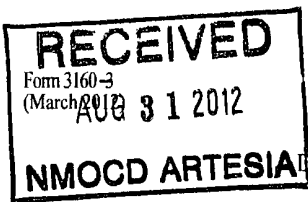


ATS-12-693

EA-12-1035

OCD-ARTESIA



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5 Lease Serial No.
NM-102917

6 If Indian, Allottee or Tribe Name *TES 9/4/2012*

7 If Unit or CA Agreement, Name and No.

8 Lease Name and Well No.
RDX FEDERAL 21-42 *<39072>*

9 API Well No.
30-015-40643

10 Field and Pool, or Exploratory
BRUSHY DRAW DELAWARE EAST *<8080>*

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

12 County or Parish
EDDY

13. State
NM

1a. Type of work: ☒ DRILL ☐ REENTER

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

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

3a. Address 3817 NW EXPRESSWAY, SUITE 950
OKLAHOMA CITY, OK. 73112

3b 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 660 FSL & 1650 FWL
At proposed prod. zone SAME

14 Distance in miles and direction from nearest town or post office*
15 MILES SOUTHEAST OF MALAGA, NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)
660'

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
990' South of proposed RDX Fed 21-32

19 Proposed Depth
7400'

20 BLM/BIA Bond No. on file
NLM-NMB-000460

21 Elevations (Show whether DF, KDB, RT, GL, etc.)
3011' 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 *Barry W. Hunt*

Name (Printed/Typed)
BARRY W. HUNT

Date
5/17/12

Title
PERMIT AGENT FOR RKI EXPLORATION & PRODUCTION, LLC.

Approved by (Signature) */s/ Don Peterson*

Name (Printed/Typed)

Date
AUG 20 2012

Title
CARLSBAD FIELD OFFICE

Office
FIELD MANAGER

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

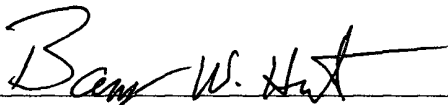
**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

*Approval Subject to General Requirements
& Special Stipulations Attached*

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 May 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

RKI Exploration & Production LLC

P.O. Box 370, Carlsbad, NM 88221
Office 505-885-1313 Fax 505-885-3509

July 17, 2009

To Whom It May Concern:

Mr. Barry Hunt is employed by RKI Exploration & Production to sign as their agent for APD's and Right of Ways in the states of New Mexico and Texas.

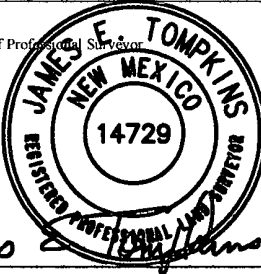
If you have any questions, please contact me at my office at 575-885-1313.

Sincerely,

RKI Exploration & Production, LLC

A handwritten signature in black ink, appearing to read "Gene Simer", written in a cursive style.

Gene Simer
Production Superintendent

				<p>SURVEYORS CERTIFICATION</p> <p><i>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.</i></p> <p>Signature: <u>Barry W. Hunt</u> Date: <u>5/17/12</u></p> <p>Print Name: <u>Barry W. Hunt</u></p> <p>E-mail Address: _____</p>
				<p>SURVEYORS CERTIFICATION</p> <p><i>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</i></p> <p>February 22, 2012</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <div style="text-align: center;">  </div> <p>James E. Tompkins</p> <p>Job No. <u>WTC48364</u></p> <p>JAMES E. TOMPKINS 14729</p> <p>Certificate Number</p>
<p>1650'</p> <p>660'</p>		<p>RDX FEDERAL 21-42 NMSP-E (NAD 83) Y = 372196 9' N X = 678883 5' E N LAT. = 32° 01' 20 90" W LONG. = -103° 53' 22.25"</p> <p>NMSP-E (NAD 27) Y = 372139 6' N X = 637697 3' E N LAT. = 32.0223478° W LONG. = -103.8890350°</p>		

RKI Exploration & Production, LLC

DRILLING PLAN

Well RDX Fed 21-42
 Location 660 FSL 1,650 FWL
 Section 21-26S-30E
 County Eddy
 State New Mexico

- 1) The elevation of the unprepared ground is 3,009 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:

Ruslter	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		
TD	7,400		144 degree F

The Bone Spring will be penetrated as rathole to enable the entire Brushy Canyon to be logged.
 Fresh water anticipated at 200 feet.

