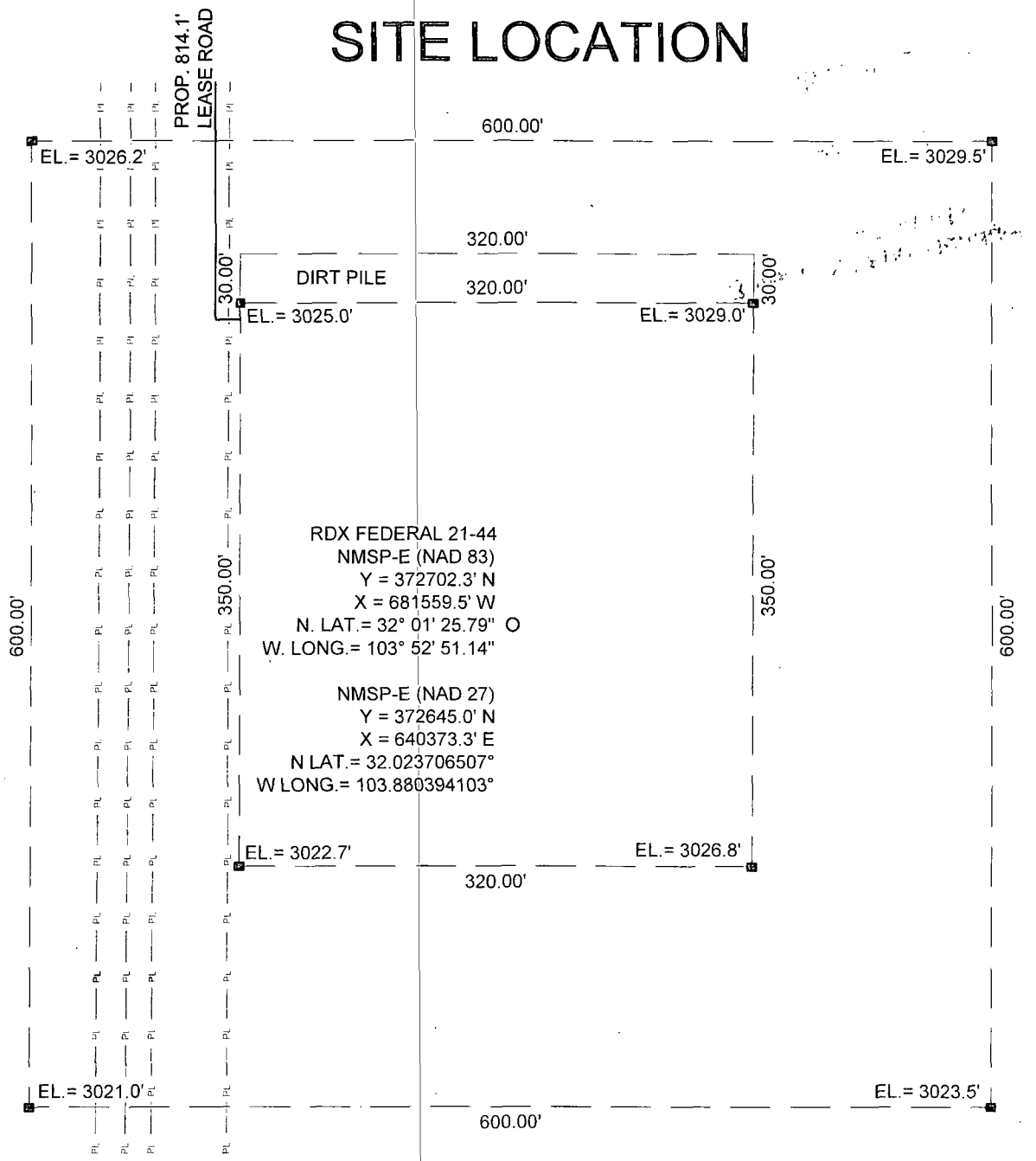
Please be advised that Mr. Barry Hunt has been retained by RKI Exploration & Production to sign as our agent on Application for Permit to Drill (APD) as well as Right of Way applications within the States of New Mexico and Texas.

If you have any questions or require additional information, please feel free to contact me at (405) 996-5771.

Sincerely,

Charles K. Ahn
EH&S/Regulatory Manager

SITE LOCATION



SCALE: 1" = 100'

SECTION 21,T 26 S, R 30 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1150' FSL & 990' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: RDX FEDERAL 21-44

DRIVING DIRECTIONS:

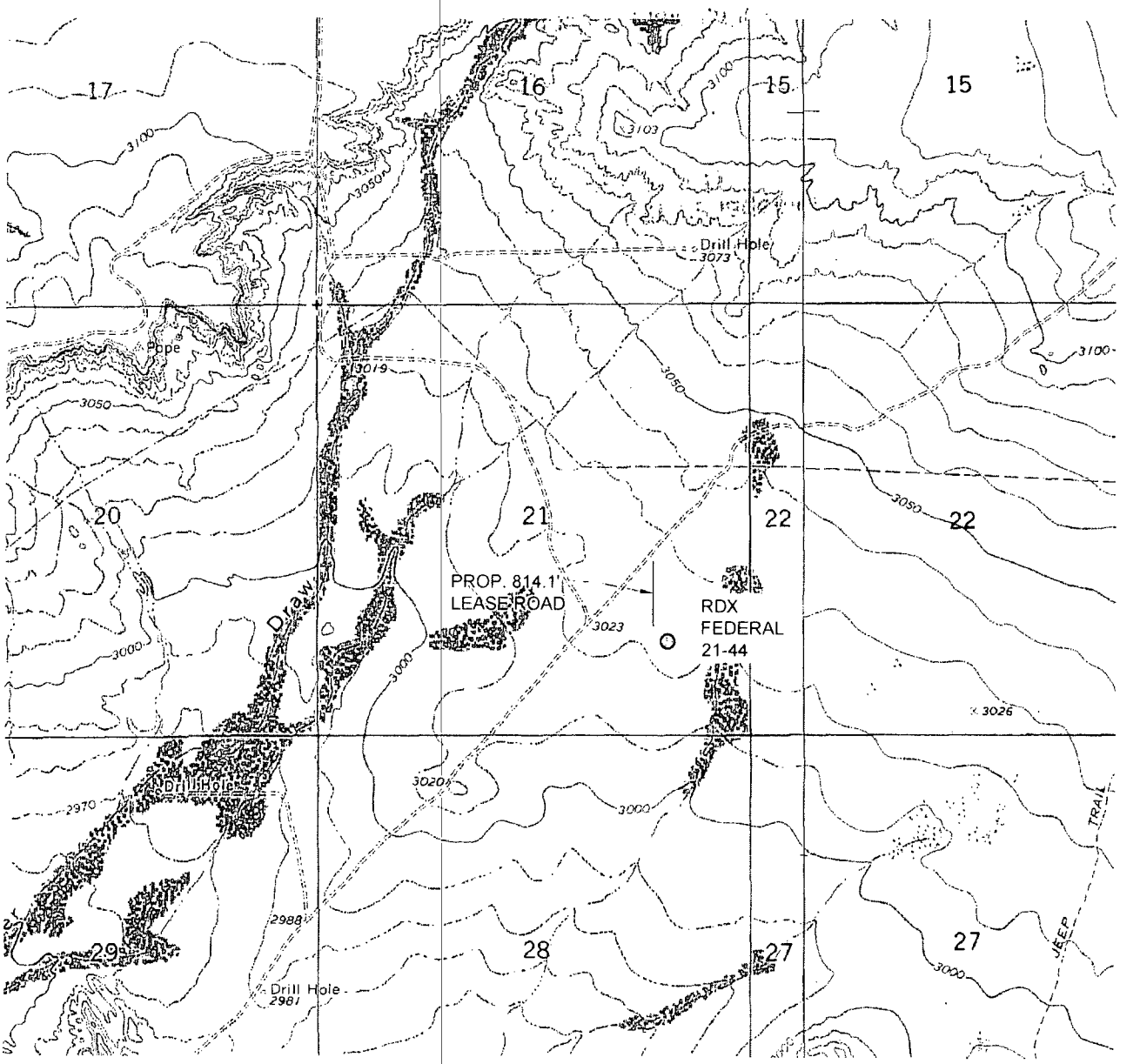
From mile marker number 4 on SH 285 go south 0.2 mile to White Thorn Road. Go northeast 11.3 miles to Tarbush Road. Go northeast 2.2 miles then south 0.2 mile then east 0.7 mile then south 0.7 mile to RDX 21-34 then south 0.3 mile then southwest 0.2 mile to the location.

