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FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NMOCD ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NM-20965

6. If Indian, Allottee or Tribe Name

TCS
2/12/2013

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

1a. 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.

<246289>

8. Lease Name and Well No.
RDX FEDERAL 17-21

<39027>

9. API Well No.

30-015-41088

3a. Address 210 PARK AVENUE, SUITE 900
OKLAHOMA CITY, OK. 731023b. Phone No. (include area code)
405-996-5748 (BRENT UMBERHAM)10. Field and Pool, or Exploratory
BRUSHY DRAW DELAWARE EAST

<8090>

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

At surface 2080 FSL & 330 FEL

At proposed prod. zone SAME

11. Sec., T. R. M. or Blk. and Survey or Area
SECTION 17, T. 26 S., R. 30 E.14. Distance in miles and direction from nearest town or post office*
14 MILES SOUTHEAST OF MALAGA, NM12. County or Parish
EDDY13. State
NM15. Distance from proposed* location to nearest property or lease line, ft.
(Also to nearest drig. unit line, if any)

330'

16. No. of acres in lease
52017. Spacing Unit dedicated to this well
4018. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
P&A WELL-400'
PRODUCING- 1420'19. Proposed Depth
7200'20. BLM/BIA Bond No. on file
NLM-NMB-00046021. Elevations (Show whether DF, KDB, RT, GL, etc.)
3092.7' 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. I, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- 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

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

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

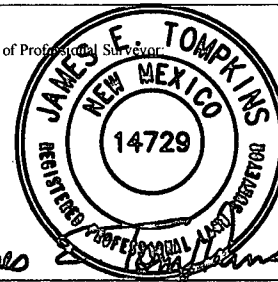
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

API Number 30-015-41088	Pool Code 8090	Pool Name BRUSHY DRAW DELAWARE EAST	
Property Code 39027	Property Name RDX 10 FED 17		Well Number 21
UGRID No. 246289	Operator Name RKI EXPLORATION & PRODUCTION		Elevation 3092.7'

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	17	26 S	30 E		2080	SOUTH	330	EAST	EDDY

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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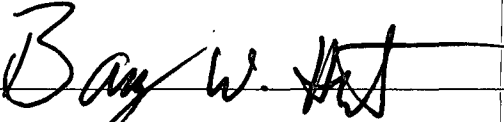
Dedicated Acres 40	Joint or Infill	Consolidated Code	Order No.
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		<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either 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>Signature: <u>Barry W. Hunt</u> Date: <u>10/15/12</u></p> <p>Print Name: <u>Barry W. Hunt</u></p> <p>E-mail Address: _____</p>
<p>330'</p> <p>2080'</p>	<p>RKI RDX 17 FED 21 SHL NMSP-E (NAD 83) Y = 378917.9 X = 676854.6 N LAT.= N32° 02' 27.50" W LONG.= W103° 53' 45.50" NMSP-E (NAD 27) Y = 378860.4' X = 635668.6' LAT.= N32.040845946" LONG.= W104.895492815"</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>JUNE 09, 2012 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: </p> <p>Job No. <u>WTC48507</u> JAMES E. TOMPKINS 14729 Certificate Number</p>

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: _____



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

DRILLING PLAN

Well RDX Federal 17-21
 Location 2,080 FSL 330 FEL
 Section 17-26S-30E
 County Eddy
 State New Mexico

- 1) The elevation of the unprepared ground is 3,092 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 7,200 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 7,200 feet.
- 5) Estimated tops:

Alluvium		*	
Rustler	927		
Salado	1,276		
Castile	1,756		
Lamar Lime	3,297		
Base of Lime	3,494		
Delaware Top	3,530		
Bell Canyon Sand	3,530	Oil	1,528 psi
Cherry Canyon Sand	4,596	Oil	1,990 psi
Brushy Canyon Sand	5,654	Oil	2,448 psi
TD	7,200		140 degree F

* Fresh water anticipated at approximately 180 feet.

- 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 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.

