

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**5. Lease Serial No.  
NMNM20965

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
RDX FEDERAL COM 17 36H9. API Well No.  
30-015-43636-00-X110. Field and Pool or Exploratory Area  
UNDESIGNATED11. County or Parish, State  
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

RKI EXPLORATION &amp; PROD LLC

Contact: CRYSTAL FULTON

E-Mail: crystal.fulton@wpenergy.com

3a. Address

3500 ONE WILLIAMS CENTER MD 35  
TULSA, OK 74172

3b. Phone No. (include area code)

Ph: 539-573-0218

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 17 T26S R30E NWNW 150FNL 920FWL

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

RKI EXPLORATION AND PRODUCTION, LLC requests to change the surface hole location and bottom hole location for the following well.

The pad is already constructed. There will be no new surface disturbance.

Please see attached updated plat, drilling plan, directional plan, and GEO Prog.

BC 9-11-17  
Accepted for record - NMOC

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL  
NM OIL CONSERVATION  
ARTESIA DISTRICT

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #379889 verified by the BLM Well Information System

For RKI EXPLORATION &amp; PROD LLC, sent to the Carlsbad

Committed to AFMSS for processing by DEBORAH MCKINNEY on 07/20/2017 (17DLM2134SE) RECEIVED

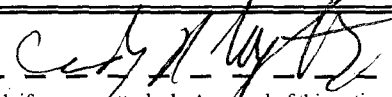
Name (Printed/Typed) CRYSTAL FULTON

Title PERMITTING TECH II

Signature (Electronic Submission)

Date 06/27/2017

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By 	Title AFM - Linda & M. [unclear]	Date 08/28/17
Conditions of approval, if any, are attached. Approval of this notice 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.		Office CPO

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.

(Instructions on page 2)

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

# RKI Exploration & Production, LLC.



## Drilling Plan

Well RDX Federal Com 17-36H  
 Location Surface: 200 FNL 735 FWL T26S R30E S17  
 Bottom Hole: 230 FSL 1064 FWL T26S R30E S17  
 County/State Eddy, NM

The elevation of the unprepared ground is 3,071 feet above sea level.

The geologic name of the surface formation is Quaternary - Alluvium

A rotary rig will be utilized to drill the well to 15747' MD, then will be cased and cemented. This equipment will then be rigged down and the well will be completed with a workover rig.

Proposed depth is 15,747 feet MD.

### 1) Estimated Tops:

Formation Name	MD	TVD	Bearing	BHP (psi)	MASP (psi)
Quaternary - Alluvium	GL	GL	Water		
Rustler Magenta Member (Base)	787	787	Water		
Bell Canyon Sand (Base Salt)	3,402	3,392	Oil/Gas		
Cherry Canyon Sand	4,535	4,516	Oil/Gas		
Brushy Canyon Sand	4,688	4,668	Oil/Gas		
1st Bone Spring Sand	8,168	8,143	Oil/Gas		
2nd Bone Spring Sand	8,983	8,958	Oil/Gas		
3rd Bone Spring Sand	10,081	10,056	Oil/Gas		
KOP	10,439	10,418			
Wolfcamp	10,472	10,447	Oil/Gas		
Landing Point (Wolfcamp)	11,189	10,565	Target Frm		
TD	15,747	10,895	Oil/Gas	7,082	4,685

### 2) Notable Formations:

Any usable fresh water zones encountered will be adequately protected and reported. All usable water zones, potential hydrocarbon zones, and valuable mineral zones will be isolated.

Useable water will be protected by surface casing set and cemented to surface.

### 3) Pressure Control Equipment:

The blowout preventer equipment (BOPE) will consist of 3 rams (10,000 psi WP) with 2 pipe rams (one of which may be variable), 1 blind ram and 1 annular preventer (5,000 psi WP) will be installed. The BOPE will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams. A rotating head will be installed as needed. Units will be hydraulically operated.

An accumulator that meets the requirements of Onshore Order 2 for the pressure rating of the BOP stack will be present.

BOPE will be inspected and operated as recommended in Onshore Order 2. A third party company will test the BOPE. After surface casing is set and the BOPE is nipped up, pressure tests will be conducted to 250 psi low and 5000 psi high (50% of WP) with the annular tested to 250 psi low and 2500 psi high (50% of WP).