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

RKI EXPLORATION & PRODUCTION

JOB No.: WTC48507

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SECTION 21,T 26 S, R 30 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1150' FSL & 990' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: RDX FEDERAL 21-44

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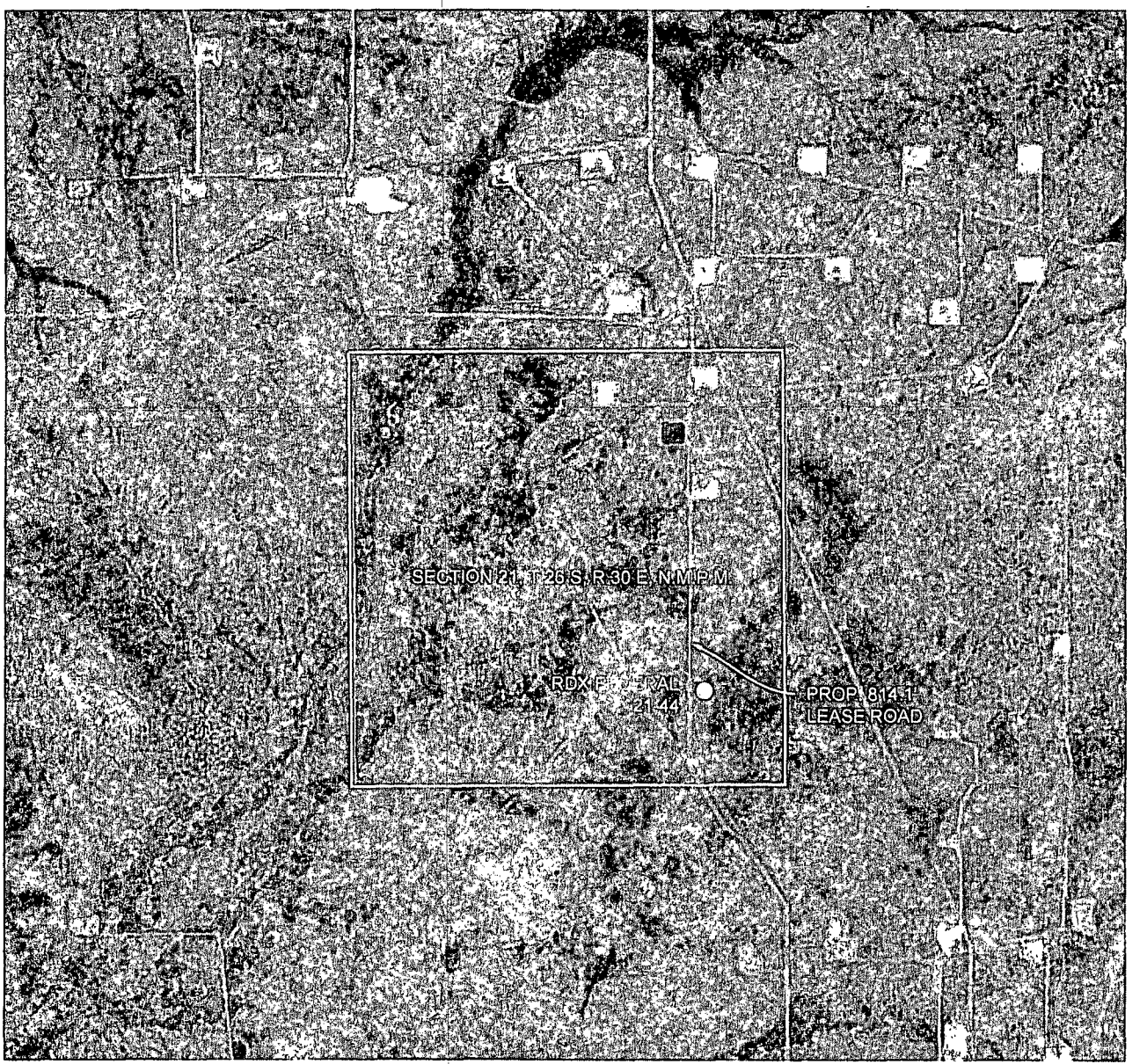
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC48507

Z:\Projects\RKI & Gas Surveys\RKI Exploration & Production\4980-RKI Exploration, Re-store & Repair RDX Fed 21-44\ Eddy Co\Drawings\4980-RDX 21-44.dwg

AERIAL MAP



SCALE: 1" = 2000'

SECTION 21,T 26 S, R 30 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1150' FSL & 990' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

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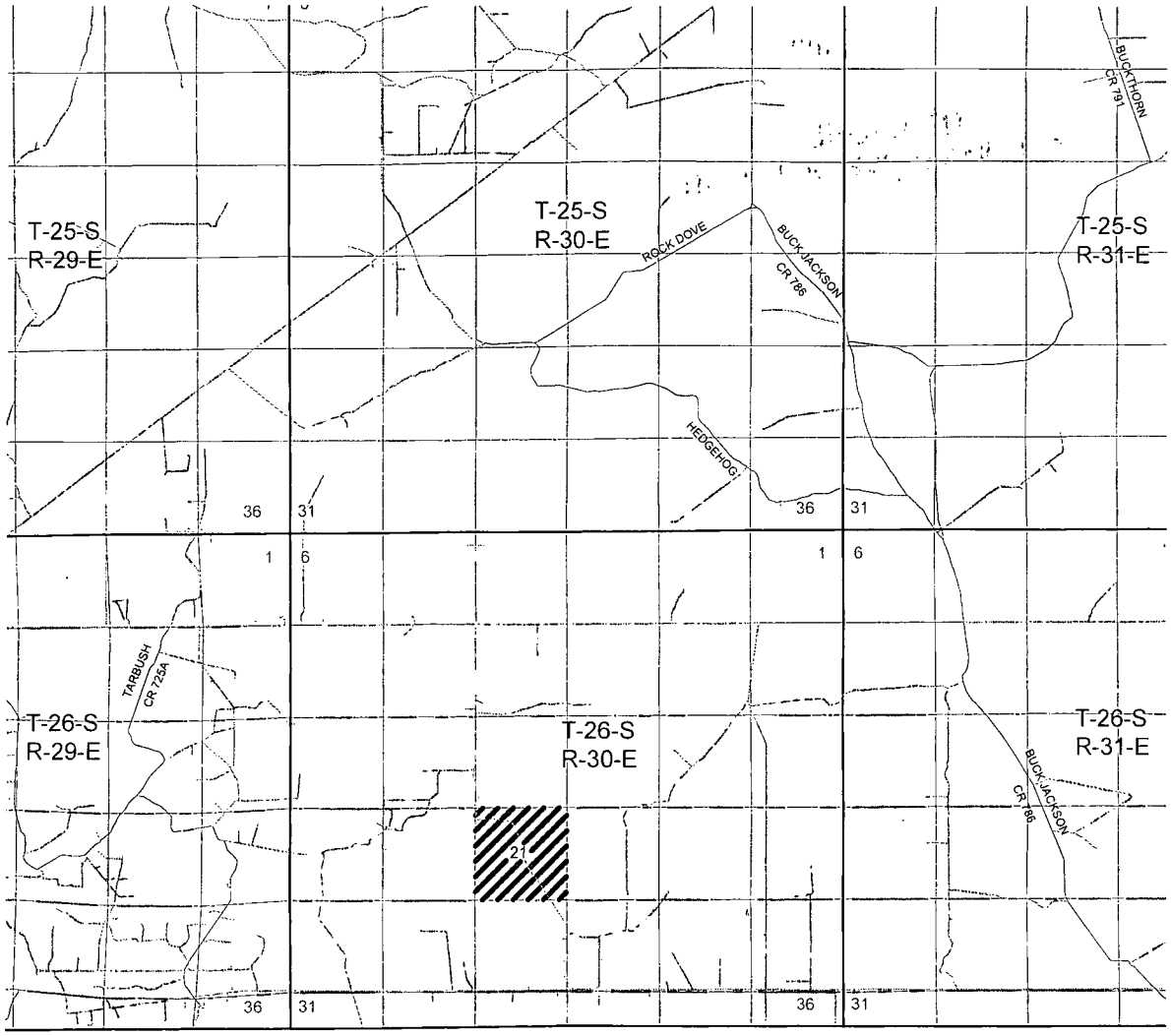
WEST TEXAS CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC48507

Z:\Projects\Oil & Gas Surveys\RKI Exploration & Production\48510-RKI Exploration, Inc-Lease & Aerial-RDX Fed 21-44, Eddy Co\Drawings\48510-RDX 21-44.dwg

VICINITY MAP



TEXAS

0 2 4 6

GRAPHIC SCALE OF MILES 1" = 2 MILE

SECTION 21,T 26 S, R 30 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1150' FSL & 990' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: RDX FEDERAL 21-44

DRIVING DIRECTIONS:

From mile marker number 4 on SH 285 go south 0.2 mile to White Thorn Road. Go northeast 11.3 miles to Tarbush Road. Go northeast 2.2 miles then south 0.2 mile then east 0.7 mile then south 0.7 mile to RDX 21-34 then south 0.3 mile then southwest 0.2 mile to the location.

