

12-974

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCOD ARTESIA

RECEIVED

SEP 17 2012

NMOCOD ARTESIA

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

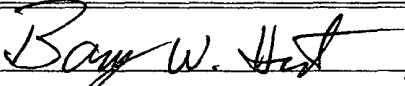
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7 If Unit or CA Agreement, Name and No.
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. RDX FEDERAL 21-73
2. Name of Operator RKI EXPLORATION & PRODUCTION, LLC.		9 API Well No. 30-015-40725
3a. Address 3817 NW EXPRESSWAY, SUITE 950 OKLAHOMA CITY, OK 73112	3b. Phone No. (include area code) 405-996-5750 (BILL AUBREY).	10. Field and Pool, or Exploratory BRUSHY DRAW DELAWARE EAST
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 2310 FSL & 2060 FEL At proposed prod. zone 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* APPROXIMATELY 15 MILES SOUTHEAST OF MALAGA, NM		12 County or Parish EDDY
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 2060'		13 State NM
16. No. of acres in lease 640		17 Spacing Unit dedicated to this well 40 ACRES
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 150' east of 21-33 990' south of 21-23		20. BLM/BIA Bond No. on file NLM-NMB-000460
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3024.1' GL		22. Approximate date work will start*
		23. Estimated duration 30 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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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) | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature 	Name (Printed/Typed) BARRY W. HUNT	Date 7/16/12
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Title
PERMIT AGENT FOR RKI EXPLORATION & PRODUCTION, LLC.

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date SEP 12 2012
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Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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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

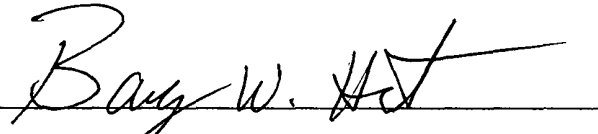
Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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 17th day of July 2012.

Signed: _____



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

Field Representative: Lonnie Catt

Address: P. O. Box 370, Carlsbad, NM 88221

Telephone: Office: (575) 885-1313.

DISTRICT I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-6720

DISTRICT II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720

DISTRICT III
1000 Rio Hondo 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 30-015-40725	Pool Code 8090	Pool Name BRUSHY DRAW DELAWARE EAST
Property Code 39072	Property Name RDX FEDERAL 21	Well Number 73
OGRID No 246289	Operator Name RKI EXPLORATION & PRODUCTION	Elevation 3024.1'

Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	21	26 S	30 E		2310	SOUTH	2060	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 40	Joint or Infill	Consolidated Code	Order No
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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: Please do not report production under this pool id code until OCD confirms perfs and appropriate pool designation on completion and C104 approvals.

<p>RDX FEDERAL 21-73 NMSP-E (NAD 83) Y = 373856 7' N X = 680481 3' E LAT. = N32° 01' 37 26" LONG. = W103° 53' 03.61"</p>				

2060'

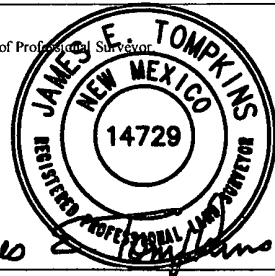
2310'

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 7/16/12
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.

MAY 30, 2012
Date of Survey
Signature and Seal of Professional Surveyor



James E. Tompkins
Job No.: WTC48567
JAMES E. TOMPKINS 14729
Certificate Number

595.1'

EL. 3024.7'

EL. 3028.2'

337.6'

EL. 3022.5'

EL. 3024.3'

298.6'

596.0'

296.6'

600.0'

150'N

150'W

150'E

150'S

RDX FEDERAL 21-73
ELEV. = 3024.0'
NMSP-E (NAD 83)
Y = 373856.7' N
X = 680481.3' E
LAT. = N32° 01' 37.26"
LONG. = W103° 53' 03.61"

RDX 21-33
DRYHOLE

EXISTING PAD SITE

354.0'

EL. 3021.5'

EL. 3023.1'

EXISTING LEASE ROAD

EL. 3021.0'

EL. 3027.2'

602.5'

BEGINNING AT THE JUNCTION OF STATE HIGHWAY 128 AND COUNTY ROAD 1, ABOUT 30 MILES WEST OF JAL, NM. GO SOUTH ON COUNTY ROAD 1 15.2 MILES TO STATE LINE ROAD. TURN RIGHT AND GO WEST 9.5 MILES TO AN INTERSECTION. TURN RIGHT ONTO AN EXISTING LEASE ROAD. GO NORTH 1.4 MILES TO THE BEGINNING OF A PROPOSED ROAD TO THE LEFT, AND THE LOCATION IS ±850 FEET TO THE WEST.