A 20" x 13-3/8" x 9-5/8" x 7" 10M multi-bowl wellhead w/ 9-5/8" and 7" mandrel hangers will be install after setting surface casing and utilized until total depth is reached. The 9-5/8" and 7" casings will be set using a mandrel in the casing head and the stack will not be retested at these casing points.

The following BOPE will be installed, tested and operational:

- Drilling spool or blowout preventer with two (2) side outlets;
  - Choke line side shall be 3" minimum diameter;
    - Two (2) adjustable chokes with one (1) remotely controlled from the rig floor and pressure gauge.
  - Kill side shall be at least 2" diameter;
    - Two (2) manual valves and one (1) check valve.

Auxiliary equipment is as follows:

- Upper kelly cock valve with a handle available;
- Lower kelly cock valve with a handle available;
- A float valve will be used in the drill string, either in a float sub or in the mud motor;
- Safety valves and subs with a full opening sized to fit all drill strings and collars will be available on the rig floor in the open position.

RKI Exploration & Production, LLC. requests a variance to drill this well using a co-flex line between the BOP and the choke manifold. Certification for proposed co-flex hose is attached. The hose is required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

#### 4) Casing Program:

Section	Hole Size	Top (MD)	Bottom (MD)	Bottom (TVD)	Casing OD	Weight (ppf)	Grade	Threads
Surf	17-1/2"	0	787	787	13-3/8"	54.5	J-55	ST&C
Int_1	12-1/4"	0	3,402	3,392	9-5/8"	40.0	J-55	LT&C
Int_2	8-3/4"	0	11,189	10,895	7"	29.0	HCP-110	BT&C
Prod	6-1/8"	10,439	15,747	10,895	4-1/2"	13.5	HCP-110	CDC-HTC

Safety Factors	
Collapse	1.125
Burst	1.000
Tension	1.600

Design Factors			
Section	Collapse	Burst	Tension
Surf	3.26	15.77	11.98
Int_1	1.72	5.29	3.82
Int_2	1.92	4.68	2.94
Prod	2.23	5.18	2.08

Centralizers will be run as follows:

- One (1) centralizer on each of the bottom three jts of casing beginning with the shoe jt;
- One (1) centralizer every third jt from above bottom three jts to planned top of cement (TOC).

#### 5) Cement Program:

Section	Hole Size	Casing OD	Cap <sub>Ann</sub> (cuft/ft)					
Surf	17.50	13.375	0.6946					
Type	Cmt Btm	Cmt Top	Cubic Feet	Yield	Excess	Sacks	Weight	Blend & Additives
Lead	530	0	368	1.74	50%	317	13.5	Class C + 4% Gel + 2% CaCl + 0.4 pps Defoamer + 0.125 pps Celloflake
Tail	787	530	134	1.34	50%	200	14.8	Class C + 2% Calcium

Section	Hole Size	Casing OD	Cap <sub>Ann</sub> (cuft/ft)	Prev Csg ID	Cap <sub>Csg-Csg</sub> (cuft/ft)			
Int_1	12.25	9.625	0.3132	12.615	0.3627			
Type	Cmt Btm	Cmt Top	Cubic Feet	Yield	Excess	Sacks	Weight	Blend & Additives
Lead	787	0	285	1.92	0%	529	12.9	Class C/Poz 35/65 + 5% Salt + 6% Gel + 0.5% Retarder + 3 pps LCM + 0.4 pps Defoamer + 0.125 pps Celloflake
	2728	787	608		20%			
Tail	3402	2728	211	1.32	20%	200	14.8	Class C

Section	Hole Size	Casing OD	Cap <sub>Ann</sub> (cuft/ft)	Prev Csg ID	Cap <sub>Csg-Csg</sub> (cuft/ft)			
Int_2	8.75	7.00	0.1503	8.835	0.1585			
Type	Cmt Btm	Cmt Top	Cubic Feet	Yield	Excess	Sacks	Weight	Blend & Additives
Lead	3402	2902	79	2.67	0%	505	11.2	TXI Lightweight + 10% Gel + 8% Plex Crete + 0.9% Retarder + 0.7 pps FL + 3 pps LCM + 0.4 pps Defoamer + 0.125 pps Celloflake
	10439	3402	1058		20%			
Tail	11189	10439	113	1.18	20%	115	15.6	Class H + 0.3% Retarder