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

RKI EXPLORATION & PRODUCTION

JOB No.: WTC48507

Z:\Projects\Dr. K Gas Surveys\RKI Exploration & Production\WTC\D-RKI Exploration, Re-stake & Replat RDX Fed 21-44, Eddy Co\Drawings\WTC\D-RDX 21-44.dwg

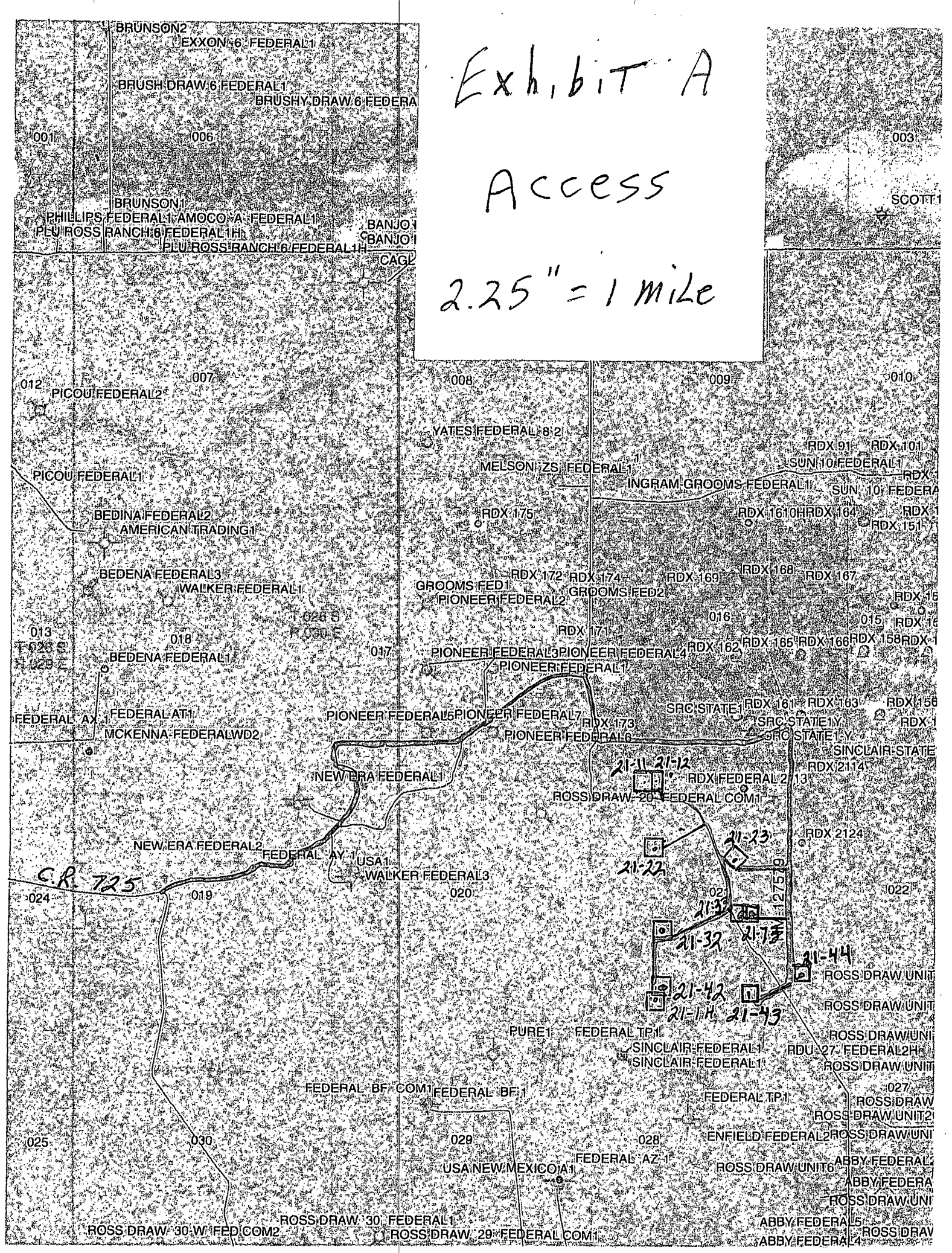
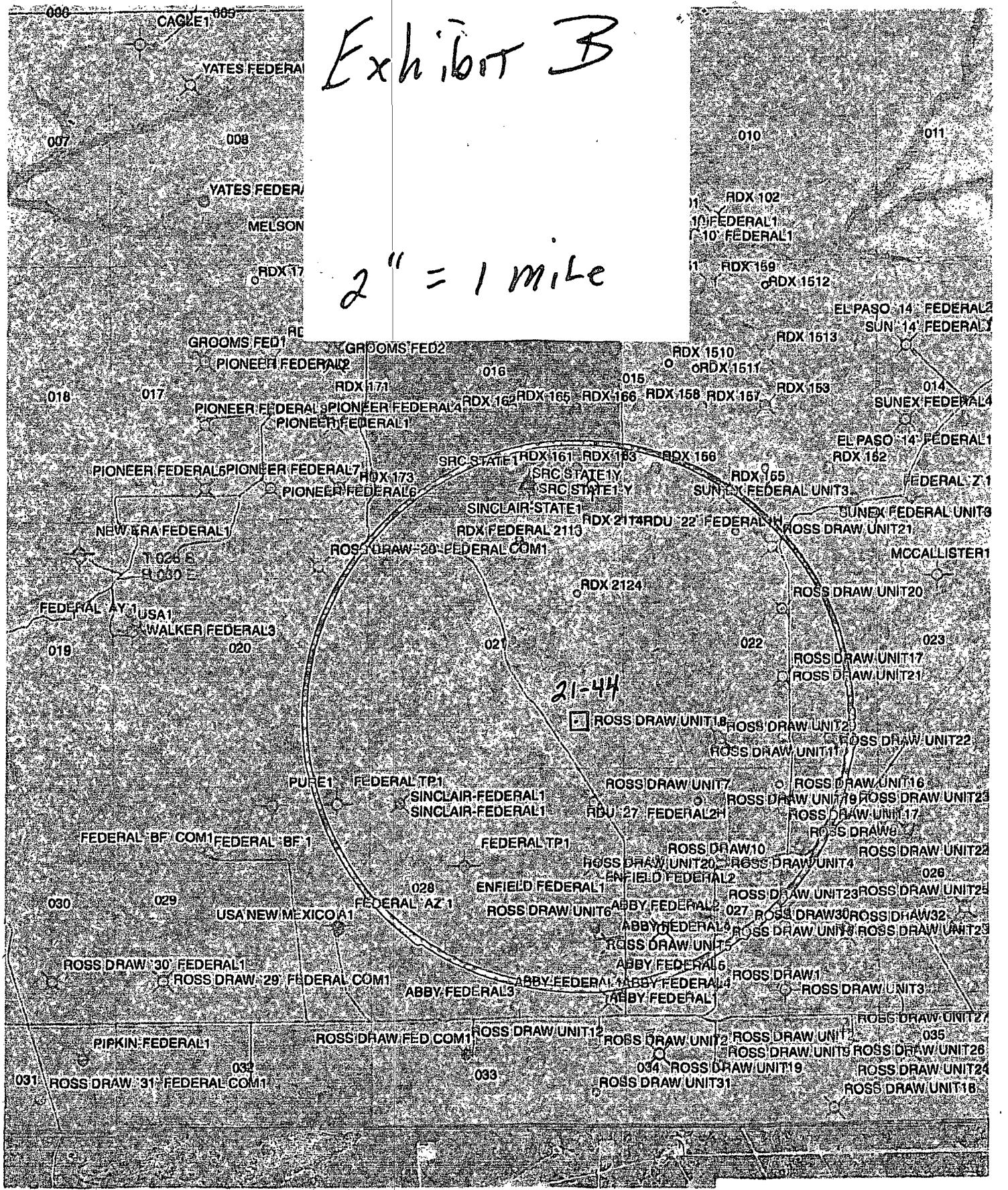


Exhibit A
Access
2.25" = 1 mile
BRUNSON2
EXXON 6 FEDERAL1
BRUSH DRAW 6 FEDERAL1
BRUSHY DRAW 6 FEDERA
001
006
003
BRUNSON1
PHILLIPS FEDERAL1
AMOCO A FEDERAL1
PLU ROSS RANCH 6 FEDERAL1H
BANJO1
BANJO
CAGL
SCOTT1
012
007
008
009
010
PICOU FEDERAL2
YATES FEDERAL 8 2
PICOU FEDERAL1
MELSON ZS FEDERAL1
INGRAM GROOMS FEDERAL1
RDX 91
RDX 101
SUN 10 FEDERAL1
SUN 10 FEDERA
BEDINA FEDERAL2
AMERICAN TRADING1
RDX 175
RDX 1610H
RDX 164
RDX 151
BEDENA FEDERAL3
WALKER FEDERAL1
GROOMS FED1
PIONEER FEDERAL2
RDX 172
RDX 174
RDX 169
RDX 168
RDX 167
GROOMS FED2
013
018
017
016
015
RDX 171
BEDENA FEDERAL1
PIONEER FEDERAL3
PIONEER FEDERAL4
PIONEER FEDERAL1
RDX 162
RDX 165
RDX 166
RDX 158
FEDERAL AX 1
FEDERAL AT1
MCKENNA FEDERALWD2
PIONEER FEDERAL5
PIONEER FEDERAL7
RDX 173
PIONEER FEDERAL6
SRC STATE1
RDX 161
RDX 163
RDX 156
SRC STATE1Y
SINCLAIR STATE
RDX 2114
21-11
21-12
RDX FEDERAL 2 13
NEW ERA FEDERAL1
ROSS DRAW 20 FEDERAL COM1
21-23
RDX 2124
NEW ERA FEDERAL2
FEDERAL AY 1
USA1
WALKER FEDERAL3
21-22
C.R. 725
024
019
020
021
022
21-31
21-32
21-33
21-44
ROSS DRAW UNIT
21-42
21-41H
21-43
ROSS DRAW UNIT
PURE1
FEDERAL TP1
SINCLAIR FEDERAL1
SINCLAIR FEDERAL1
ROSS DRAW UNI
RDU 27 FEDERAL2H
ROSS DRAW UNIT
FEDERAL BF COM1
FEDERAL BF 1
FEDERAL TP1
027
ROSS DRAW
ROSS DRAW UNIT2
025
030
029
028
ENFIELD FEDERAL2
ROSS DRAW UNI
FEDERAL AZ 1
ROSS DRAW UNIT6
ABBY FEDERAL
USA NEW MEXICO A1
ABBY FEDERA
ROSS DRAW UNI
ROSS DRAW 30 FEDERAL1
ROSS DRAW 30 W FED COM2
ROSS DRAW 29 FEDERAL COM1
ABBY FEDERAL 5
ROSS DRAV
ABBY FEDERAL 4