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	875	13 3/8"	54.5#/J-55	ST&C	2.98	6.06	10.78
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

All new casing

7) Cement program:

Surface	17 1/2" hole	
Pipe OD	13 3/8"	
Setting Depth	875 ft	
Annular Volume	0.69462 cf/ft	
Excess	1	100 %

Lead	541 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	1116 cf	
With Excess	2232 cf	

Lead	950 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
Excess	0.35	35 %
Total Annular Volume	767 cf	
With Excess	1,036 cf	
DV Tool Depth	5000 ft	

Stage 1

Lead:	382 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:	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 (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

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	875	8.5 to 8.9	32 to 36	6 - 12	2 - 8	NC	Fresh Water
695	875	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

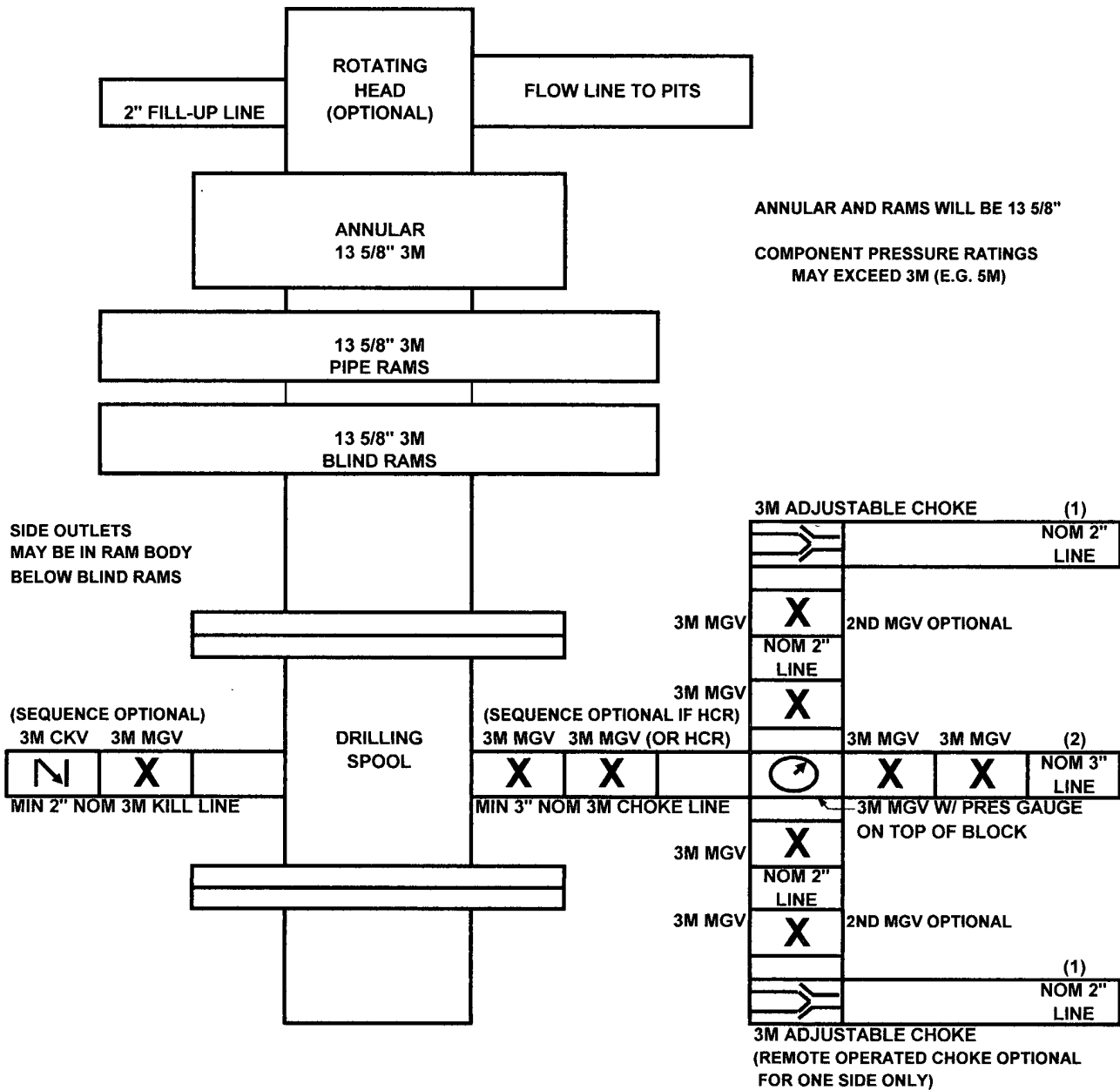
11) Potential hazards:

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

Though lost circulation is not anticipated, lost circulation material will be available on location.