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

RKI EXPLORATION & PRODUCTION

JOB No : WTC48567

RKI Exploration & Production, LLC

DRILLING PLAN

Well RDX Fed 21-73
 Location 2,310 FSL 2,060 FEL
 Section 21-26S-30E
 County Eddy
 State New Mexico

- 1) The elevation of the unprepared ground is 3,024 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 7,500 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 7,500 feet.

5) Estimated tops:

Alluvium	*		
Rustler RUSTLER	750		
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	7,500		3,248 psi

146 degree F

* Fresh water anticipated at about 200 ft.

The Bone Spring will be penetrated as rathole to enable the entire Brushy Canyon to be logged.

6) Casing program:

Hole Size	Top	Bottom	OD Csg	Wt/Grade	Connection	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 1/2"	0	800	13 3/8"	54.5#/J-55	ST&C	3.26	6.63	11.79
12 1/2"	0	3,450	9 5/8"	40#/J-55	LT&C	1.35	5.38	3.77
7 7/8"	0	7,500	5 1/2"	17#/N-80	LT&C	1.93	1.55	2.73

All new casing

7) Cement program:

Surface	17 1/2" hole		
Pipe OD	13 3/8"		
Setting Depth	800 ft		
Annular Volume	0.69462 cf/ft		
Excess	1	100 %	

Lead	482 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	3,450 ft		
Annular Volume	0.31318 cf/ft	0.3627 cf/ft	
Excess	1	100 %	
Total Annular Volume	1120 cf		
With Excess	2240 cf		

Lead	954 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	7,500 ft		
Annular Volume	0.1733 cf/ft	0.26074 cf/ft	300 ft
Excess	0.35	35 %	
Total Annular Volume	780 cf		
With Excess	1,053 cf		
DV Tool Depth	5000 ft		

Stage 1

Lead:	398 sx	1.47 cf/sk	13.0 ppg
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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:	157 sx	2.04 cf/sk	12.6 ppg
Tail:	100 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: 3,150 ft

8) 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 nipped 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.

9) Mud program:

Top	Bottom	Mud Wt.	Vis	PV	YP	Fluid Loss	Type System
0	800	8.5 to 8.9	32 to 36	6 - 12	2 - 8	NC	Fresh Water
800	3,450	9.8 to 10.0	28 to 30	1 - 6	1 - 6	NC	Brine
3,450	7,500	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 July '12
Duration 15 days



The diagram illustrates a wellhead assembly with the following components and connections:

- ROTATING HEAD (OPTIONAL)**: Located at the top center.
- 2" FILL-UP LINE**: Connected to the left side of the Rotating Head.
- FLOW LINE TO PITS**: Connected to the right side of the Rotating Head.
- ANNULAR 13 5/8" 3M**: A rectangular component below the Rotating Head.
- 13 5/8" 3M PIPE RAMS**: A rectangular component below the Annular.
- 13 5/8" 3M BLIND RAMS**: A rectangular component below the Pipe Rams.
- LET'S IN RAM BODY BLIND RAMS**: Text on the left side, partially cut off.
- 3M MGVS**: Text on the right side, partially cut off.
- DRILLING SPOOL**: A central vertical component.
- 3M MGVS (SEQUENCE OPTIONAL IF HCR)**: Text on the right side, partially cut off.
- 3M MGVS (OR HCR)**: Text on the right side, partially cut off.
- MIN 3" NOM 3M CHOKE LINE**: Text on the right side, partially cut off.
- 3M MGVS**: Text on the right side, partially cut off.
- 3M MGVS**: Text on the right side, partially cut off.