Exhibit B

2" = 1 mile



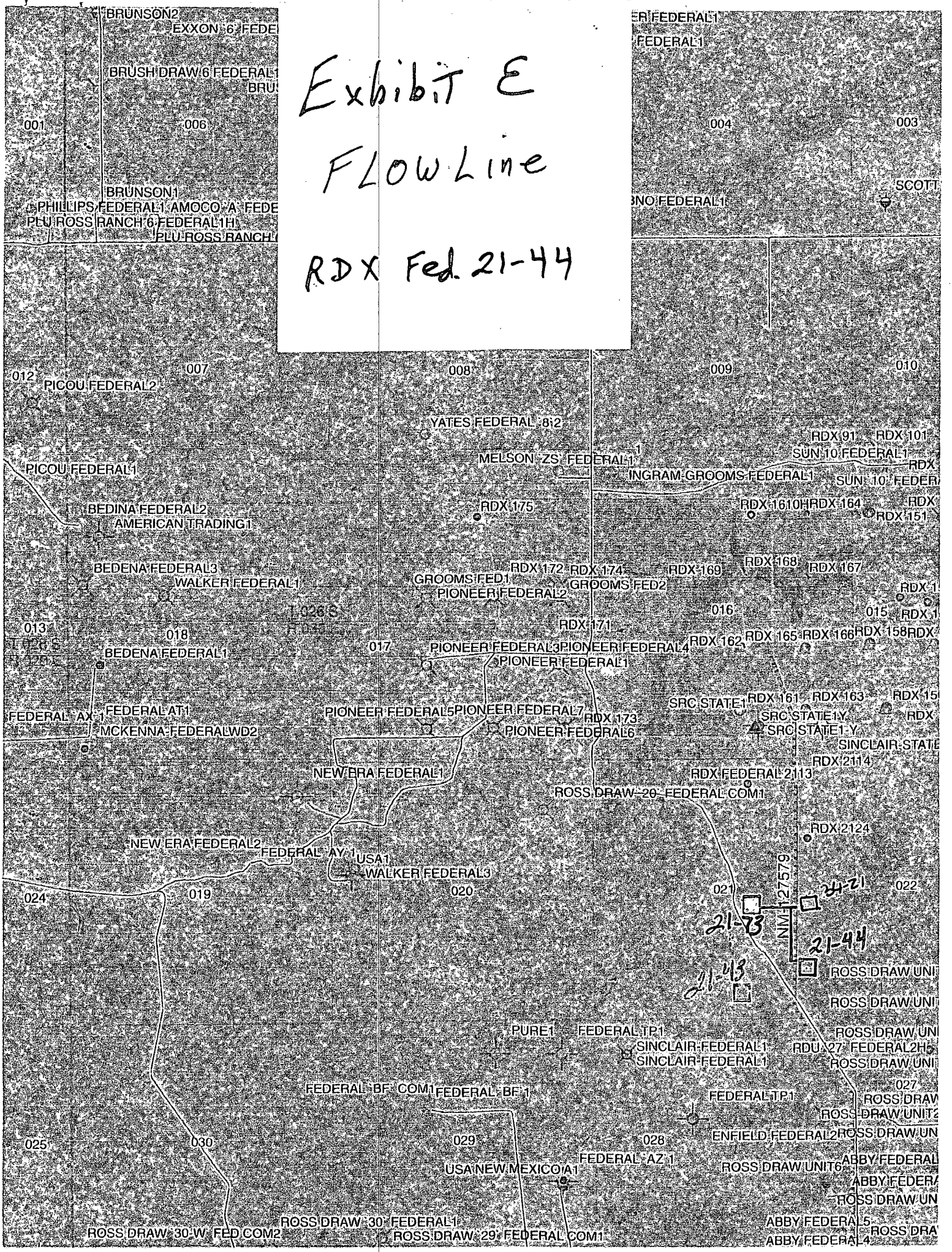
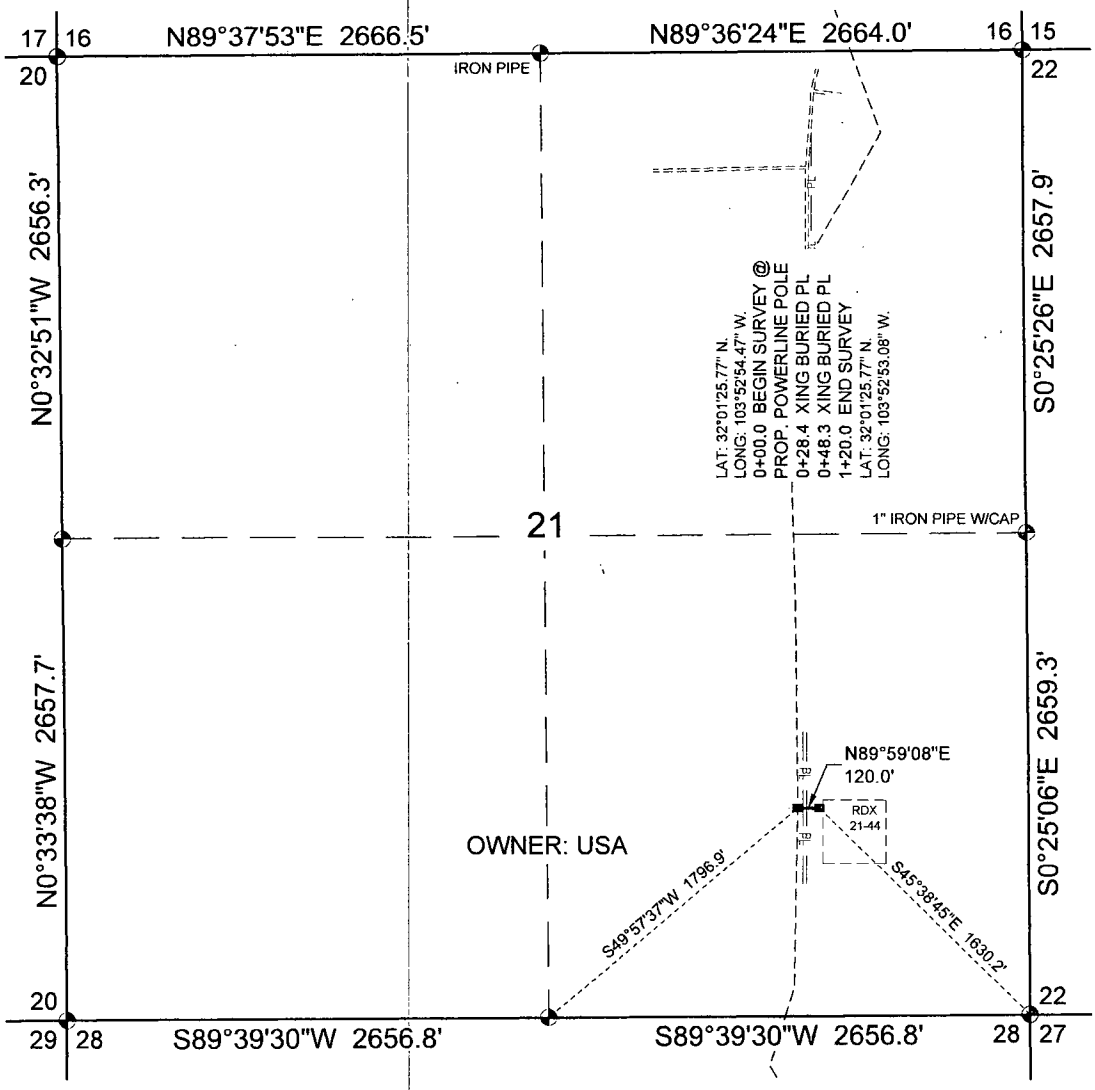