12) Anticipated Start Date June '12
Duration 15 days

3M BOP SCHEMATIC



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

(2) Bleed line to pit

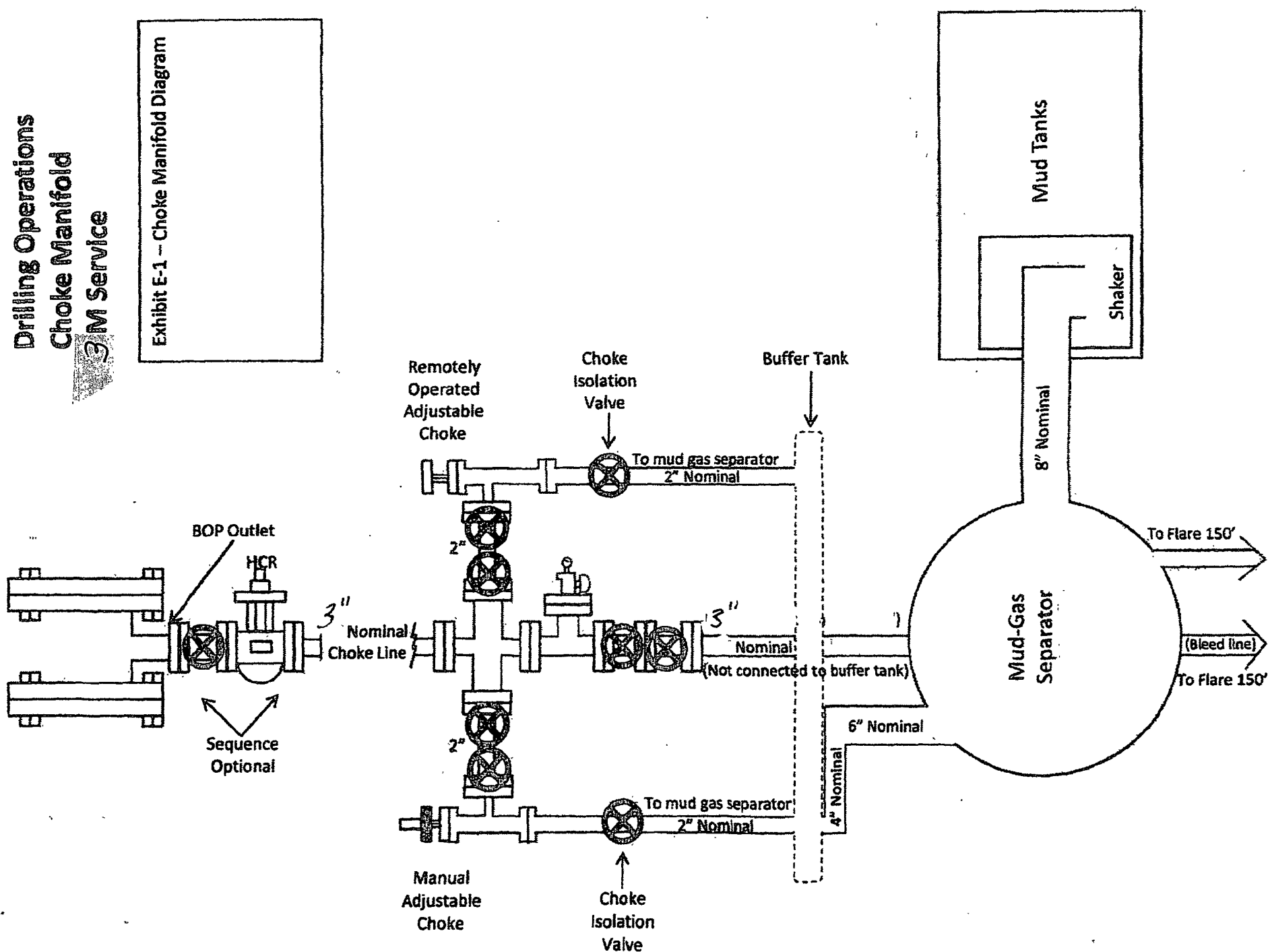
MGV - Manual Gate Valve

CKV - Check Valve

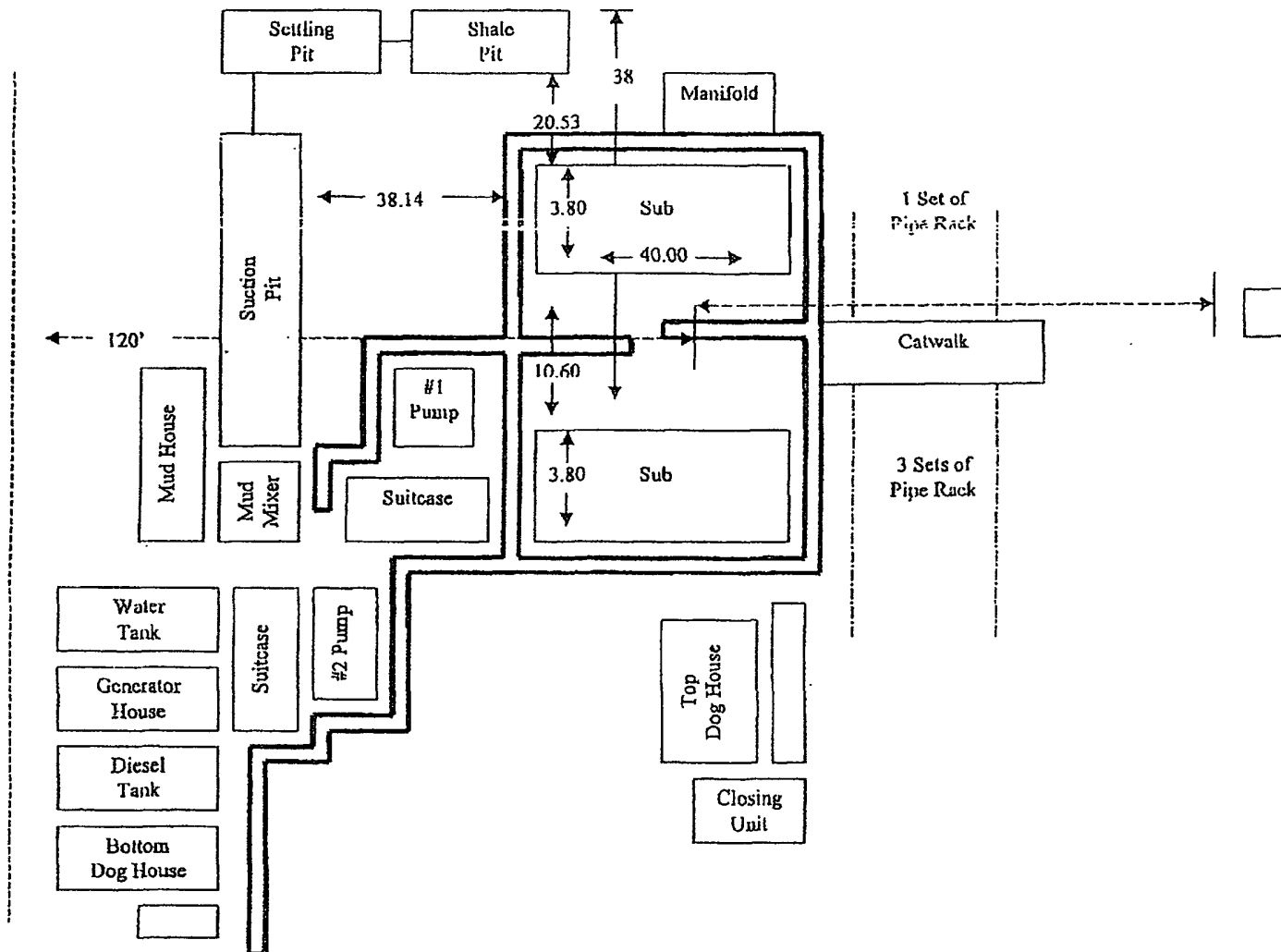
HCR - Hydraulically Controlled Remote Valve

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.

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI EXPLORATION
LEASE NO.:	NM102917
WELL NAME & NO.:	42-RDX FEDERAL 21
SURFACE HOLE FOOTAGE:	660'/S. & 1650'/W.
BOTTOM HOLE FOOTAGE	
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
 - Watershed Resources
- ☒ **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
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**