**COMPONENT PRESSURE RATINGS
MAY EXCEED 3M (E.G. 5M)**

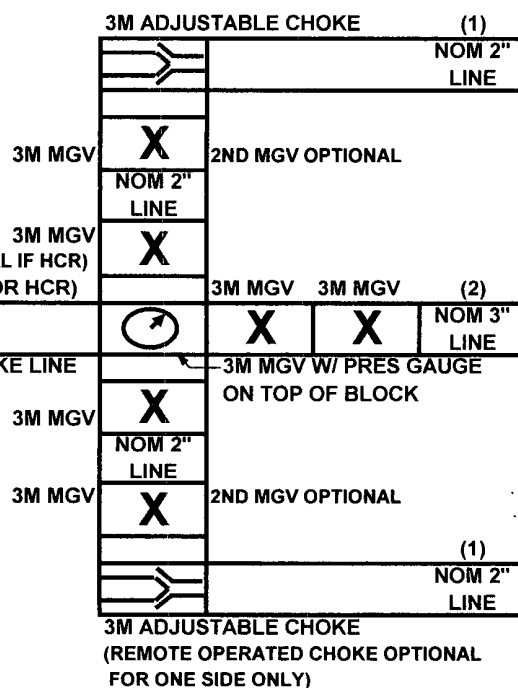


3M CKV 3M MGV

		
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MIN 2" NOM 3M KILL LINE

3M MG V	3M MG V (OR HCR)	
X	X	

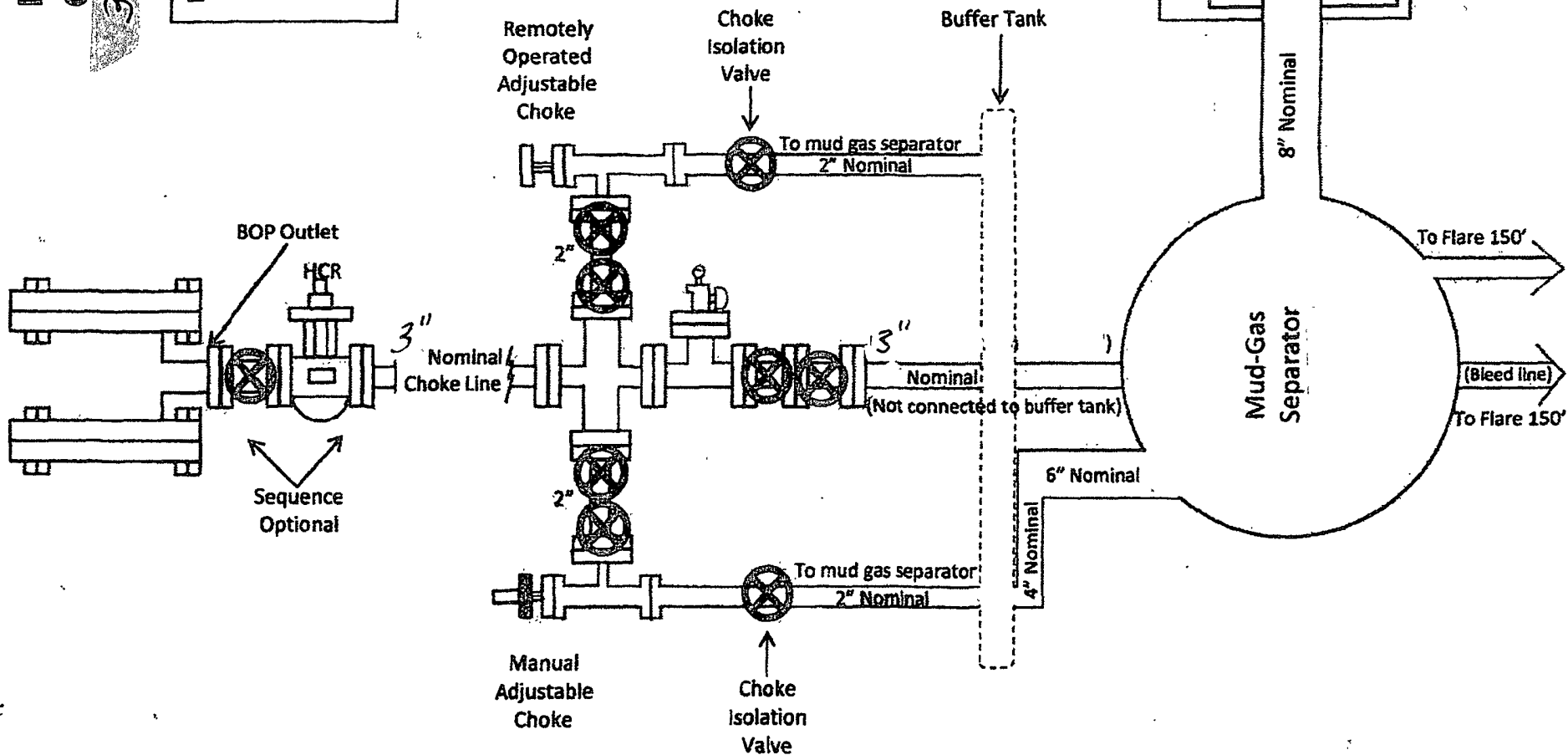


- (1) Line to mud gas separator and/or pit
(2) Bleed line to pit

MGV - Manual Gate Valve
CKV - Check Valve
HCR - Hydraulically Controlled Remote Valve