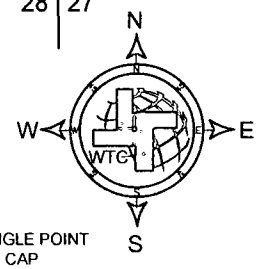
Exhibit E
FLOW Line
RDX Fed. 21-44
BRUNSON 2
EXXON 6 FEDE
BRUSH DRAW 6 FEDERAL 1
BRUNSON 1
PHILLIPS FEDERAL 1 AMOCO A FEDE
PLU ROSS RANCH 6 FEDERAL 1H
PLU ROSS RANCH
001
006
004
003
SCOTT
007
008
009
010
012
PICOU FEDERAL 2
YATES FEDERAL 8 2
PICOU FEDERAL 1
MELSON ZS FEDERAL 1
INGRAM GROOMS FEDERAL 1
SUN 10 FEDERAL 1
RDX 91
RDX 101
BEDINA FEDERAL 2
AMERICAN TRADING 1
RDX 175
RDX 1610H
RDX 164
RDX 151
BEDENA FEDERAL 3
WALKER FEDERAL 1
GROOMS FED 1
GROOMS FED 2
PIONEER FEDERAL 2
RDX 172
RDX 174
RDX 169
RDX 168
RDX 167
T 26 S
R 33 E
013
018
017
016
015
RDX 171
BEDENA FEDERAL 1
PIONEER FEDERAL 3
PIONEER FEDERAL 4
PIONEER FEDERAL 1
RDX 162
RDX 165
RDX 166
RDX 158
FEDERAL AX 1
FEDERAL AT 1
MCKENNA FEDERAL WD 2
PIONEER FEDERAL 5
PIONEER FEDERAL 7
PIONEER FEDERAL 6
RDX 173
SRC STATE 1
RDX 161
RDX 163
SRC STATE 1 Y
SINCLAIR STATE
RDX 2114
NEW BRA FEDERAL 1
RDX FEDERAL 2113
ROSS DRAW 20 FEDERAL COM 1
RDX 2124
NEW ERA FEDERAL 2
FEDERAL AY 1
USA 1
WALKER FEDERAL 3
024
019
020
021
022
NM 12757 S
21-21
21-73
21-44
21-43
ROSS DRAW UNI
PURE 1
FEDERAL TP 1
SINCLAIR FEDERAL 1
SINCLAIR FEDERAL 1
RDU 27 FEDERAL 2H
ROSS DRAW UNI
FEDERAL BF COM 1
FEDERAL BF 1
FEDERAL TP 1
027
ROSS DRAW
ROSS DRAW UNIT 2
ENFIELD FEDERAL 2
ROSS DRAW UN
025
030
029
028
FEDERAL AZ 1
ROSS DRAW UNIT 6
ABBY FEDERAL
USA NEW MEXICO A 1
ABBY FEDERA
ROSS DRAW UN
ROSS DRAW 30 FEDERAL 1
ROSS DRAW 30 W FED COM 2
ROSS DRAW 29 FEDERAL COM 1
ABBY FEDERAL 5
ABBY FEDERAL 4
ROSS DRA

Exhibit E (E-Line)

SECTION 21, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY CO., NM.



A STRIP OF LAND 30 FEET IN WIDTH AND 120.0 FEET, 0.02 MILE OR 7.27 RODS IN LENGTH, SITUATED IN SECTION 21, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING 15 FEET LEFT AND 15 FEET RIGHT OF THE SURVEY OF CENTERLINE AS SHOWN HEREON.



NOTE:
1. BASIS OF BEARING IS A TRANSVERSE MERCATOR PROJECTION OF THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83, BASED ON NGS STATION "LOVING", AND DISTANCES ARE OF GRID VALUE.

O = BEGIN, END OR ANGLE POINT
◔ = FND. USGS BRASS CAP

1000 0 1000 2000 FEET

JAMES E. TOMPKINS NEW MEXICO 14729 REGISTERED PROFESSIONAL LAND SURVEYOR

I, JAMES E. TOMPKINS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14729, DO HEREBY CERTIFY THAT THIS PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

James E. Tompkins 12/27/2012

JAMES E. TOMPKINS, N.M. P.L.S. No.14729

SURVEY DATE: 12/19/12
JOB NO.:48715

DRAFT: GMY
SHEET: 1 OF 1

RKI EXPLORATION & PRODUCTION
A PROPOSED ELECTRICAL LINE IN SECTION 21, T26S, R30E, N.M.P.M., EDDY COUNTY, NEW MEXICO

WTC Engineers - Surveyors

WEST TEXAS CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st. Street
Andrews, TX 79714
(432) 523-2181

RKI Exploration & Production, LLC

DRILLING PLAN

Well RDX Fed 21-44
Location 990 FSL 990 FEL
Section 21-26S-30E
County Eddy
State New Mexico

1) The elevation of the unprepared ground is 3,019 feet above sea level.

2) The geologic name of the surface formation is Quaternary - Alluvium.

3) A rotary rig will be utilized to drill the well to 7,400 feet and run casing. This equipment will then be rigged down and the well will be completed with a workover rig.

4) Proposed depth is 7,400 feet.

5) Estimated tops:

Alluvium	*			
Rustler	861			
Salado	1,200			
Castile	1,700			
Lamar Lime	3,418			
Base of Lime	3,432			
Delaware Top	3,457			
Bell Canyon Sand	3,457	Oil	1,497 psi	
Cherry Canyon Sand	4,523	Oil	1,958 psi	
Brushy Canyon Sand	5,589	Oil	2,420 psi	
Bone Spring	7,253		3,141 psi	
TD	7,400		3,204 psi	144 degree F

* Fresh water anticipated at approximately 180 feet.
The Bone Spring will be penetrated as rathole to enable the entire Brushy Canyon to be logged.

6) Pressure control equipment:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram type (3,000 psi WP) preventer, a bag-type annular preventer (3,000 psi WP), and rotating head. Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and pipe rams (sized to accommodate the drill pipe size being utilized) on bottom. A 13 3/8" SOW x 13 5/8" 3M casing head will be installed on the 13 3/8" casing and utilized until total depth is reached. All BOP and associated equipment will be tested to 3,000 psi and the annular will be tested to 1,500 psi after setting the 13 3/8" string. The 13 3/8" and 9 5/8" casing will be tested to .22 psi per ft of casing string length or 1,500 psi whichever is greater, but not to exceed 70% of the minimum yield.
The 9 5/8" casing will be hung in the casing head and the stack will not be nippled down at this point.
The stack will not be isolated and tested after running the 9 5/8" casing, but will be tested along with the 9 5/8" casing. Pipe rams will be operated and checked each 24 hour period and each time the drill string is out of the hole. These function test will be documented on the daily driller's log.
A drilling spool or blowout preventer with 2 side outlets (choke side shall be 3" minimum diameter, kill side shall be at least 2" diameter).
2 kill line valves, one of which will be a check valve.
2 chokes on the manifold along with a pressure gauge.
Upper kelly cock valve with handle available.
Safety valve and subs to fit all drill string connections in use.
All BOP equipment connections subjected to pressure will be flanged, welded, or clamped.
Fill up line above the upper most preventer.

7) Casing program: ALL NEW CASING

Hole Size	Top	Bottom	OD Csg	Wt/Grade	Connection	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 1/2"	0	925	13 3/8"	54.5#/J-55	ST&C	2.82	5.74	10.20
12 1/2"	0	3,425	9 5/8"	40#/J-55	LT&C	1.36	5.41	3.80
7 7/8"	0	7,400	5 1/2"	17#/N-80	LT&C	1.96	1.55	2.77

8) Cement program:

Surface 17 1/2" hole
Pipe OD 13 3/8"
Setting Depth 925 ft
Annular Volume 0.69462 cf/ft
Excess 1 100 %

Lead 581 sx 1.75 cf/sk 13.5 ppg
Tail 200 sx 1.34 cf/sk 14.8 ppg
Lead: "C" + 4% PF20 (gel) + 2% PF1 (CC) + .125 pps PF29 (CelloFlake) + .2% PF46 (antifoam)
Tail: "C" + 1% PF1 (CC)
Top of cement: Surface

Intermediate 12 1/2" hole
Pipe OD 9 5/8"
Setting Depth 3,425 ft
Annular Volume 0.31318 cf/ft 0.3627 cf/ft
Excess 1 100 %
Total Annular Volume 1118 cf
With Excess 2237 cf

Lead 952 sx 2.07 cf/sk 12.6 ppg
Tail 200 sx 1.33 cf/sk 14.8 ppg
Lead: 35/65 Poz "C" + 5% PF44 (salt) + 6% PF20 (gel) + 3 pps PF42 (KoalSeal) +
.125 pps PF29 (CelloFlake) + .2% PF46 (antifoam) +1% PF1 (CC)
Tail: "C" + .2% PF13 (retarder)
Top of cement: Surface

Production 7 7/8" hole
Pipe OD 5 1/2"
Setting Depth 7,400 ft
Annular Volume 0.1733 cf/ft 0.26074 cf/ft 300 ft
Excess 0.35 35 %
Total Annular Volume 767 cf
With Excess 1,036 cf
DV Tool Depth 5,500 ft

Stage 1
Lead: 302 sx 1.47 cf/sk 13.0 ppg
Lead: PVL + 2% PF174 (expanding agent) + .3% PF167 (Uniflac) + .1% PF65 (dispersant) + .2% PF13 (retarder) + .25 pps PF46 (antifoam)
Top of cement: DV tool

Stage 2
Lead: 164 sx 2.04 cf/sk 12.6 ppg
Tail: 175 sx 1.47 cf/sk 13.0 ppg
Lead: 35/65 Poz "C" + 5% PF44 (salt) + 6% PF20 (gel) + .125 pps PF29 (CelloFlake) + .2% PF13 (retarder) + .25 pps PF46 (antifoam)
Tail: PVL + 1.3% PF44 (salt) + 5% PF174 (expander) +.5% FP606 (gel suppressing agent) +
.25 pps PF46 (antifoam) + .2% PF13 (retarder)
Top of cement: 3,125 ft

9) Mud program:

Top	Bottom	Mud Wt.	Vis	PV	YP	Fluid Loss	Type System
0	925	8.5 to 8.9	32 to 36	6 - 12	2 - 8	NC	Fresh Water
925	3,425	9.8 to 10.0	28 to 30	1 - 6	1 - 6	NC	Brine
3,425	7,400	8.9 to 9.1	28 to 36	1 - 6	1 - 6	NC	Fresh Water