Seals are broken - BOP Test required

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	<i>See COA</i> 977 1010	13 3/8"	54.5#/J-55	ST&C	2.67	5.43	9.65
12 1/2"	0	3,450	9 5/8"	40#/J-55	LT&C	1.35	5.38	3.77
7 7/8"	0	7,200	5 1/2"	17#/N-80	LT&C	2.01	1.55	2.84

8) Cement program:

Surface	17 1/2" hole
Pipe OD	13 3/8" <i>See COA</i>
Setting Depth	977 ft 1010'
Annular Volume	0.69462 cf/ft
Excess	0.5
	50 %
Total Annular Volume	590 cf
With Excess	886 cf

Lead	506 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
Excess	0.5
	50 %
Total Annular Volume	1129 cf
With Excess	1693 cf

Lead	604 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	7,200 ft
Annular Volume	0.1733 cf/ft
Excess	0.35
	35 %
Total Annular Volume	728 cf
With Excess	983 cf
DV Tool Depth	5,500 ft

Stage 1

Lead:	271 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:	143 sx	2.04 cf/sk	12.6 ppg
Tail:	200 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) + .25pps PF46 (antifoam) + .2% PF13 (retarder)

Top of cement: 3,150 ft

9) Mud program:

see con

Top	Bottom	Mud Wt.	Vis	PV	YP	Fluid Loss	Type System
0 <i>1010'</i>	977	8.5 to 8.9	32 to 36	6 - 12	2 - 8	NC	Fresh Water
977	3,450	9.8 to 10.0	28 to 30	1 - 6	1 - 6	NC	Brine
3,450	7,200	8.9 to 9.1	28 to 36	1 - 6	1 - 6	NC	Fresh Water

10) Logging, coring, and testing program:

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:

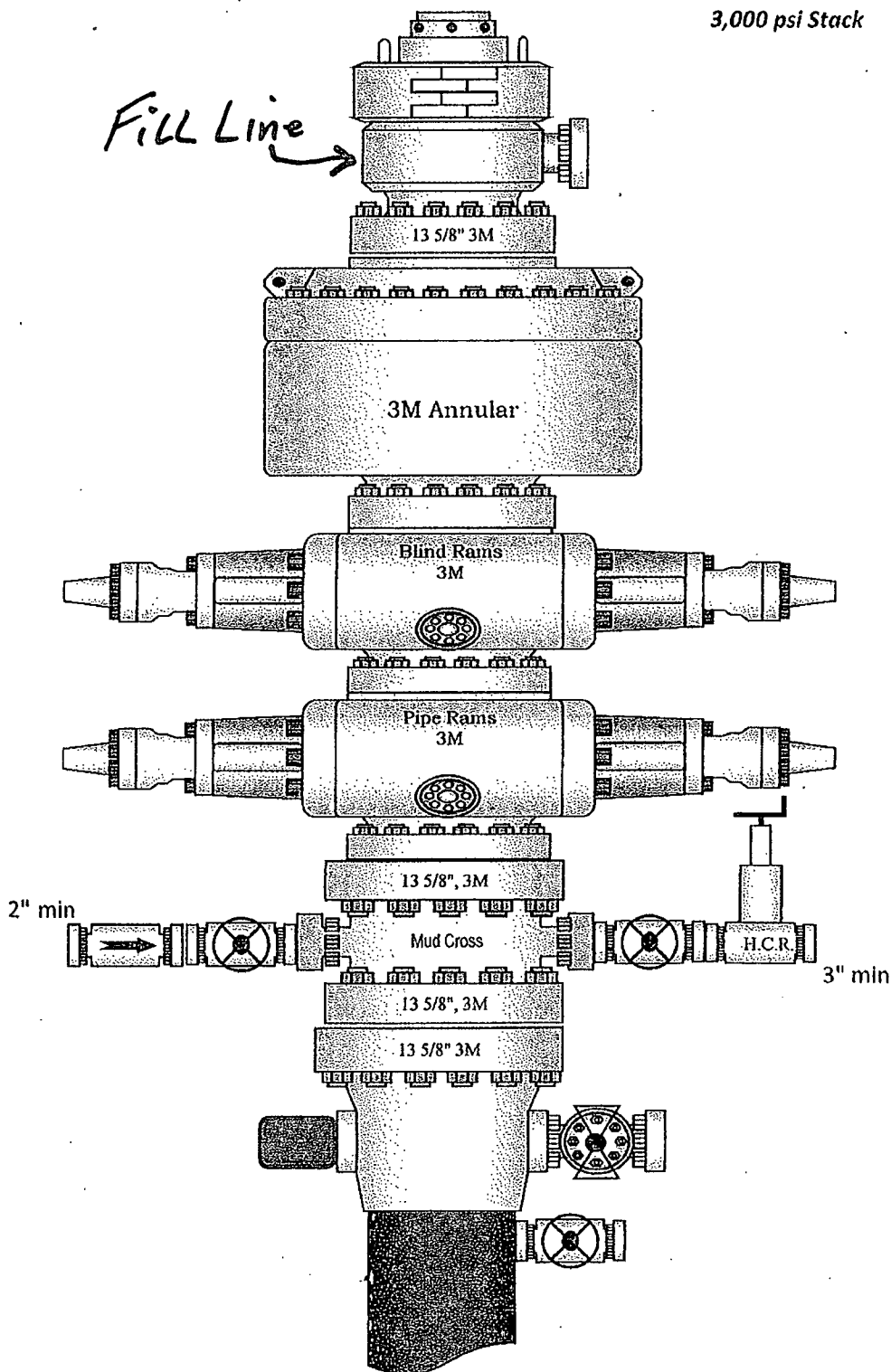
No abnormal pressure or temperature is expected. No H2S is known to exist in the area.

