

OCD-ARTESIA

ATS-12-631

EA-12-849

Form 3160-3
(August 2007)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires July 31, 20105 Lease Serial No.
NM-102917

6 If Indian, Allottee or Tribe Name

7 If Unit or CA Agreement, Name and No.

8 Lease Name and Well No.
RDX FEDERAL 21-22

9 API Well No.

10 Field and Pool, or Exploratory
BRUSHY DRAW DELAWARE EAST11 Sec., T. R. M. or Blk. and Survey or Area
SECTION 21, T. 26 S., R. 30 E.12 County or Parish
EDDY13. State
NM1a. Type of work: ☒ DRILL☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator RKI EXPLORATION & PRODUCTION, LLC.

3a. Address 3817 NW EXPRESSWAY, SUITE 950
OKLAHOMA CITY, OK. 731123b Phone No. (include area code)
405-996-5750 (BILL AUBREY)

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

At surface 1650 FNL & 1650 FWL

At proposed prod. zone SAME

14 Distance in miles and direction from nearest town or post office*
16 MILES SOUTHEAST OF MALAGA, NM15 Distance from proposed* location to nearest property or lease line, ft.
(Also to nearest drig. unit line, if any) 1650 ft.16 No. of acres in lease
64017. Spacing Unit dedicated to this well
40

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 660 ft. east of RDX Federal 21-21

19 Proposed Depth
TD 7500 ft.20 BLM/BIA Bond No. on file
NLM-NMB-00046021 Elevations (Show whether DF, KDB, RT, GL, etc.)
3018' 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.

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

Name (Printed/Typed)
BARRY W. HUNT

Date

4/20/12

Title

PERMIT AGENT FOR RKI EXPLORATION & PRODUCTION, LLC.

Approved by (Signature)

/s/ W. W. Ingram

Name (Printed/Typed)

/s/ W. W. Ingram

Date

JUL 30 2012

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.

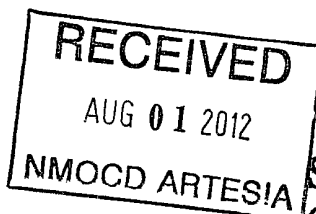
APPROVAL FOR TWO YEARS

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)

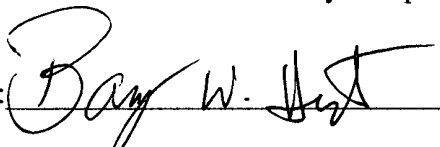
Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations AttachedSEE 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 20th day of April 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: Gene Simer

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

Telephone: Office: (575) 885-1313, Cell: (575) 706-3225

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 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 30-015-90561	Pool Code 8090	Pool Name BRUSHY DRAW DELAWARE EAST
Property Code 39072	Property Name RDX FEDERAL 21	Well Number 22
OGRID No 246289	Operator Name RKI EXPLORATION & PRODUCTION	Elevation 3018'

Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	21	26S	30E		1650	NORTH	1650	WEST	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.

7500 7/30

				<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Barry W. Hunt</i> 4/20/12 Signature Date</p> <p>Barry W. Hunt Print Name</p> <p>E-mail Address</p>
			<p>RDX FEDERAL 21-22 NMSP-E (NAD 83) Y = 375201 6' N X = 678854 4' E N LAT. = 32° 01' 50.64" W LONG. = -103° 53' 22.44"</p> <p>NMSP-E (NAD 27) Y = 375144.1' N X = 637668.3' E N LAT. = 32.0306075° W LONG. = -103.8890887°</p>	

<p>SURVEYORS CERTIFICATION</p> <p>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.</p> <p>February 22, 2012 Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p><i>James E. Tompkins</i></p> <p>JAMES E. TOMPKINS REGISTERED PROFESSIONAL LAND SURVEYOR NEW MEXICO 14729</p> <p>Job No. WTC48364 JAMES E TOMPKINS 14729 Certificate Number</p>
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RKI Exploration & Production, LLC

DRILLING PLAN

Well RDX Fed 21-22
 Location 1,650 FNL 1,650 FWL
 Section 21-26S-30E
 County Eddy
 State New Mexico

- 1) The elevation for the unprepared ground is 3,018 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	850		
Salado	1,200		
Castile	1,700		
Lamar Lime	3,420		
Base of Lime	3,443		
Delaware Top	3,485		
Bell Canyon Sand	3,485	Oil	1,509 psi
Cherry Canyon Sand	4,560	Oil	1,974 psi
Brushy Canyon Sand	5,635	Oil	2,440 psi
Bone Spring	7,300		
TD	7,500		146 degree F

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

* Water possible above the Rustler

6) Casing program: New

Hole Size	Top	Bottom	OD Csg	Wt/Grade	Connection	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 1/2"	0	1,000	13 3/8"	54.5#/J-55	ST&C	2.61	5.31	9.43
12 1/2"	0	3,430	9 5/8"	40#/J-55	LT&C	1.36	5.41	3.79
7 7/8"	0	7,500	5 1/2"	17#/N-80	LT&C	1.93	1.55	2.73

7) Cement program:

Surface	17 1/2" hole		
Pipe OD	13 3/8" New		
Setting Depth	1,000 ft		
Annular Volume	0.69462 cf/ft		
Excess	1	100 %	

Lead	641 sx	1.75 cf/sk	13.5 ppg
Tail	200 sx	1.34 cf/sk	14.8 ppg

Lead: "C" + 4% PF20 + 2% PF1 + .125 pps PF29 + .2% PF46

Tail: "C" + 1% PF1

Top of cement: Surface

Intermediate	12 1/2" hole		
Pipe OD	9 5/8" New		
Setting Depth	3,430 ft		
Annular Volume	0.31318 cf/ft	0.3627 cf/ft	
Excess	1	100 %	
Total Annular Volume	1124 cf		
With Excess	2247 cf		

Lead	782 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 + 6% PF20 + 3 pps PF42 + .125 pps PF29 + .2% PF46 + 1% PF1

Tail: "C" + .2% PF13

Top of cement: Surface

Production	7 7/8" hole		
Pipe OD	5 1/2" New		
Setting Depth	7,500 ft		
Annular Volume	0.1733 cf/ft	0.26074 cf/ft	300 ft
Excess	0.35	35 %	
Total Annular Volume	784 cf		
With Excess	1,058 cf		
DV Tool Depth	5,000 ft		

Stage 1

Lead:	398 sx	1.47 cf/sk	13.0 ppg
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Lead: PVL + 2% PF174 + .3% PF167 + .1% PF65 + .2% PF13 + .25 pps PF46

Top of cement: DV tool

Stage 2

Lead:	160 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 + 6% PF20 + 3 pps PF42 + .2% PF13 + .125 pps PF130 + .25 pps PF46

Tail: PVL + 2% PF174 + .3% PF167 + .1% PF65 + .2% PF13 + .25 pps PF46

Top of cement: 3,130 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	1,000	8.5 to 8.9	32 to 36	6 - 12	2 - 8	NC	Fresh Water
1,000	3,430	9.8 to 10.0	28 to 30	1 - 6	1 - 6	NC	Brine
3,430	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

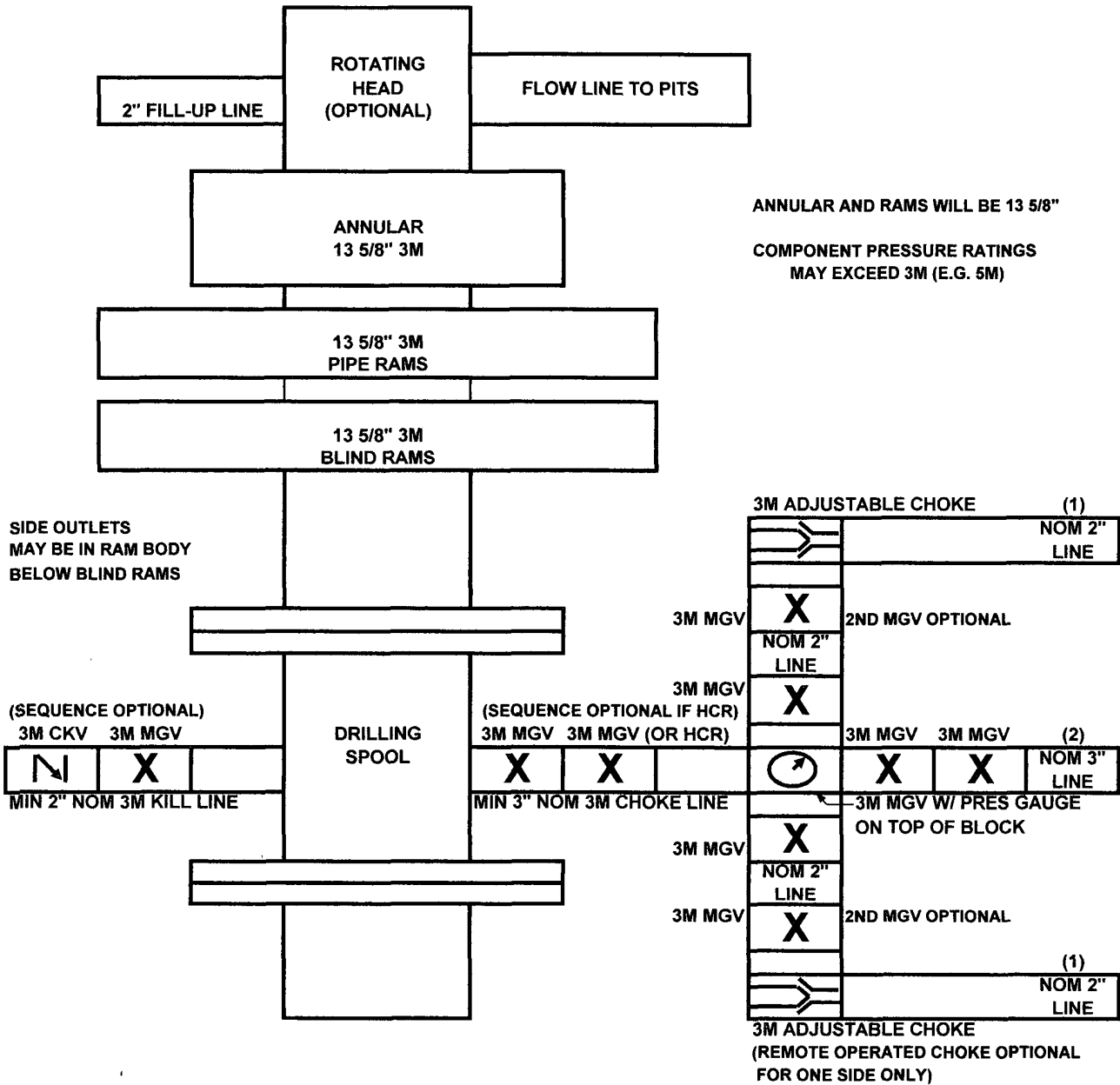
11) Potential hazards:

No abnormal pressure or temperature is expected. No H2S is known to exist in the area.

No lost circulation is expected to occur.

12) Anticipated Start Date May '12
Duration 15 days

3M BOP SCHEMATIC



(1) Line to mud gas separator and/or pit

(2) Bleed line to pit

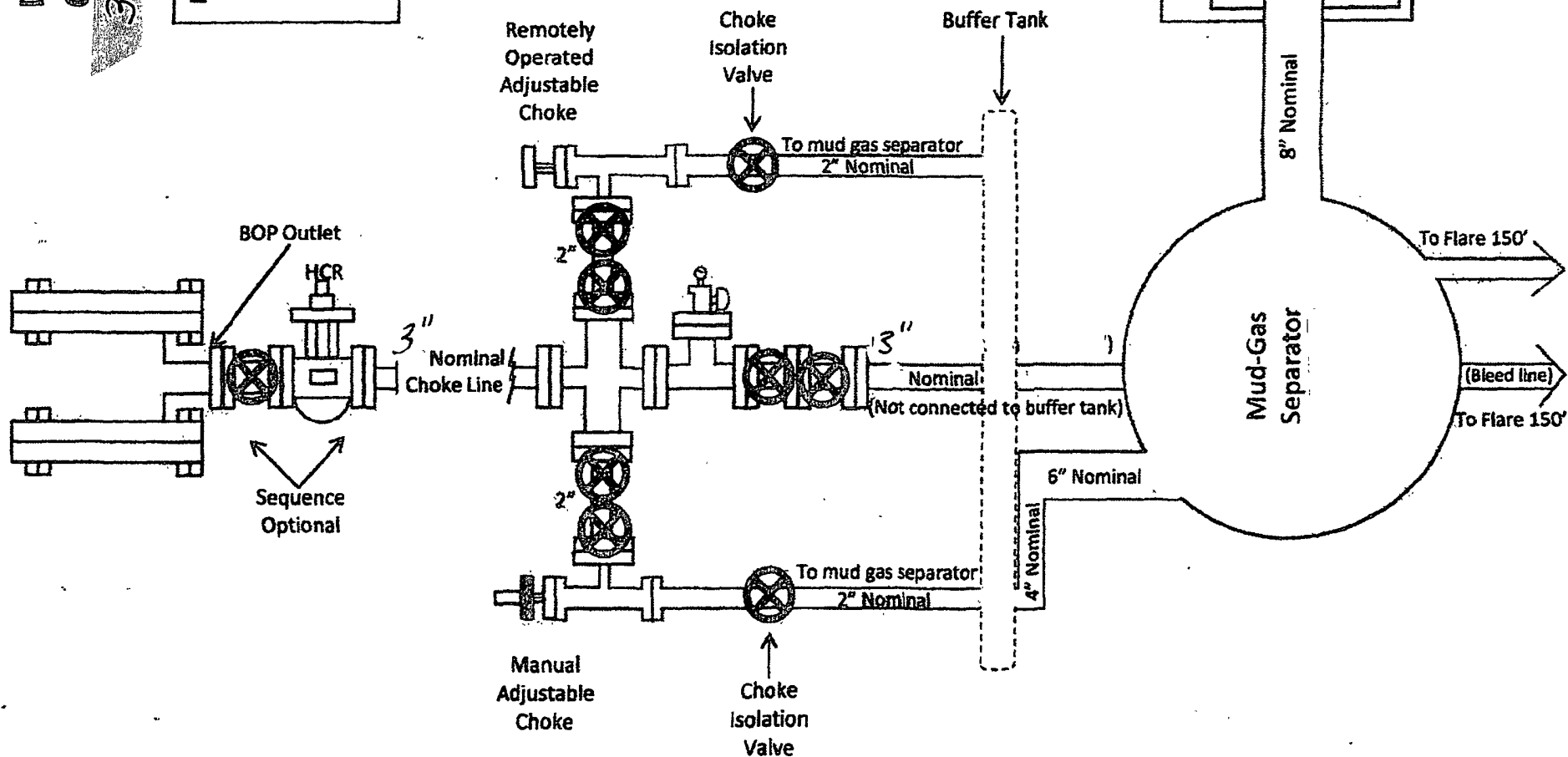
MGV - Manual Gate Valve

CKV - Check Valve

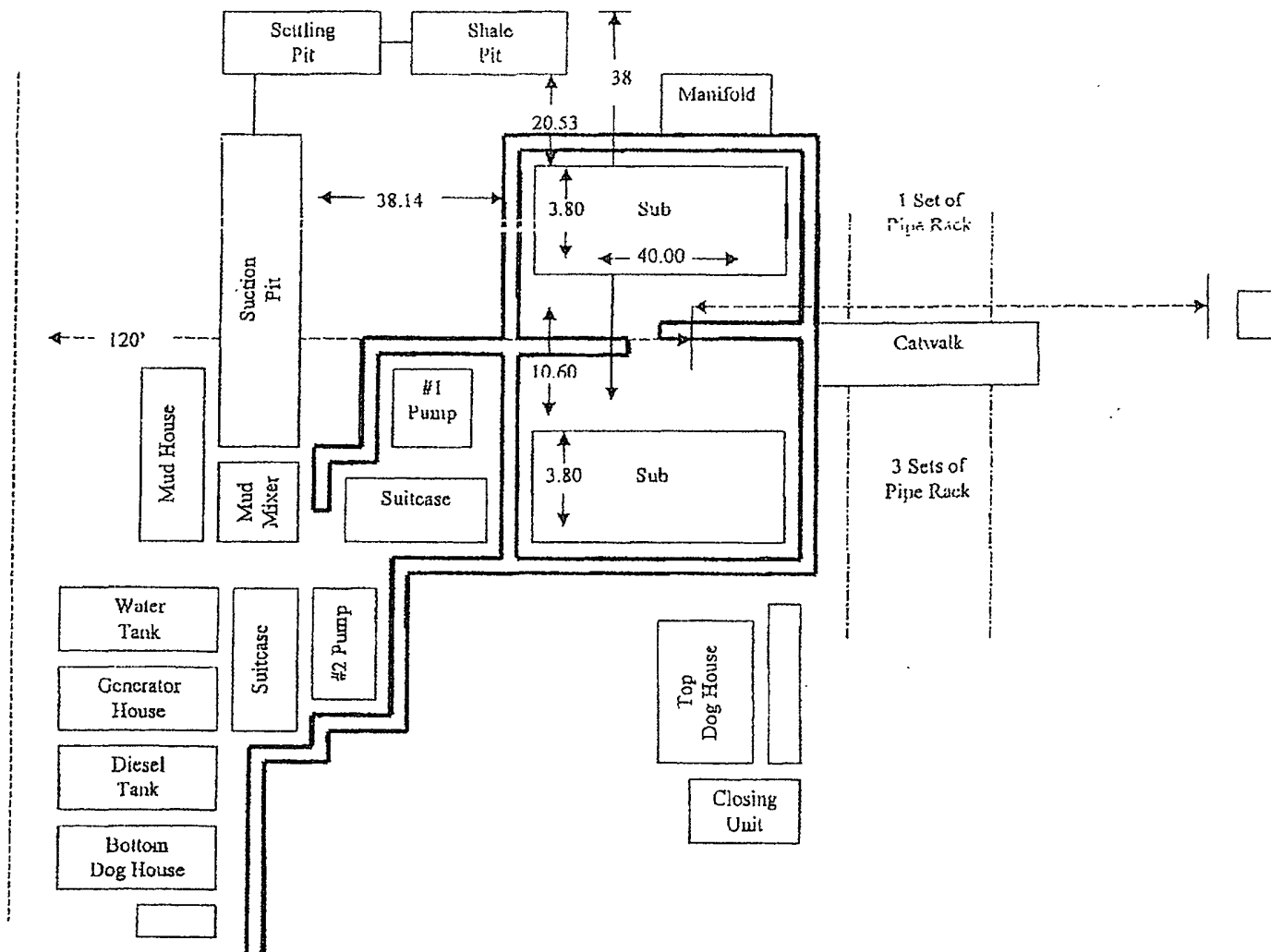
HCR - Hydraulically Controlled Remote Valve

Drilling Operations Choke Manifold 3M Service

Exhibit E-1 -- Choke Manifold Diagram



Plat for Closed Loop System



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.

EXHIBIT 'D'

**Rig Plat Only
RDX FEDERAL 21-22
V-DOOR EAST**

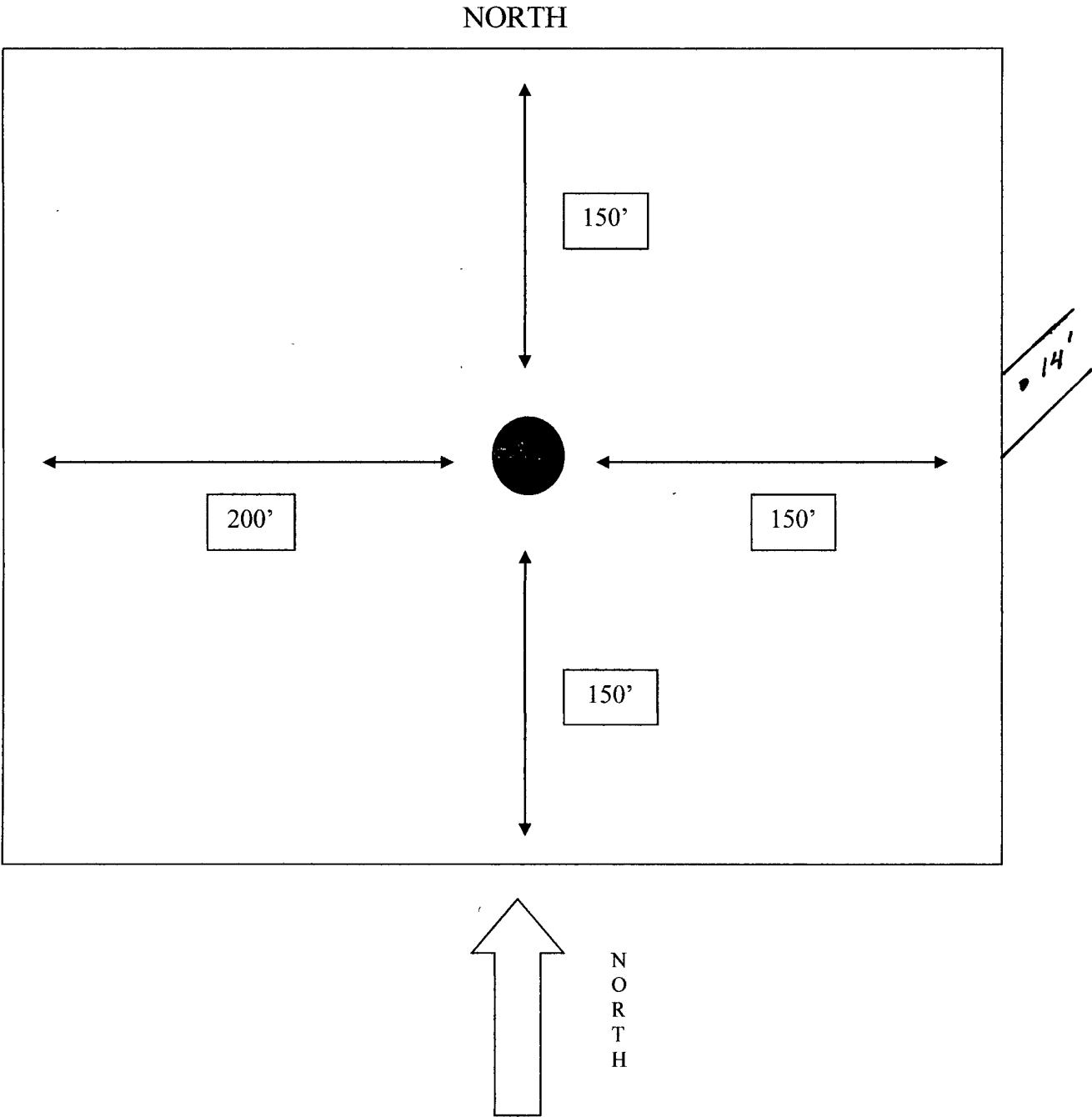
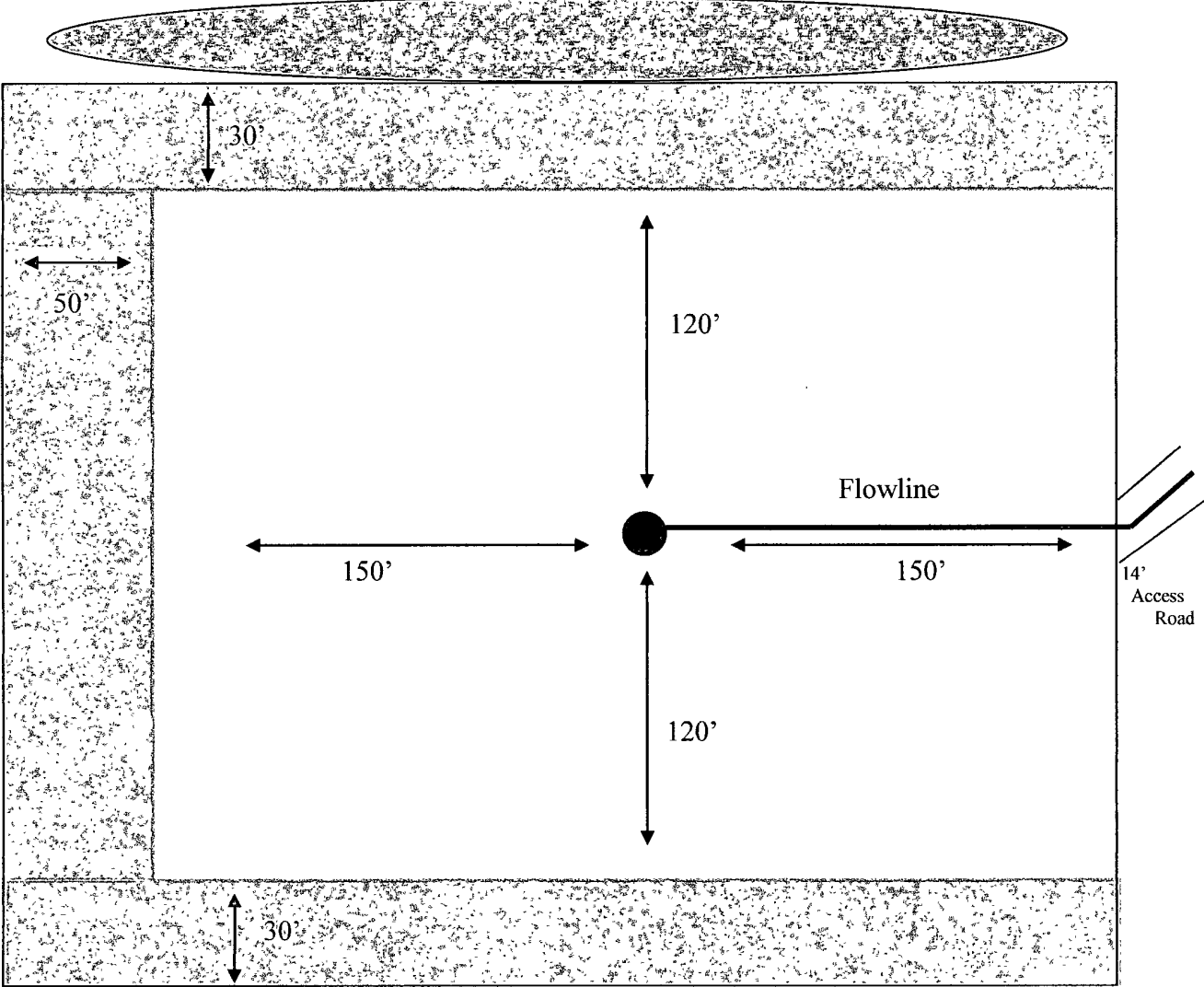


EXHIBIT C

**Interim Reclamation & Production Facilities
RDX FEDERAL 21-22
V-DOOR EAST**



LEGEND



Well Bore



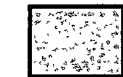
Topsoil



Interim Reclamation



Production Facilities



NORTH

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI EXPLORATION, LLC
LEASE NO.:	NM102917
WELL NAME & NO.:	22-RDX FEDERAL 21
SURFACE HOLE FOOTAGE:	1650'/N. & 1650'/W.
BOTTOM HOLE FOOTAGE:	
LOCATION:	Section 21, T. 26 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

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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**
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- ☒ **Construction**
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 - Topsoil
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 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
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 - Logging Requirements
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 - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
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