10) Logging, coring, and testing program: See COA

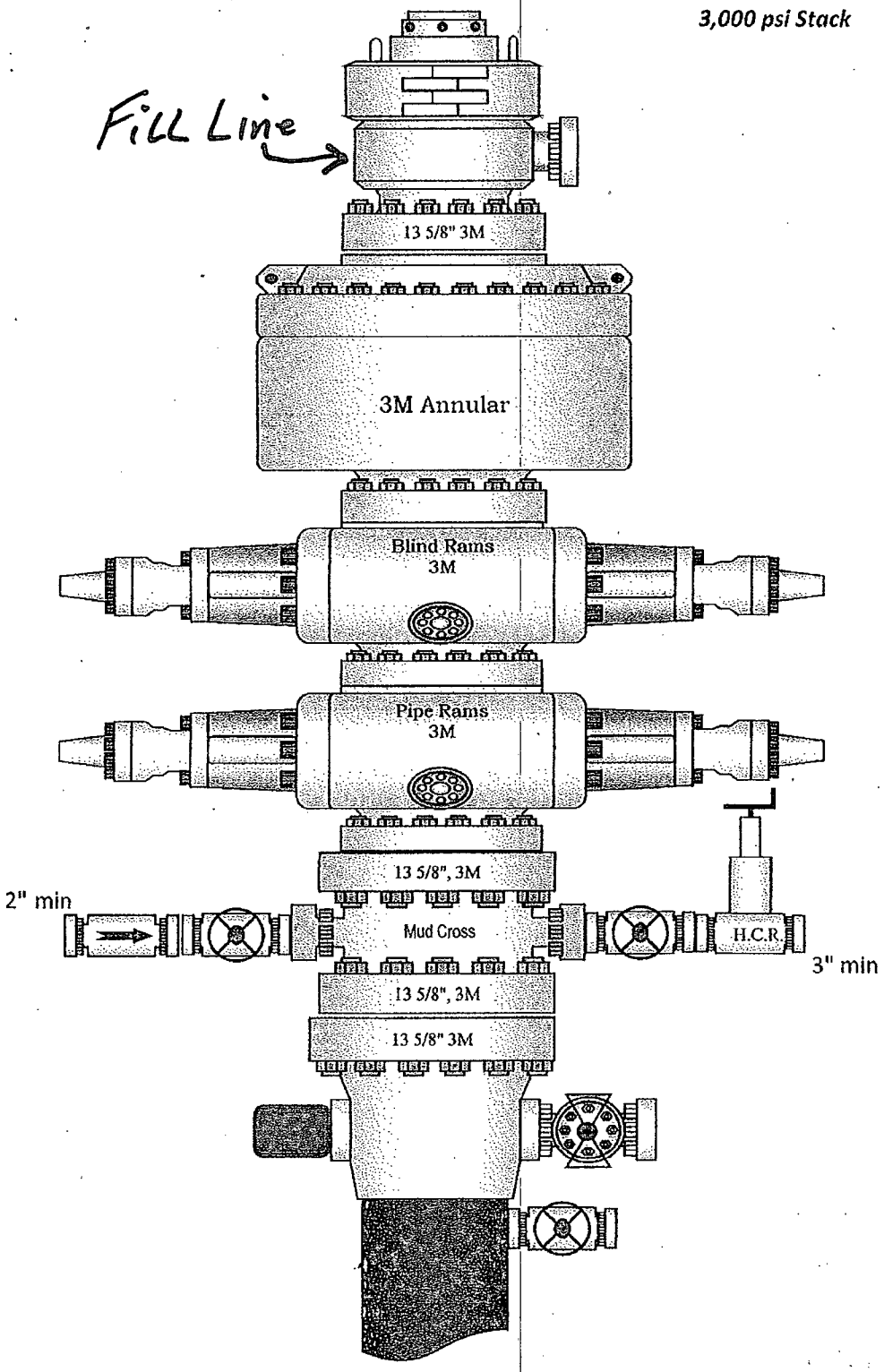
No drillstem test are planned
Total depth to intermediate: CNL, Caliper, GR, DLL,
Intermediate to surface: CNL, GR
No coring is planned

11) Potential hazards:

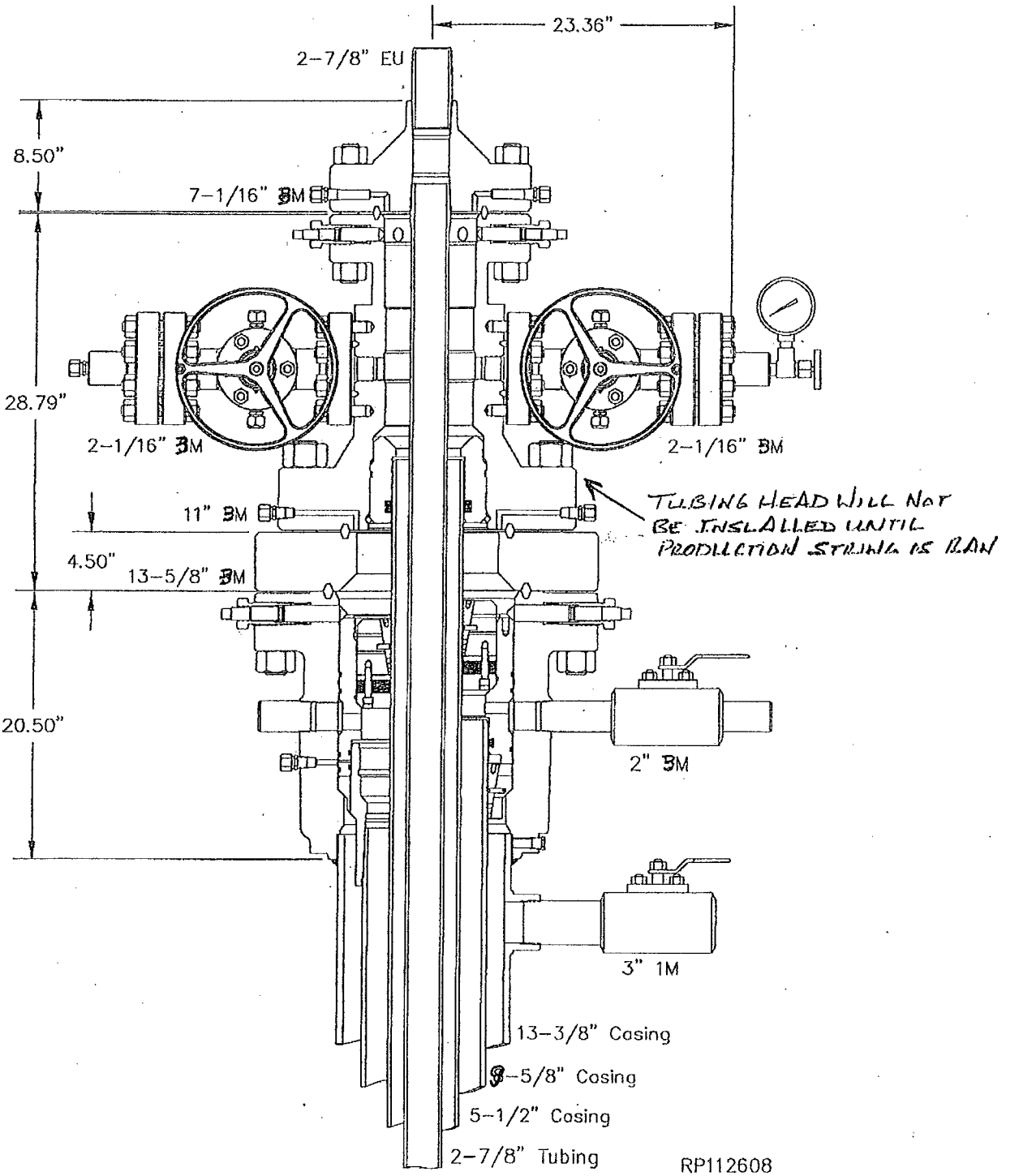
No abnormal pressure or temperature is expected. No H2S is known to exist in the area.
Lost circulation is not anticipated, but lost circulation equipment will be on location and readily available if needed.