Drilling Operations
Choke Manifold
3M Service

Exhibit E-1 -- Choke Manifold Diagram



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

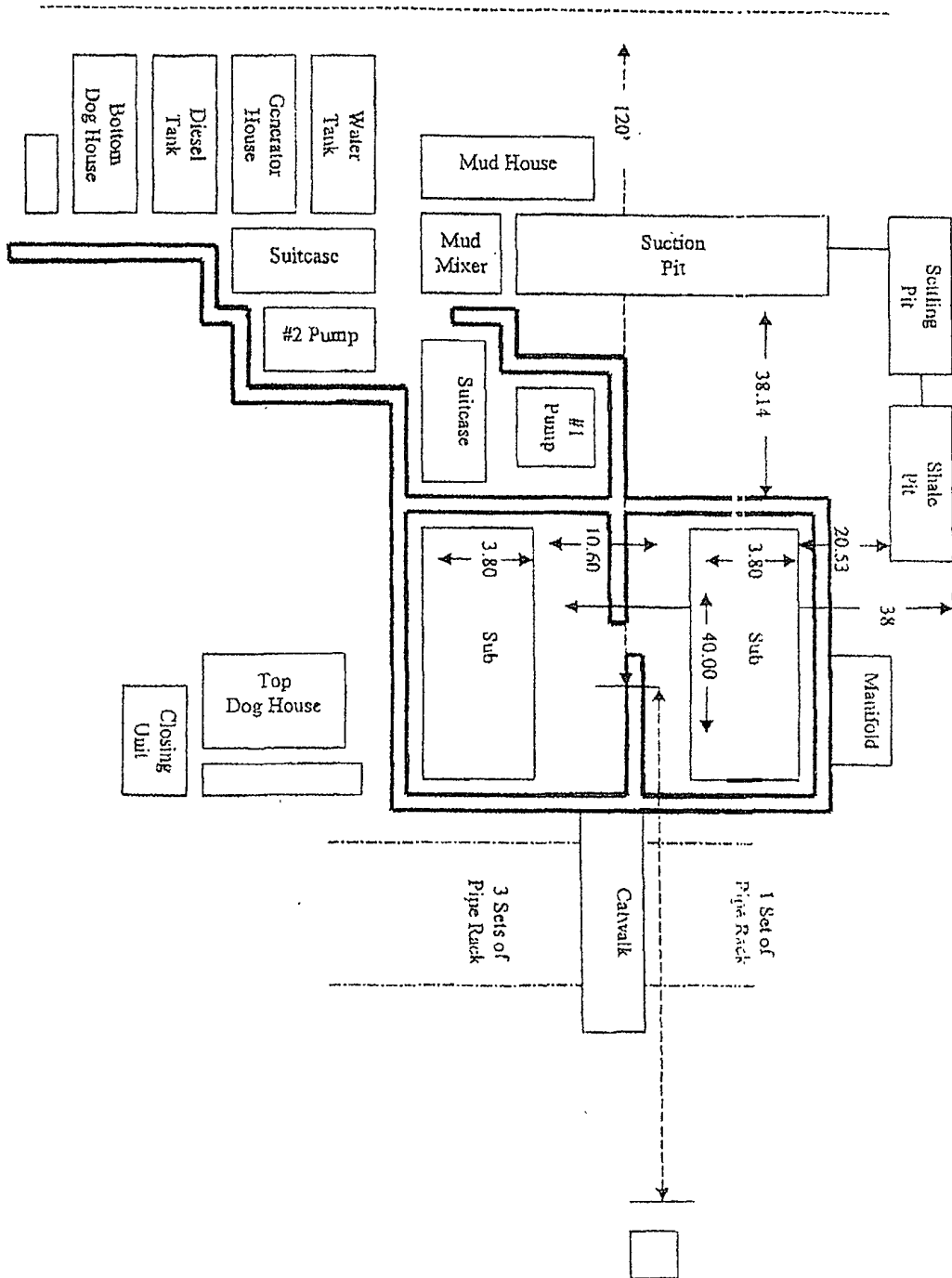


EXHIBIT D

Rig Plat Only
RDX FEDERAL 21-73
V-DOOR EAST

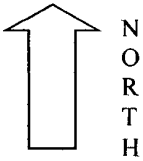
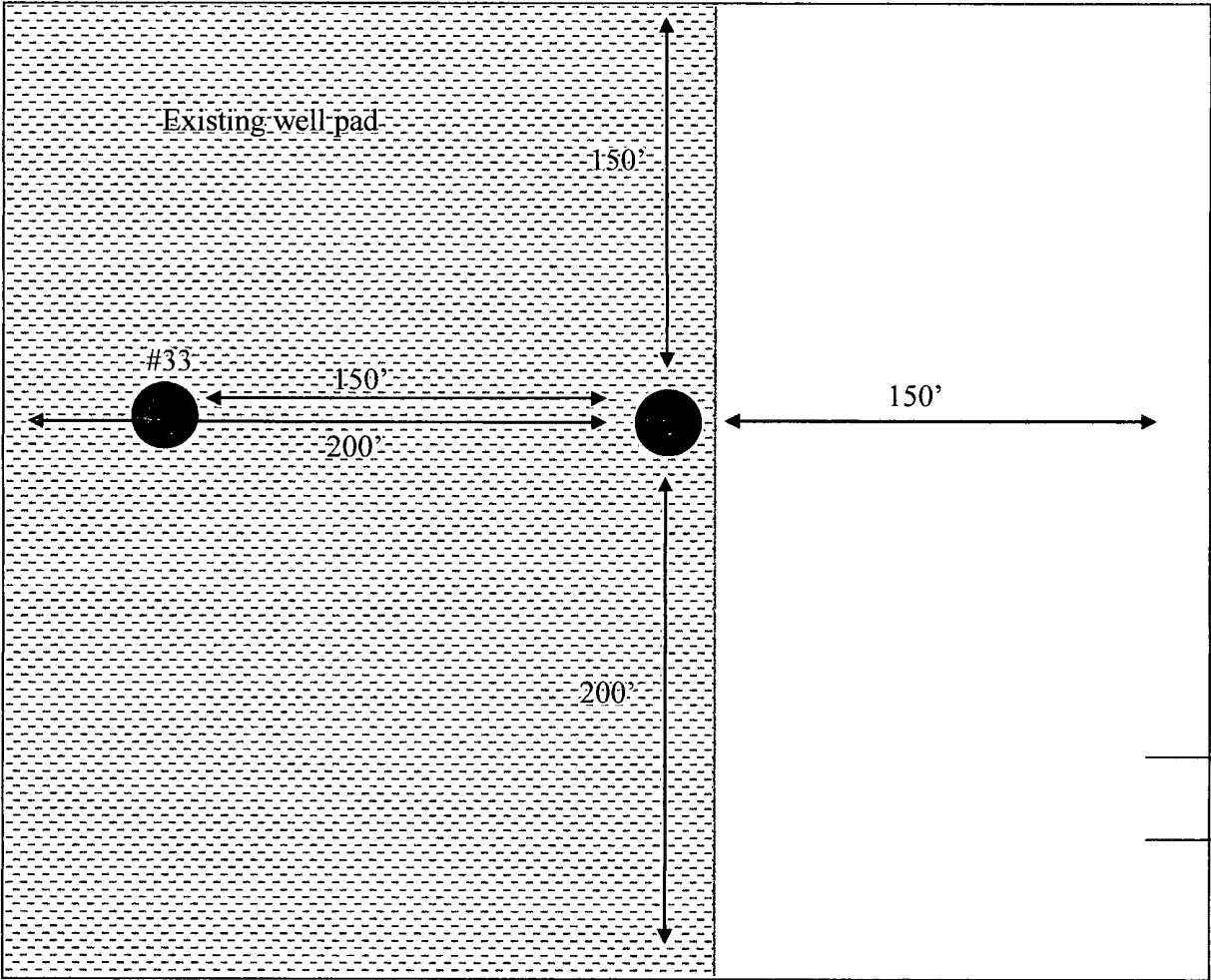
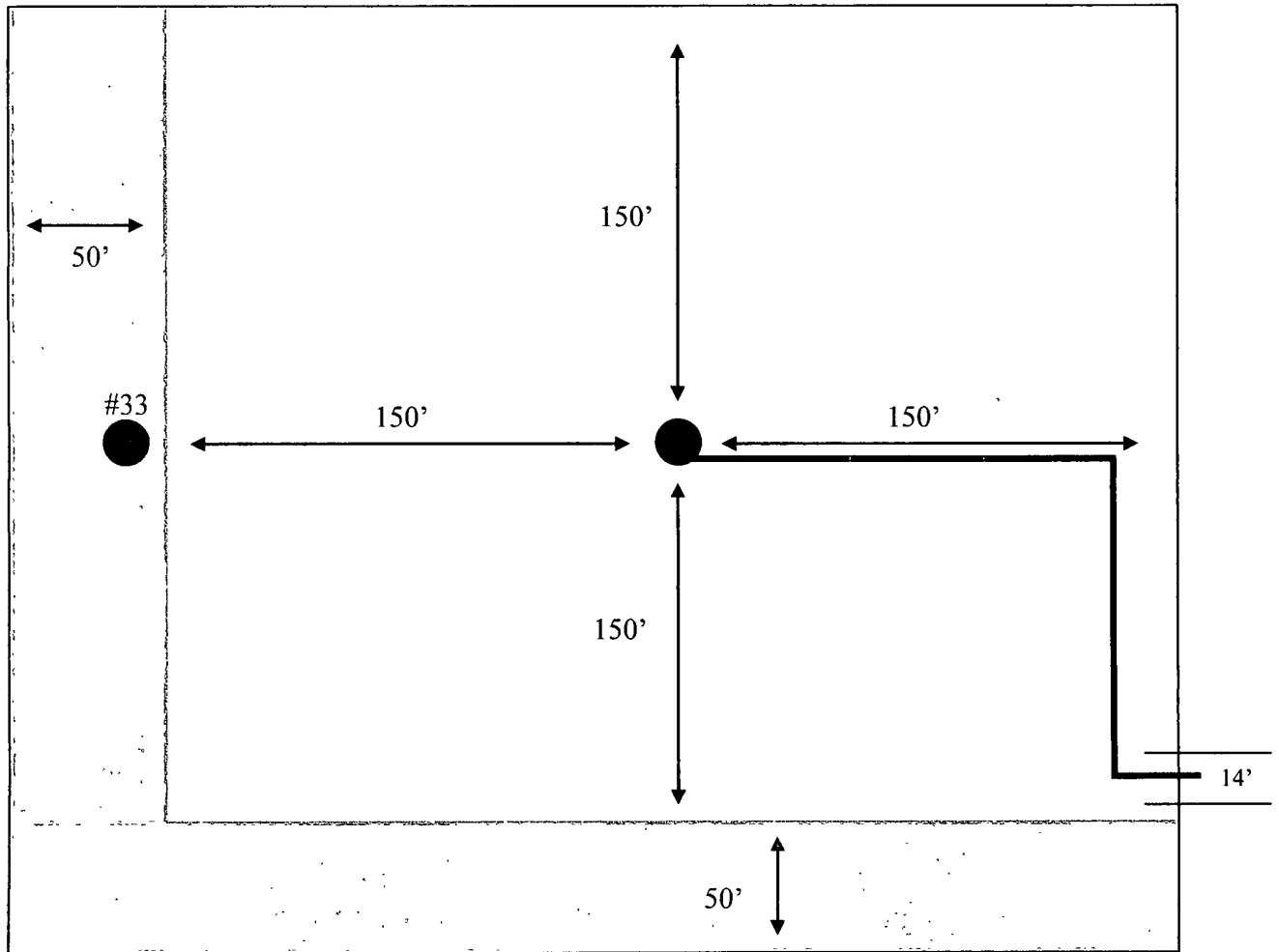


EXHIBIT C

**Interim Reclamation & Production Facilities
RDX FEDERAL 21-73
V-DOOR EAST**



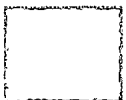
LEGEND



Well Bore



Topsoil



Interim Reclamation



Production Facilities



NORTH

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI Exploration & Production LLC
LEASE NO.:	NM-102917
WELL NAME & NO.:	RDX Federal 21 #73
SURFACE HOLE FOOTAGE:	2310' FSL & 2060' FEL
BOTTOM HOLE FOOTAGE:	SAME
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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Phantom Banks Heronries
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Logging Requirements
 - Medium Cave/Karst
 - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines – not requested
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**