Section	Hole Size	Casing OD	Cap <sub>Ann</sub> (cuft/ft)	Prev Csg ID	Cap <sub>Csg-Csg</sub> (cuft/ft)			
Prod	6.125	4.50	0.0942	6.184	0.0981			
Type	Cmt Btm	Cmt Top	Cubic Feet	Yield	Excess	Sacks	Weight	Blend & Additives
Tail	11189	10439	74	1.89	0%	311	13.0	Acid Soluble TXI + 1.3% Salt + 30% CaCl + 5% Plexacid + 0.7% FL + 0.3% Retarder + 0.1% Anti-settling + 0.4 pps Defoamer
	15747	11189	429		20%			

#### 6) Drilling Fluids Program:

An electronic mud monitoring system satisfying the requirements of Onshore Order 1 will be used. All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.

Section	Hole Size	TMD	Mud Wt.	Vis	PV	YP	Fluid Loss	Type
Surf	17-1/2"	787	8.5 to 8.9	32 to 36	1 - 6	1 - 6	NC	Fresh Wtr
Int_1	12-1/4"	3,402	9.8 to 10.0	28 to 30	1 - 3	1 - 3	NC	Brine
Int_2	8-3/4"	11,189	8.9 to 9.4	28 to 36	1 - 3	1 - 3	NC	Cut Brine
Prod	6-1/8"	15,747	10.5 to 12.5	50 to 55	20-22	8 - 10	8 - 10	OBM

Mud checks will be performed every 24 hours.

The following mud system monitoring equipment will be in place during drilling:

- Visual pit markers
- Pit volume totalizer (PVT)
- Stroke counter
- Gas detection
- Mud-gas separator (gas buster)
- Flow sensor

A closed-loop system will be in place during all phases of drilling. Cuttings disposal will be at an off-site disposal facility.

#### 7) Formation Evaluation Program:

No core or drill stem test is planned.

A 2-person mud-logging program will be used from Int\_1 9-5/8" casing point to TD.

No electronic logs are planned.

#### 8) Abnormal Conditions:

No abnormal pressure or temperature is expected.

Maximum expected bottom hole pressure is 7082 psi at 10895' TVD. Expected bottom hole temperature is <200°F.

In accordance with Onshore Order 6, RKI Exploration & Production, LLC does not anticipate that there will be enough H<sub>2</sub>S to meet the BLM's minimum requirements for the submission of an "H<sub>2</sub>S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. However, since RKI Exploration & Production, LLC has an H<sub>2</sub>S safety package on all wells, an "H<sub>2</sub>S Drilling Operations Plan" is attached.

Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

*All personnel will be familiar with all aspects of safe operation of equipment being used.*

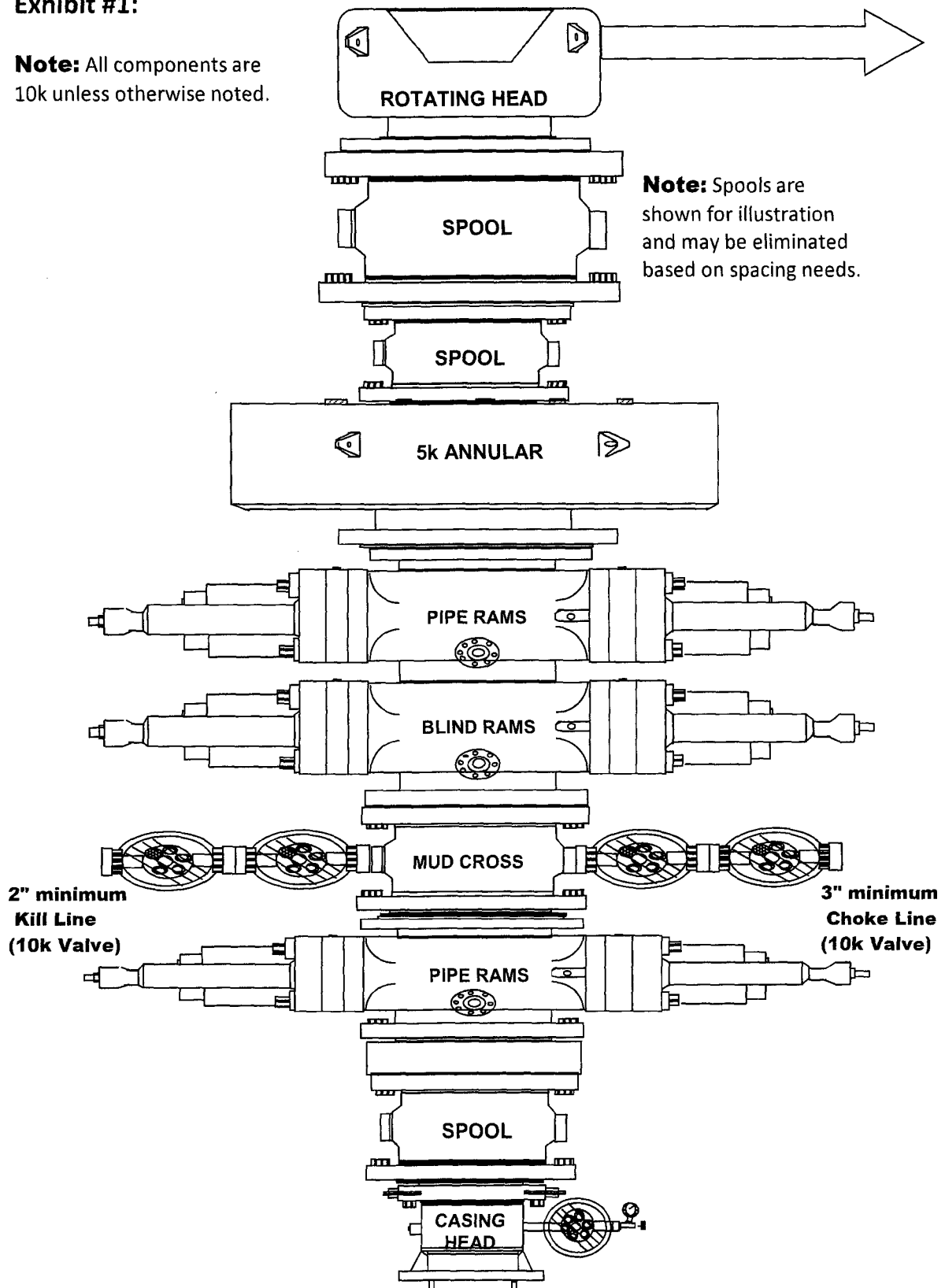
**9) Other Information**

The anticipated spud date is upon approval. Expected duration is 30 days to drill the well.

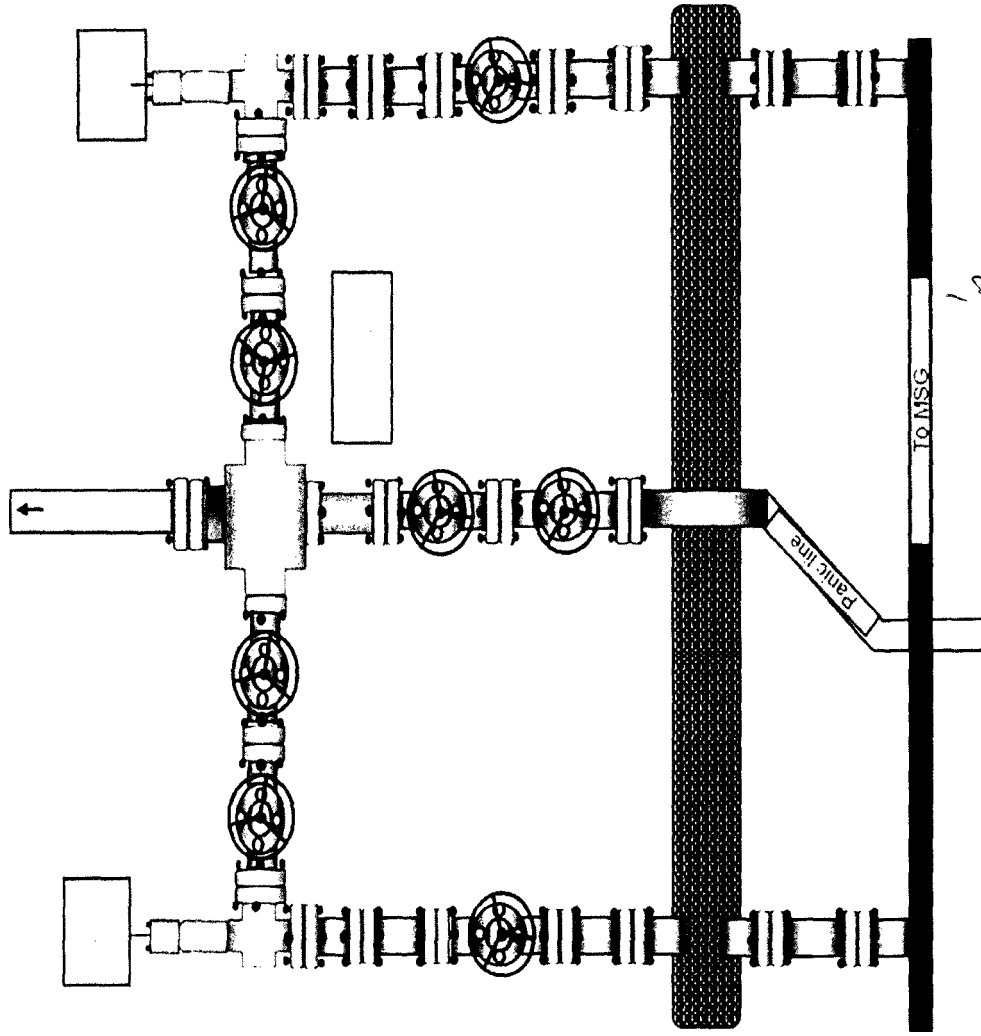
# 13-5/8" 5M BOP Schematic

## Exhibit #1:

**Note:** All components are 10k unless otherwise noted.



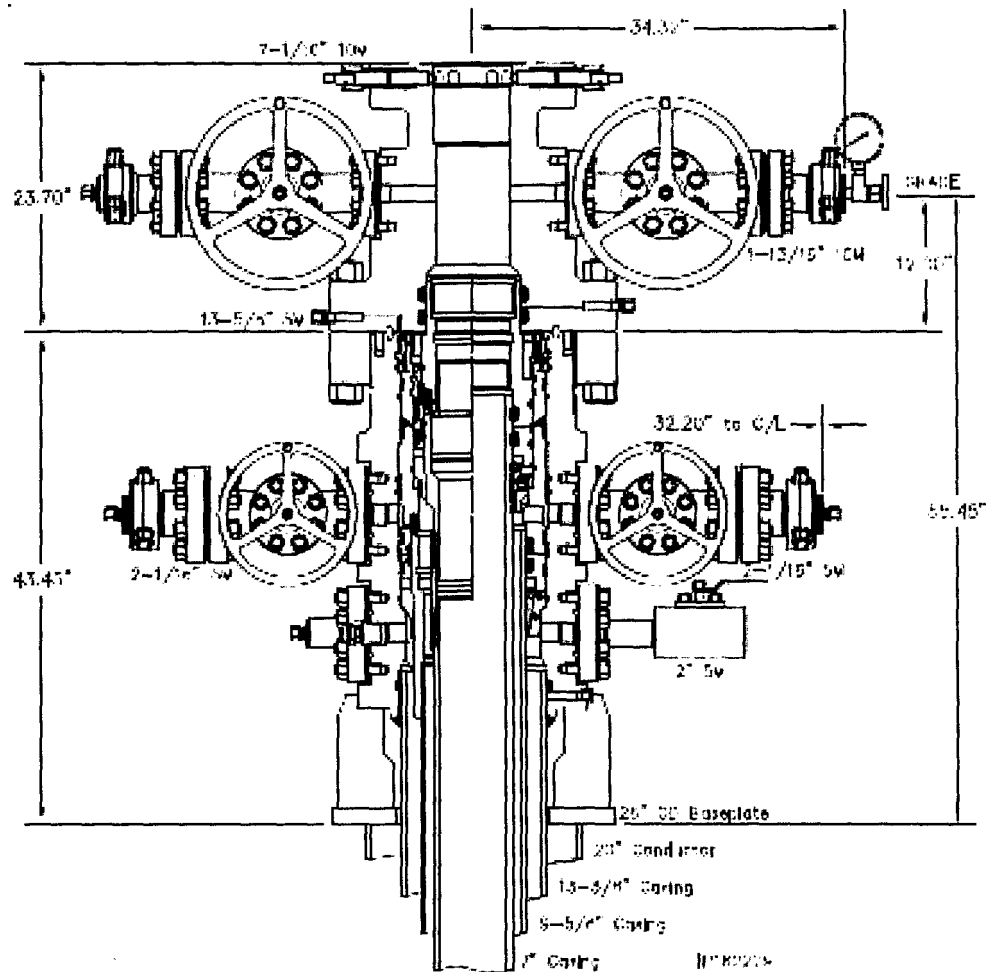
5M Choke Manifold



Buffer tank  
Must have two  
outlets per OO #7  
diagram

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## System Drawing



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**Cactus**  
Wellhead

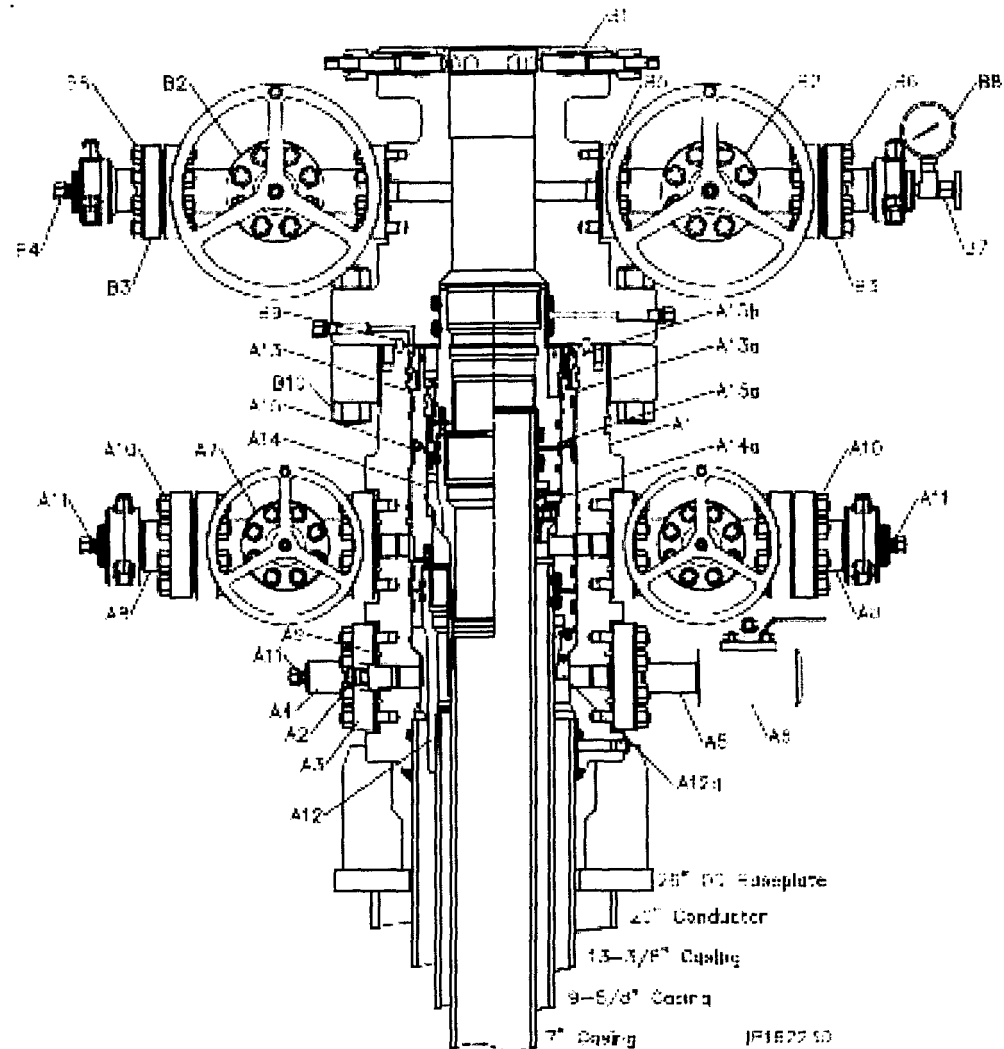
WPX Energy  
20" x 13-3/8" x 8-5/8" x 7" 10M MSU-3T Wellhead With 7"  
Mandrel Hanger & CTR-DBLHP5 Tubing Head

IP 0467  
Page 1



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## Bill of Materials



20" x 13-3/8" x 9-5/8" x 7" 10M MBU-3T Wellhead with 7" Mandrel Hanger & CTH-DBLHP5 Tubing Head

IP 0487  
Page 2

WVX Energy  
20" x 13-3/8" x 9-5/8" x 7" 10M MBU-3T Wellhead with  
7" Mandrel Hanger & CTH-DBLHP5 Tubing Head

**Cactus**  
Wellhead

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DRILLING HOUSING ASSEMBLY	RECOMMENDED SERVICE TOOLS	RECOMMENDED SERVICE TOOLS
1. 1. 10' 10" 10M MBU-3T Wellhead with 7" Mandrel Ranger & CTH-DBLHPS Tubing Head	S-10-1. 10' 10" 10M MBU-3T Wellhead with 7" Mandrel Ranger & CTH-DBLHPS Tubing Head	S-10-1. 10' 10" 10M MBU-3T Wellhead with 7" Mandrel Ranger & CTH-DBLHPS Tubing Head
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14. 1. 10' 10" 10M MBU-3T Wellhead with 7" Mandrel Ranger & CTH-DBLHPS Tubing Head	S-10-14. 10' 10" 10M MBU-3T Wellhead with 7" Mandrel Ranger & CTH-DBLHPS Tubing Head	S-10-14. 10' 10" 10M MBU-3T Wellhead with 7" Mandrel Ranger & CTH-DBLHPS Tubing Head

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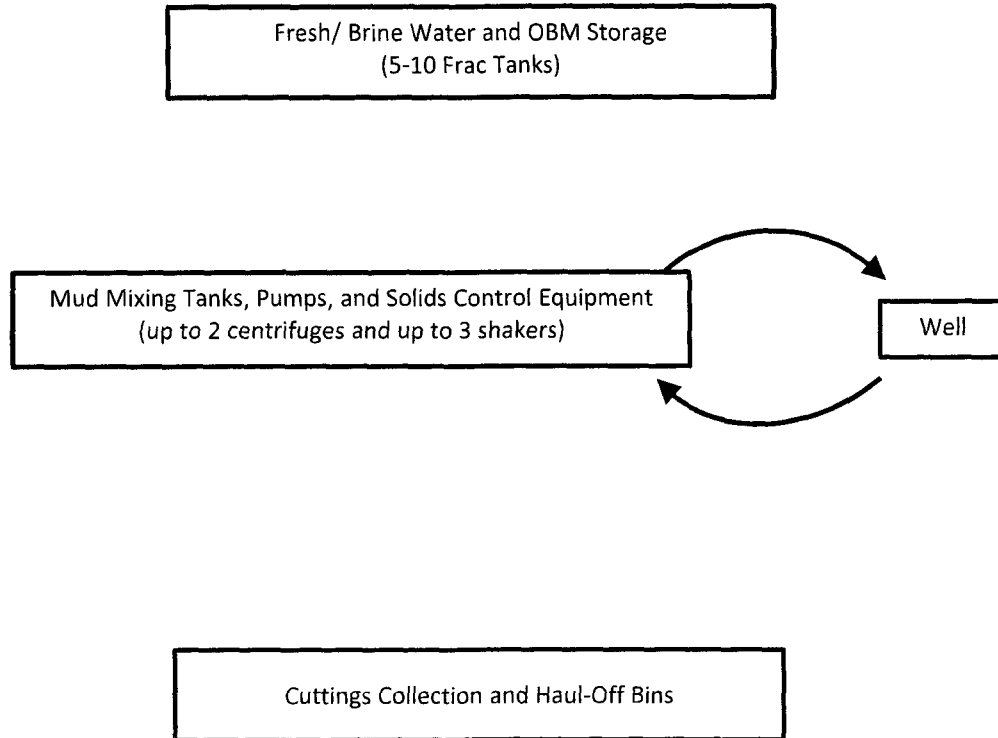
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## Closed Loop System

RKI Exploration & Production, LLC.

RDX Federal Com 17-36H

Eddy, NM

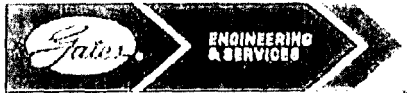


### Operating and Maintenance Plan:

During drilling operations, third party services companies will utilize solids control equipment to remove cuttings from drilling fluids and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

### Closure Plan:

During the drilling operations, third party service companies will haul off drill solids and fluids to an approved disposal facility. At the end of the well, all closed loop equipment will be removed from the location.



GATES E & S NORTH AMERICA, INC  
DU-TEX  
134 44TH STREET  
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807  
FAX: 361-887-0812  
EMAIL:  
WEB: www.gates.com

### 10K CHOKE & KILL ASSEMBLY PRESSURE TEST CERTIFICATE

Customer:	ORION DRILLING COMPANY	Test Date:	9/2/2014
Customer Ref:	PENDING	Hose Serial No.	D-000214-4
Invoice No.	203508	Created By:	JUSTIN CROPPER
Product Description:	10K3 025.0CK4.171610KFLGE/E		
End Fitting 1	4 1/16 10K FLG	End Fitting 2	4 1/16 10K FLG
Gates Part No.:	4771-4291	Assembly Code	L33076040913D-050214-4
Working Pressure:	10,000 PSI	Test Pressure:	15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality Manager  
Date:  
Signature:

QUALITY
9/2/2014
<i>[Signature]</i>

Technical Supervisor  
Date:  
Signature:

PRODUCTION
9/2/2014
<i>[Signature]</i>



Gates E&S North America  
134 - 44th St.  
CORPUS CHRISTI, TEXAS 78405  
PHONE : (361) 887-9807  
FAX: (361) 887-0812

## CERTIFICATE OF CONFORMANCE

This is to verify that all Parts and/or Materials included in this shipment have been manufactured and/or processed in Conformance with applicable drawings and specifications, and that Records of Required Tests are on file and subject to examination. The following items were assembled at Gates E & S, Inc. (formerly Outex, Inc.), facilities in Corpus Christi, TX, USA. This hole assembly was designed and manufactured to meet all the requirements of API Spec 7K.

CUSTOMER: ORION DRILLING COMPANY  
CUSTOMERS P.O.#: PENDING  
PART DESCRIPTION: 10-3.025.0CK4 1/1610KFGE/E  
SALES ORDER #: 203508  
QUANTITY: 1  
SERIAL #: D-090214-4

SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

QUALITY \_\_\_\_\_

9/2/2014

MODEL 316 LENGTH 2 ft END 1 1/16 END 1 1/16  
GRADE 10 K WORKING PRESSURE 19,000 PSI  
TEST PRESSURE 15,000 PSI  
TEST DATE 9-2-14 SERIAL # 43070046878D-016244  
DATE 9-2-14 CR # 8554





U.S. Steel Technical Products

4" 112 13.50 lb. 6.29' P110 H1

USS CDC HTQ™

FIG.

CONNECTION

#### MECHANICAL PROPERTIES

Minimum Yield Strength	110,000	psi
Maximum Yield Strength	140,000	psi
Minimum Tensile Strength	125,000	psi

#### DIMENSIONS

Outside Diameter	4.500	5.425	in
Wall Thickness	0.290		in
Inside Diameter	3.920	4.830	in
Depth - API	5.705	5.725	in
Nominal Lineal Weight, T & C	13.50		lb/ft
Min End Weight	13.05		lb/ft

#### SECTION AREA

Cross-Sectional Area - Critical Area	3.836	3.836	sq in
Area - EP		100.0	sq in

#### PERFORMANCE

Minimum Charpy Resistance	11,810	11,810	psi
External Bursting Lineal Resistance		9,450	psi
Minimum External Yield Force	10,420	10,420	psi
Minimum Pipe Body Yield Strength	12,000		psi
Joint Strength		11,110	psi
Compression Flange		106,000	psi
Reference Length		11,877	in
Maximum Allowable Stress		72.6	ksi/1000 psi

#### MAKE-UP DATA

Make-Up Loss	0.04	in
Minimum Make-Up Torque	3,000	ft-lbs
Maximum Make-Up Torque	10,000	ft-lbs
Connection Yield Torque	11,400	ft-lbs

#### Notes

1. This table provides only general information and is not intended to be used as a specification. It is intended to provide a general overview of the product and its properties. For detailed information, please refer to the applicable specification and standard.
2. The values in this table are based on the latest available data and are subject to change without notice. The values are for reference only and should not be used for design purposes.
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U.S. Steel Technical Products 800.441.4444  
10340 Sam Houston Park Dr. #100 connections@uss.com  
Houston, TX 77064 www.ussteel.com