12) Anticipated Start Date Dec '12
Duration 25 days

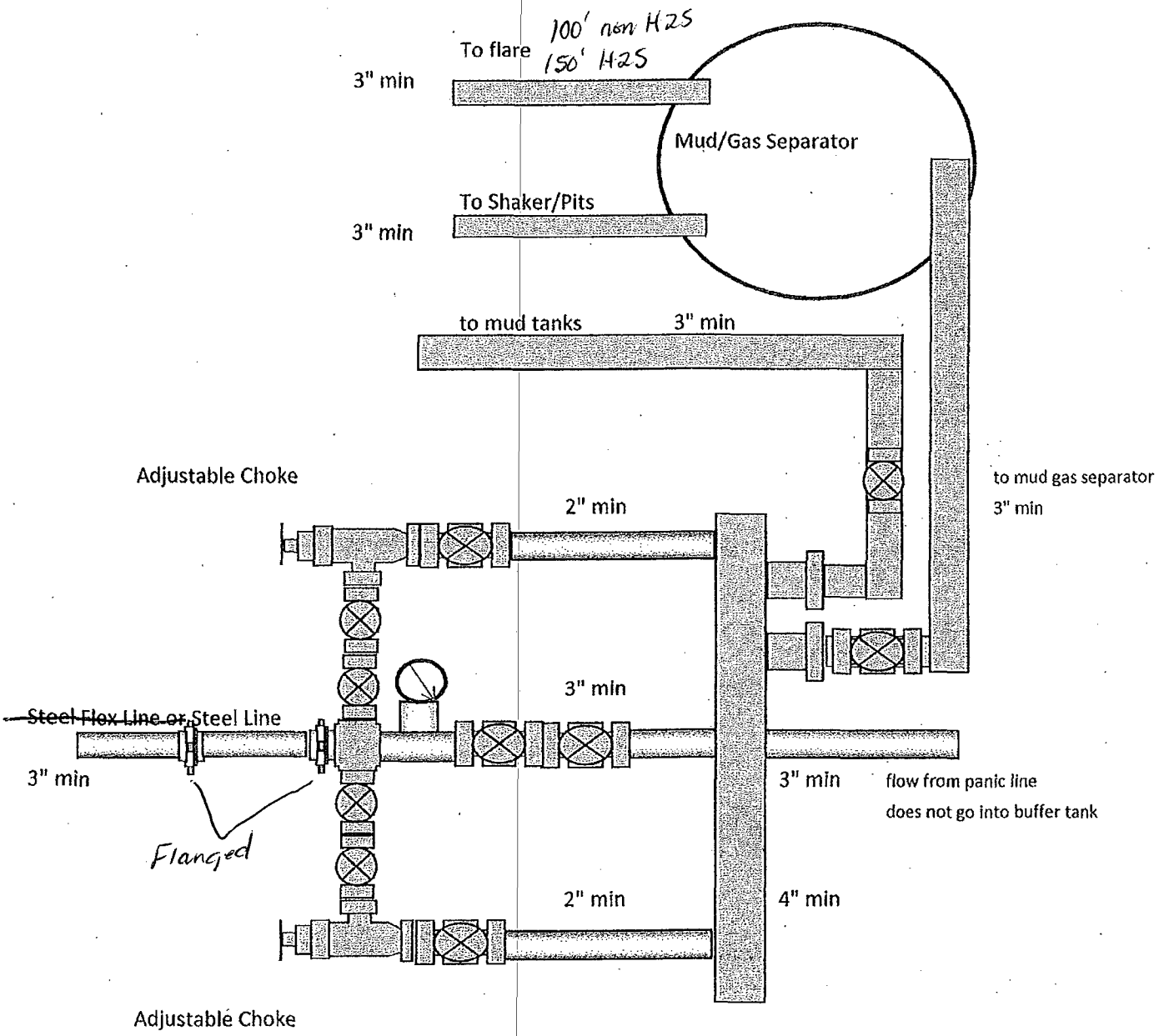
3,000 psi Stack



System Drawing



3,000 psi Manifold



RKI Exploration and Production
3817 N. W. Expressway, Suite 950
Oklahoma City, OK. 73112

Closed Loop System

Design Plan

Equipment List

2 – 414 Swaco Centrifuges
2 – 4 screen Mongoose shale shakers
2 – 250 bbl. tanks to hold fluid
2 – CRI Bins with track system
2 – 500 bbl. frac tanks for fresh water
2 – 500 bbl. frac tanks for brine water

Operation and Maintenance

- Closed Loop equipment will be inspected daily by each tour and any necessary maintenance performed
- Any leak in system will be repaired and/or contained immediately
- OCD notified within 48 hours
- Remediation process started

Closure Plan

During drilling operations, all liquids, drilling fluids and cuttings will be hauled off via CRI (Controlled Recovery Incorporated). Permit #: R-9166.

Plat for Closed Loop System

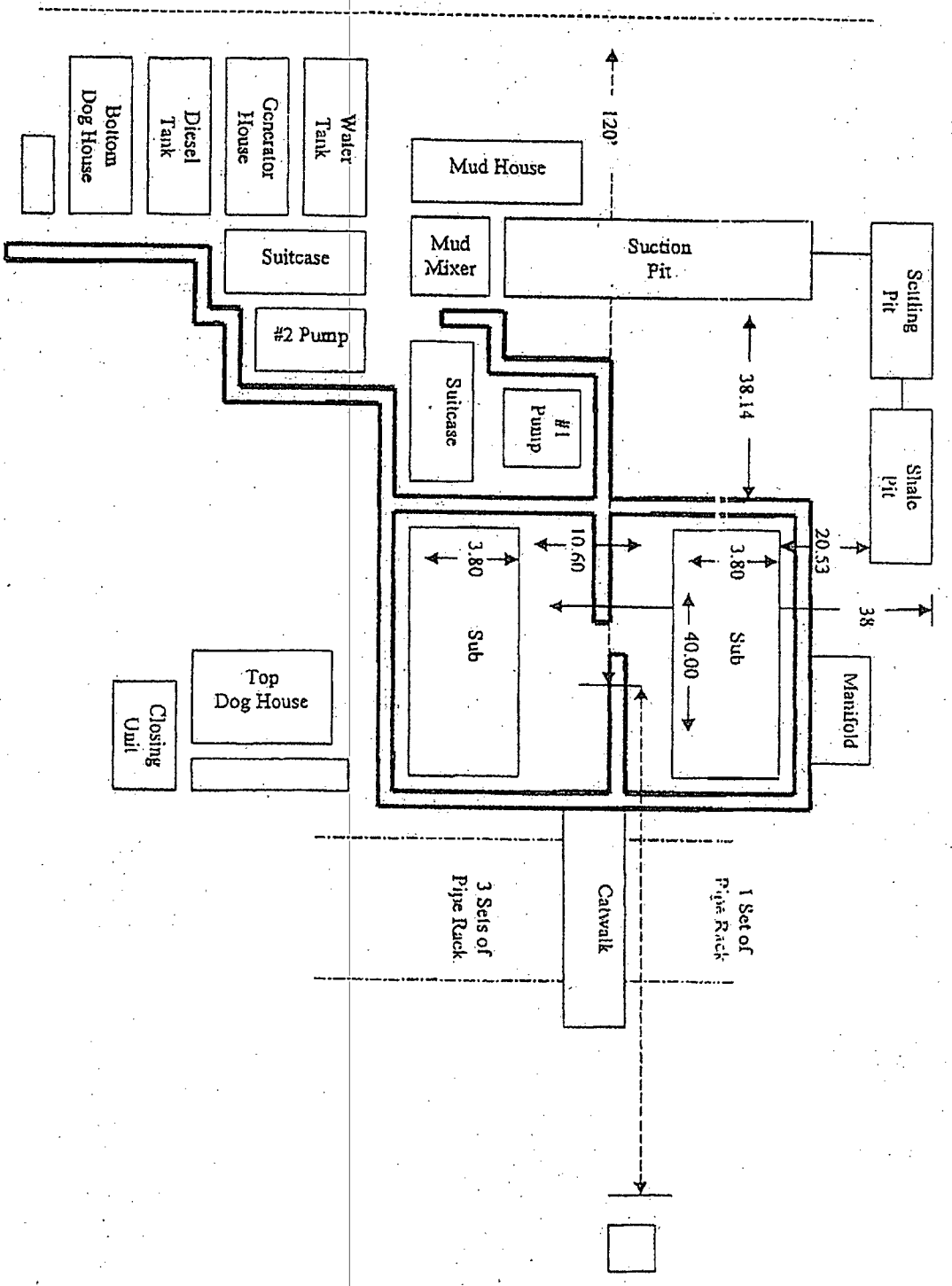
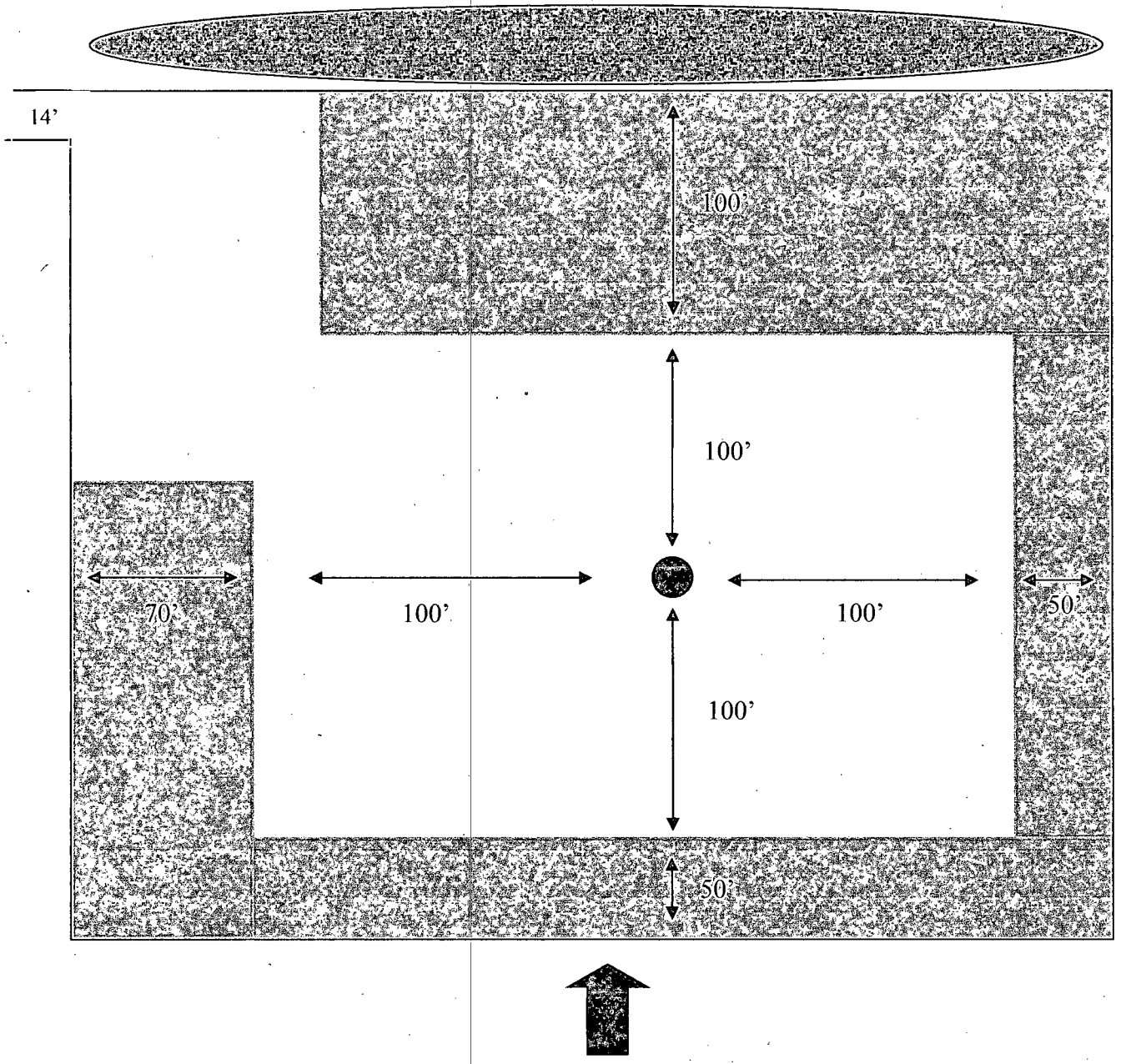