Lost circulation is not anticipated, but lost circulation equipment will be on location and readily available if needed.

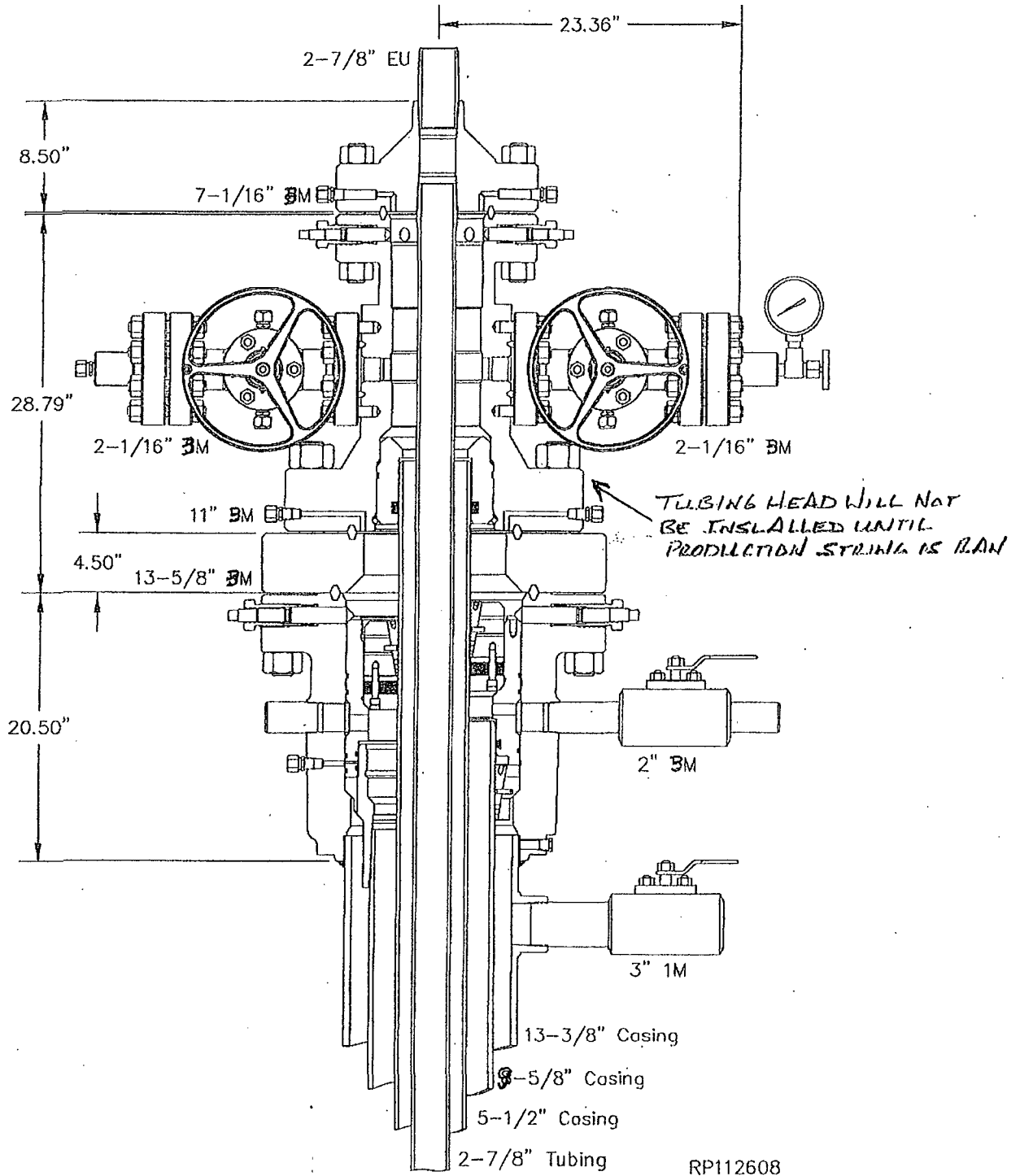
12) Anticipated Start Date Dec '12
 Duration 25 days

3,000 psi Stack

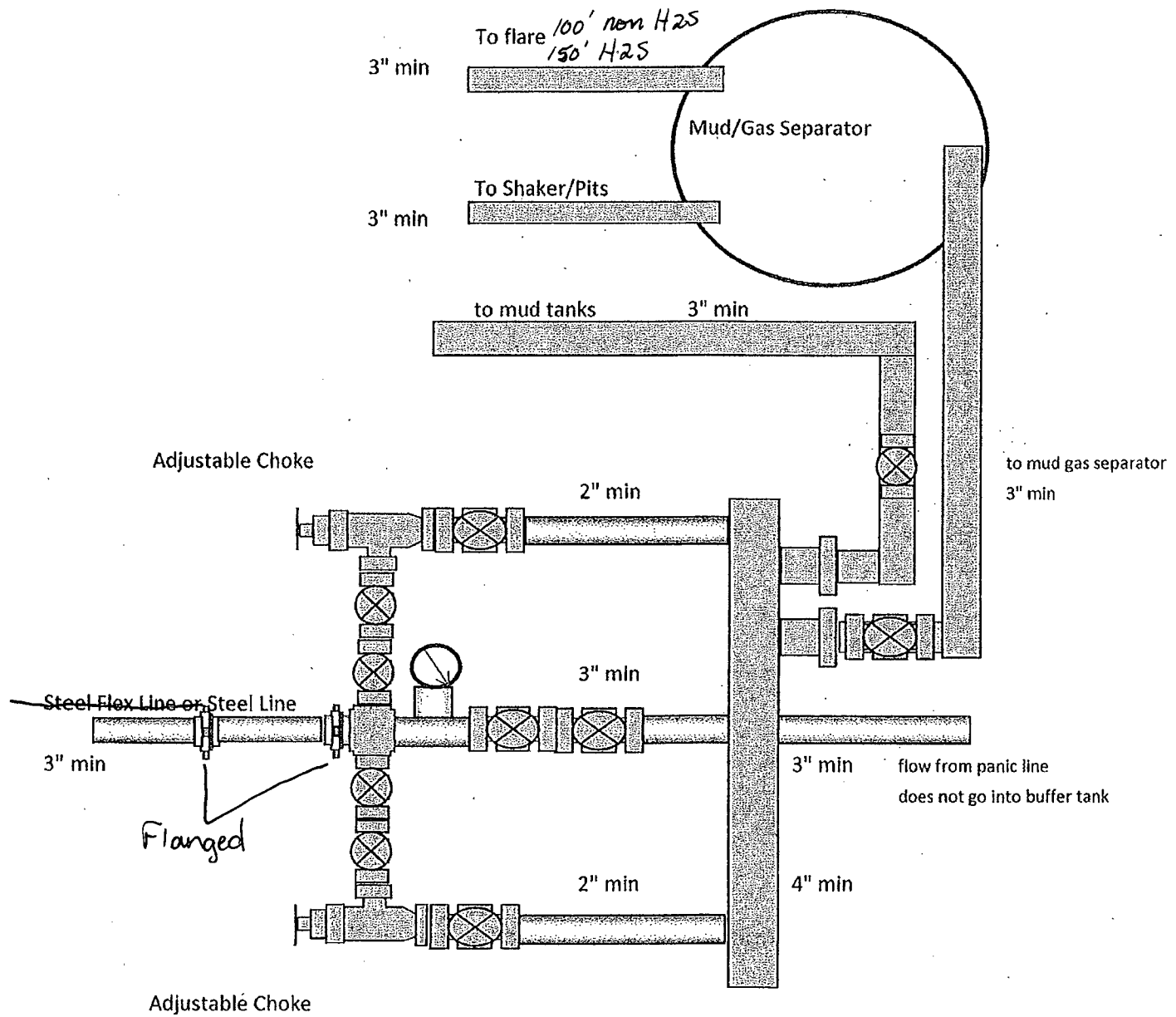
Fill Line



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

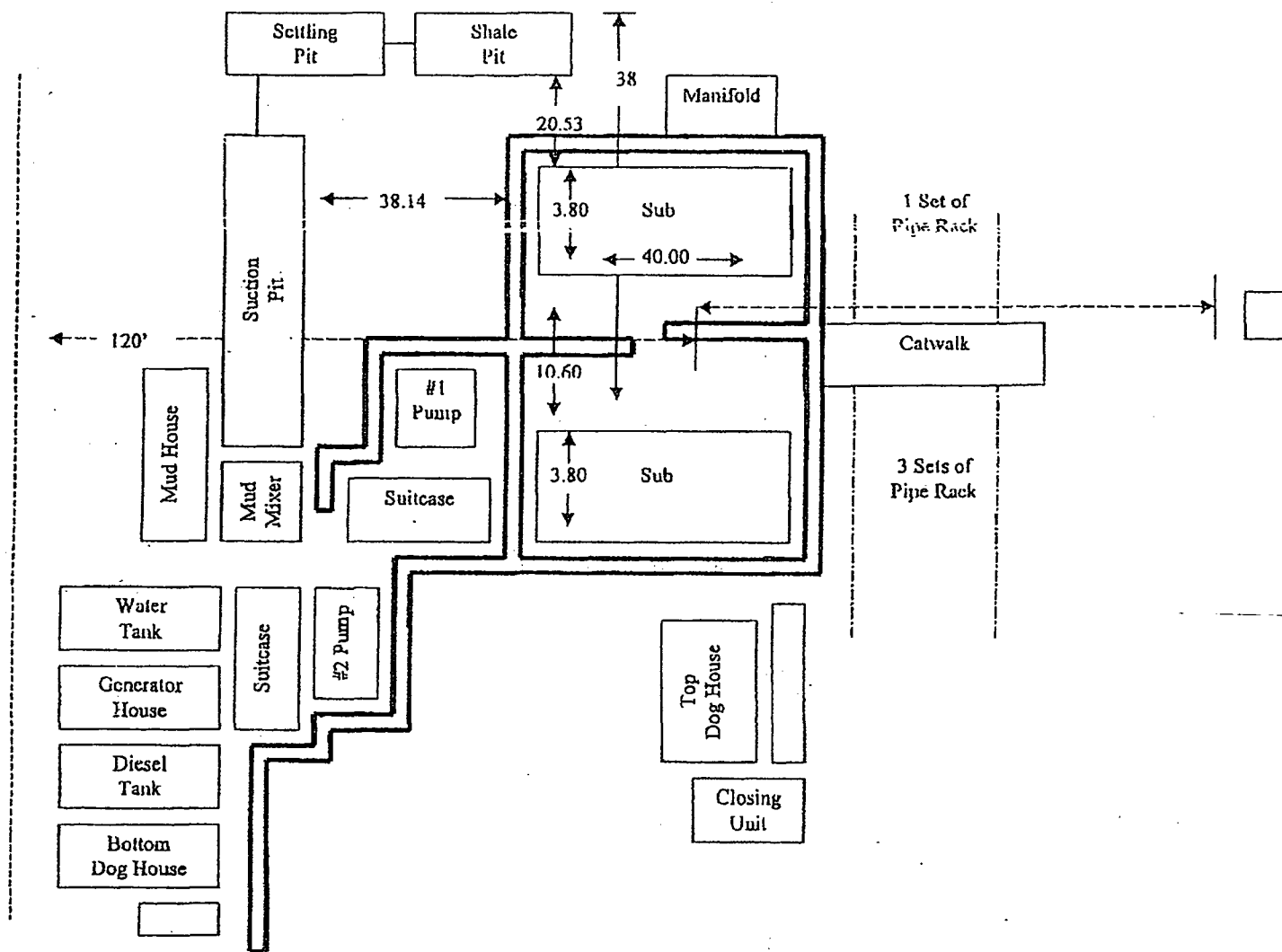
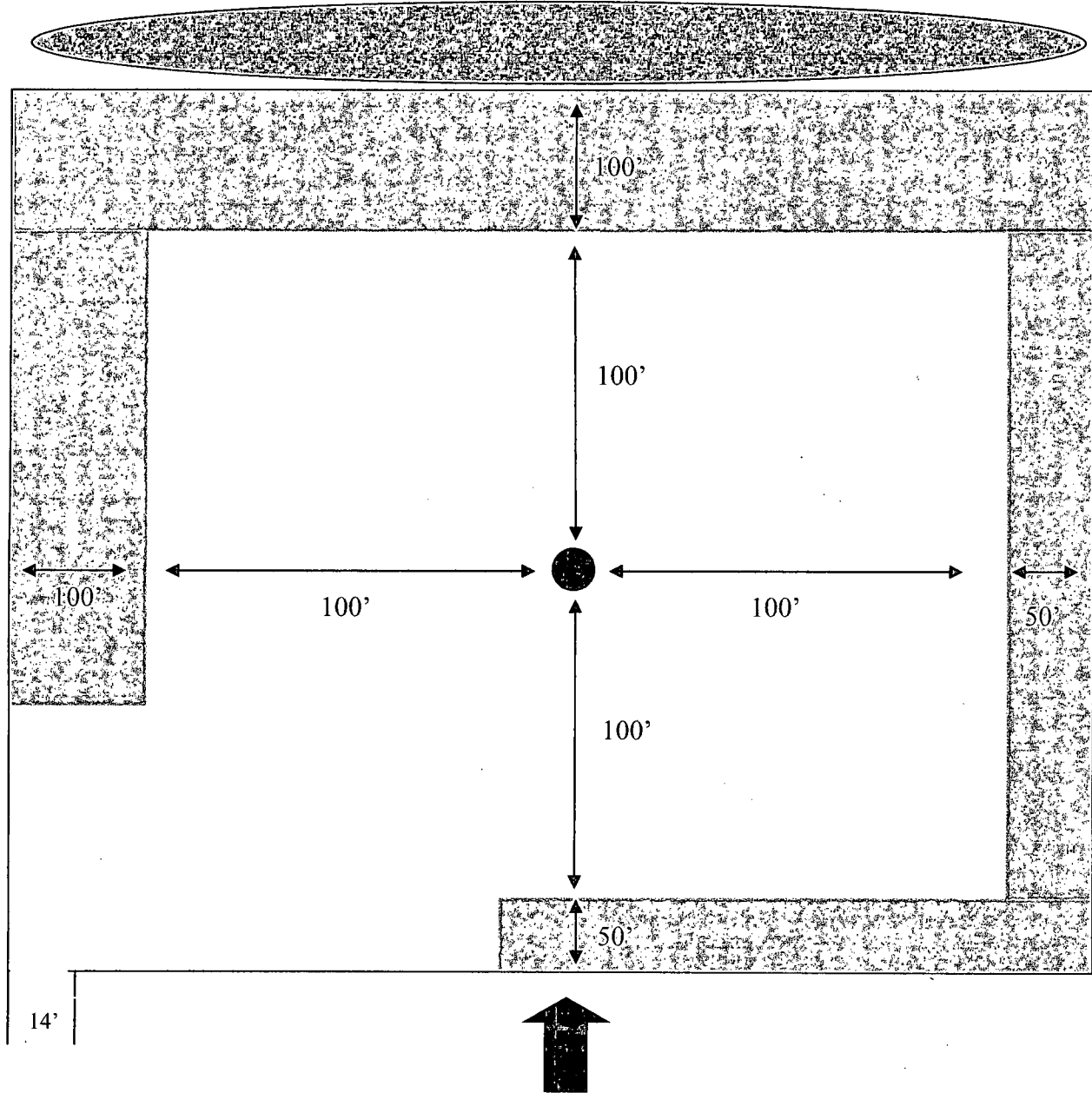


EXHIBIT C

**Interim Reclamation & Production Facilities
RDX FEDERAL 17-21
V-DOOR SOUTH**



LEGEND



Well Bore



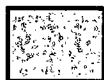
Topsoil



Interim Reclamation



Berm



Production Facilities



NORTH

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI Exploration and Production, LLC.
LEASE NO.:	NM-20965
WELL NAME & NO.:	RDX Federal 17-21
SURFACE HOLE FOOTAGE:	0280' FSL & 0330' FEL
LOCATION:	Section 17, 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 Bank Heronries
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Medium Cave/Karst
 - Logging Requirements
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**