EXHIBIT C

Interim Reclamation & Production Facilities
RDX FEDERAL 21-44
V-DOOR SOUTH



LEGEND

- Well Bore
- Topsoil
- Interim Reclamation
- Berm
- Production Facilities
- NORTH

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI EXPLORATION & PRODUCTION
LEASE NO.:	NM102917
WELL NAME & NO.:	44-RDX FEDERAL 21
SURFACE HOLE FOOTAGE:	1150'/S. & 990'/E.
LOCATION:	Section 21, T. 26 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)

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.

Phantom Bank Heronries

Stipulations/Condition of Approval for Phantom Banks Heronries: Surface disturbance will not be allowed within up to 200 meters of active heronries or by delaying activity for up to 120 days, or a combination of both. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

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 stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used 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. 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 (20) 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.

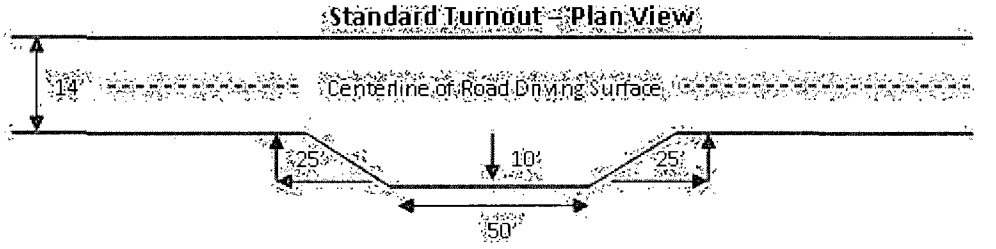
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

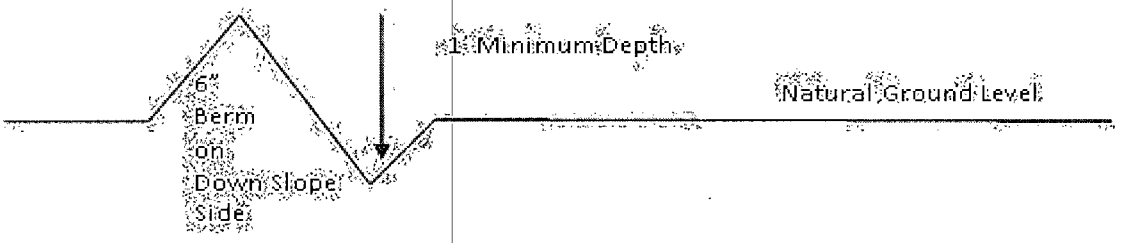
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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:

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

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

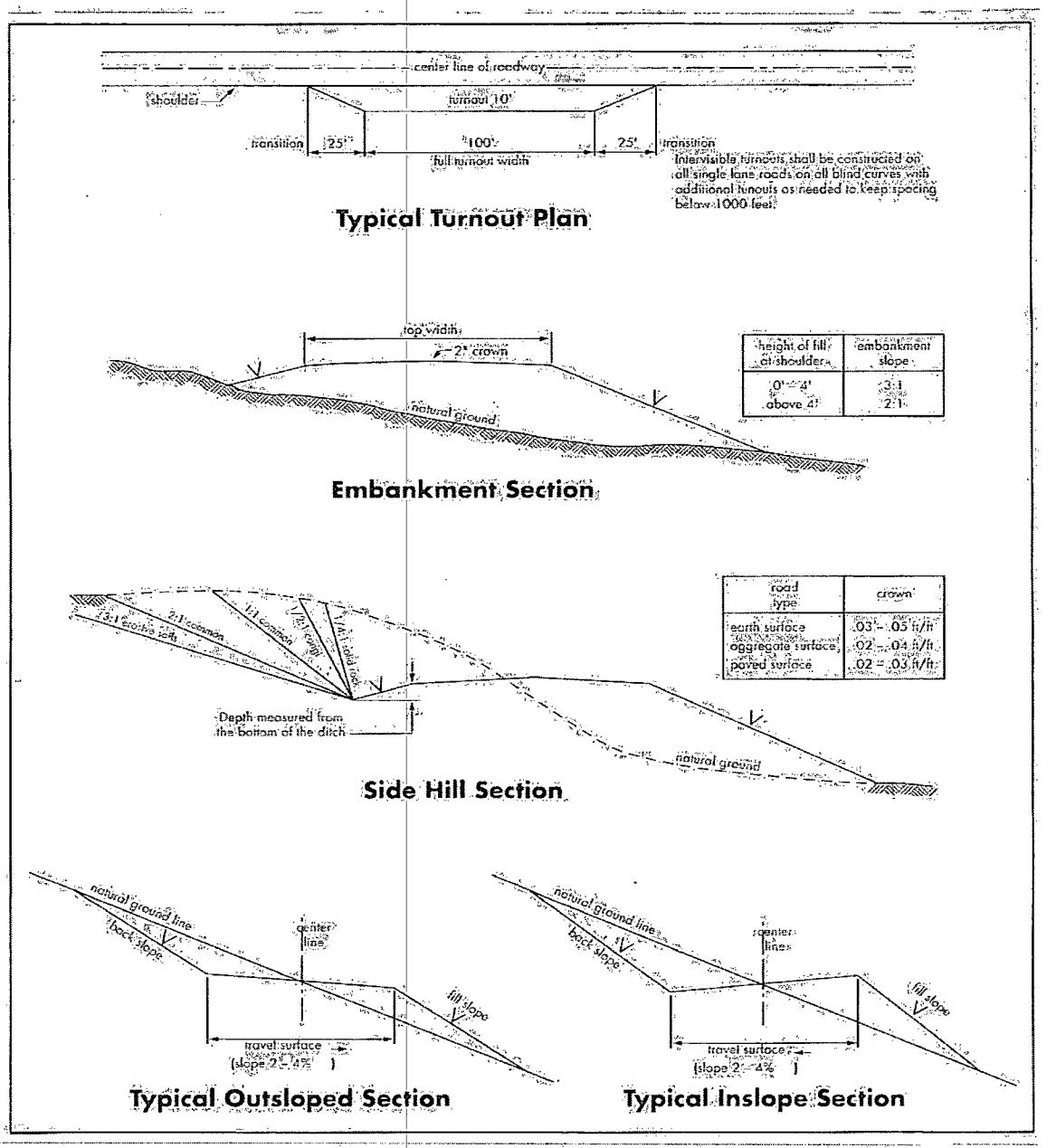
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

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

1. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. 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 are 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 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. 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.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

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. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium Cave/Karst
Possible lost circulation in Redbeds and evaporates to the base of the Castile group; and in the Delaware and Bone Spring groups.

1. The **13-3/8** inch surface casing shall be set at approximately **925** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
    Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

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

   a. First stage to DV tool, cement shall:

   ☒ Cement to circulate. 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. **Additional cement may be required – excess calculates to 22%.**

   b. Second stage above DV tool, cement shall:

   ☒ Cement should tie-back at least 300 feet into previous casing string. Operator shall provide method of verification.

4. 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. **Operator has proposed a multi-bowl wellhead assembly. BLM review of the actual installation procedure of this assembly does not eliminate the testing of the BOP/BOPE for the successive casing strings. A seal is broken when the lock screws are used and when the observation port is opened. There is no guarantee that when these are tightened that a pressure seal exists without performing another test is performed on this segment of the BOP/BOPE. BOP/BOPE is still required for the successive casing strings.**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

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.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

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, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **20** feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas,

the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. Special Stipulations:

Lesser Prairie-Chicken
Oil and gas activities 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, geophysical exploration other than 3-D operations, and 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. 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 ft. from the source of the noise.

(March 1989)

C. ELECTRIC LINES
Not applied for in permit.

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.

Seed Mixture 4, for Gypsum Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Alkali Sacaton (Sporobolus airoides)	1.0
DWS Four-wing saltbush (Atriplex canescens)	5.0

DWS: DeWinged Seed

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed