10-696

Form 3160-3
(August 2007)

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010 EA 10-1230

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. BHL
NM-555443, NM-011042, NM-554774

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No.
RDU Federal 27-2H (38362)

2. Name of Operator RKI Exploration & Production, LLC. (246289)

9. API Well No.
30-015-38435

3a. Address 3817 NW Expressway, Suite 950
Oklahoma City, OK. 73112

3b. Phone No. *(include area code)*
405-996-5750

10. Field and Pool, or Exploratory
Ross Draw Bone Spring

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 660 FNL & 1500 FWL, Section 27
At proposed prod. zone 660 FSL & 1650 FWL, Section 34

11. Sec., T. R. M. or Blk. and Survey or Area
SHL: Section 27, T. 26 S., R. 30 E.
BHL: Section 34, 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

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
660 ft.	160 each	224.87
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
480 ft.	8300 ft. TVD 14183' MD	NLM-NMB-000460
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3026' GL		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)*	Date
Barry W. Hunt	BARRY W. HUNT	9/15/10

Title
Permitting Agent for RKI Exploration & Production

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Jim Whitlatch		OCT 13 2010
Title	**Office**	
FIELD MANAGER	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)

NMOCD

OCD CONDITION OF APPROVAL for Drilling:
Intent to drill ONLY --- CANNOT produce until the Non-Standard Location has been approved by OCD Santa Fe office.

RECEIVED
OCT 18 2010
NMOCD ARTESIA

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

RKI EXPLORATION & PRODUCTION, LLC.
DRILLING PLAN

RDU 27-2H
Surface Location: 660' FNL & 1,500' FWL of 27-26S-30E
Bottom Hole Location: 660' FSL & 1,650' FWL of 34-26S-30E
Eddy County, NM

1. The elevation of the unprepared ground is 3,026' 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 14,183' MD and run casing. This equipment will then be rigged down and the well will be completed with a workover rig.

4. Proposed total depth is 14,183' MD, 8,300' TVD.

5. Estimated tops of important geologic markers:

Rustler	800'
Salado	1,100'
Castile	1,640'
Lamar Lime	3,410'
Base of Lime	3,430'
Delaware Top	3,470'
Bell Canyon Sand	3,470'
Cherry Canyon Sand	4,580'
Brushy Canyon Sand	5,630'
KOP	7,663'
Bone Spring	7,325'
TVD	8,300' (135 degree F)

6. Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Bell Canyon	Oil (1,509 psi)
Cherry Canyon	Oil (1,996 psi)
Brushy Canyon	Oil (2,444 psi)
Bone Spring	Oil (3,182 psi)

7. The proposed casing program is as follows:

See COA

Surface: 13-3/8" 54.5# J-55 ST&C new casing set from 0' - 950'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

Intermediate: 9-5/8" 40# J-55 LT&C new casing set from 0' – 3,300'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

Production: 5-1/2" 17# P-110 LT&C new casing set from 0' – 14,183'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

8. Casing setting depth and cementing program: See COA

a. 13-3/8" surface casing set at ~~950'~~ in 17-1/2" hole. Circulate cement to surface with 560 sx "C" with 4% D20, 2% S1, .2% D46, .125 pps D130 mixed at 12.9 ppg (1.97 cf/sk) followed by 200 sx "C" with 1% S1, .125 pps D130 mixed at 14.8 ppg (1.34 cf/sk).

b. 9-5/8" intermediate casing set at 3,300' in 12 1/4" hole. A fluid caliper will be run to determine exact cement volume required. Cement will be circulated to surface with 950 sx 35:65 Poz "C" with 6% D20, 5% D44, .2% D46, .2% D13, .125 pps D130 mixed at 12.6 ppg (2.06 cf/sk) followed by ~~,~~ Class C with .2% D13 mixed 14.8 ppg (1.33 cf/sk). 200 sx

See COA

c. 5-1/2" production casing set at ~~12,809~~ 14,183' in 8 ¾" hole. Cement will be calculated to bring TOC to 3,000'. The well will be cemented in two stages as follows: **Stage 1:** 2,000 sx PVL with 3% D174, .3% D167, .1% D65, .2% D46, .5% D800 mixed at 13.0 ppg (1.44 cf/sk). **Stage 2:** 375 sx 35:65 Poz C with 6% D20, 5% D44, .2% D46, .1% D13, 2 pps D42, .125 pps D130 mixed at 12.6 ppg (2.05 cf/sk). DV tool at approximately 5000'

9. Pressure Control Equipment See COA

The blowout preventor equipment (BOP) will consist of a 5000 psi double ram type preventor, a ~~1500~~ psi bag-type (Hydril) preventor, and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. A 5M BOP will be installed on the 13-3/8" surface casing and utilized continuously until total depth is reached. After setting the 13-3/8" casing all BOP's and associated equipment will be tested to rated pressure and before drilling out the 13-3/8" casing shoe the casing will be tested to ~~1000~~ psi. After setting the 9-5/8" casing all BOP's and associated equipment will be tested to rated pressure and before drilling out the 9-5/8" casing shoe the casing will be tested to ~~1000~~ psi. See COA

See COA

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will

include a Kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi rating.

10. Mud Program:

0' - 950'	Bentonite/Lime mud. Paper for losses and seepage. 8.4 to 9.0 ppg, 32 to 36 vis, PV 1 to 3, YP 1 to 3, WL NC.
950' - 3,300'	Brine. As needed LCM for losses and seepage. 10.0 to 10.1 ppg, 28 to 30 vis, PV 1 to 3, YP 1 to 3, WL NC.
3,300' – 14,183'	Drill out with cut brine. 9.1 to 9.3 ppg, 28 to 30 vis, PV 1 to 3, YP 1 to 3, WL NC.

see COA

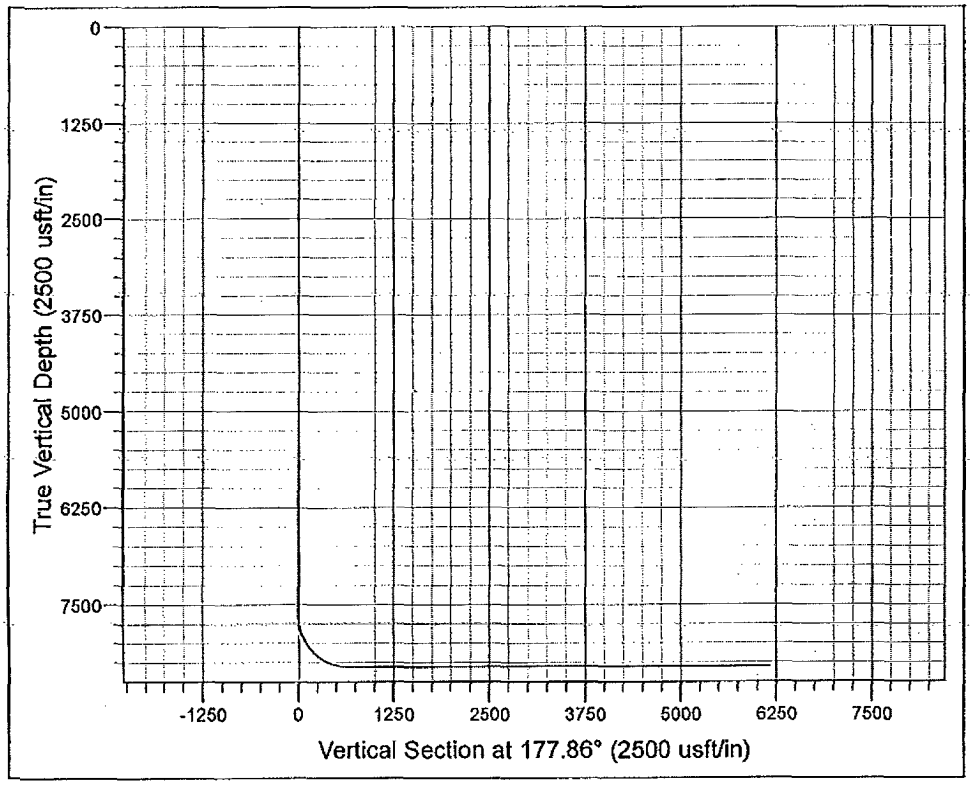
11. Testing, Logging and Coring Program: See COA

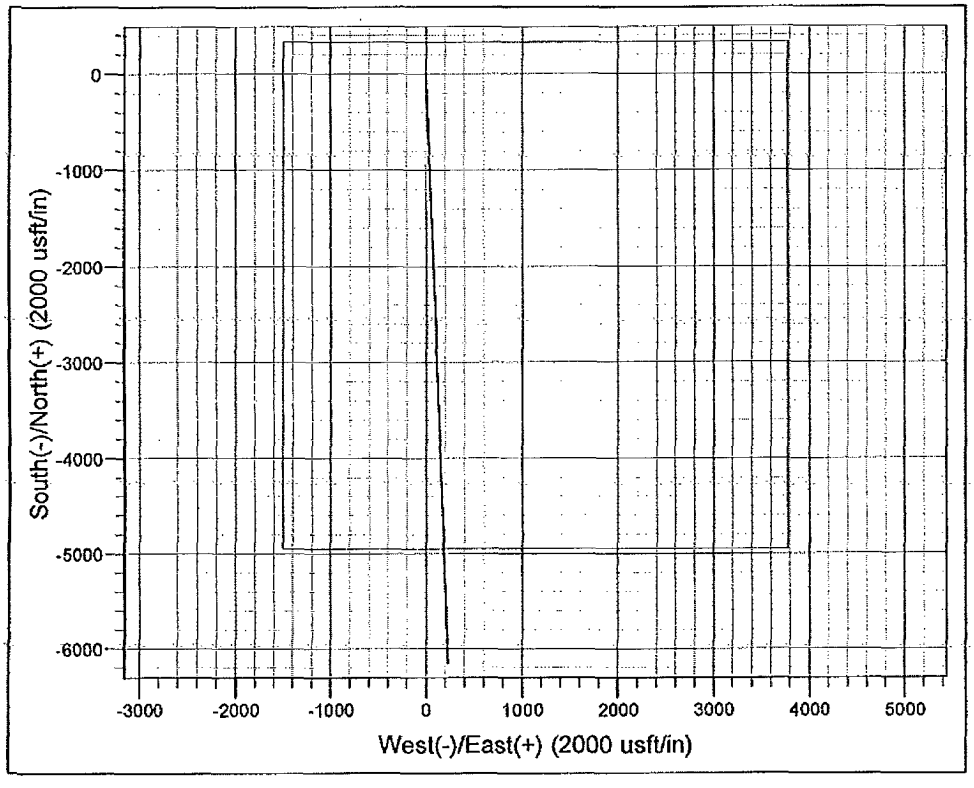
Testing program: No drillstem tests are anticipated.
Electric logging program: CNL/CAL/GR, DLL/CAL/GR. From 9 5/8" casing to kick off point. A gyro survey will also be ran at kick off point.
Coring program: None.

12. Potential Hazards:

No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3182 psi and estimated BHT 135 degrees F.

RDU 27-2H





Surf: 660' FNL 1500' FWL
27-26S-30E

BHL: 660' FSL 1650' FWL
34-26S-30E

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	7663.4	0.00	0.00	7663.4	0.0	0.0	0.00	0.00	0.0	
3	8663.4	90.00	177.86	8300.0	-636.2	23.8	9.00	177.86	636.6	
4	14183.8	90.00	177.86	8300.0	-6152.7	229.9	0.00	0.00	6157.0	T1

RKI Exploration & Production

RDU 27-2H
27-26S-30E
Eddy County, NM

Wellbore #1

Plan: Design #1

Standard Planning Report

14 September, 2010

Database:	ahrtoedm1	**Local Co-ordinate Reference:**	Site 27-26S-30E
Company:	RKI Exploration & Production	**TVD Reference:**	WELL @ 0.0usft (Original Well Elev)
Project:	RDU 27-2H	**MD Reference:**	WELL @ 0.0usft (Original Well Elev)
Site:	27-26S-30E	**North Reference:**	Grid
Well:	Eddy County, NM	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project RDU 27-2H

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Wyoming Eastern Zone		

Site 27-26S-30E

Site Position:		**Northing:**	-3,085,007.24 usft	**Latitude:**	32° 1' 7.970 N
From:	Lat/Long	**Easting:**	1,057,186.37 usft	**Longitude:**	103° 52' 22.170 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.69 °

Well Eddy County, NM

Well Position	**+N/-S**	0.0 usft	**Northing:**	-3,085,007.24 usft	**Latitude:**	32° 1' 7.970 N
	+E/-W	0.0 usft	**Easting:**	1,057,186.37 usft	**Longitude:**	103° 52' 22.170 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	0.0 usft

Wellbore Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	9/12/2010	7.79	59.98	48,594

Design Design #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.0	0.0	0.0	177.86

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,663.4	0.00	0.00	7,663.4	0.0	0.0	0.00	0.00	0.00	0.00	
8,663.4	90.00	177.86	8,300.0	-636.2	23.8	9.00	9.00	0.00	177.86	
14,183.8	90.00	177.86	8,300.0	-6,152.7	229.9	0.00	0.00	0.00	0.00	T1

Halliburton

Planning Report

Database:	ahrtoedm1	**Local Co-ordinate Reference:**	Site 27-26S-30E
Company:	RKI Exploration & Production	**TVD Reference:**	WELL @ 0.0usft (Original Well Elev)
Project:	RDU 27-2H	**MD Reference:**	WELL @ 0.0usft (Original Well Elev)
Site:	27-26S-30E	**North Reference:**	Grid
Well:	Eddy County, NM	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.0	90.00	177.86	8,300.0	-2,671.4	99.8	2,673.2	0.00	0.00	0.00
10,800.0	90.00	177.86	8,300.0	-2,771.3	103.6	2,773.2	0.00	0.00	0.00
10,900.0	90.00	177.86	8,300.0	-2,871.2	107.3	2,873.2	0.00	0.00	0.00
11,000.0	90.00	177.86	8,300.0	-2,971.1	111.0	2,973.2	0.00	0.00	0.00
11,100.0	90.00	177.86	8,300.0	-3,071.1	114.8	3,073.2	0.00	0.00	0.00
11,200.0	90.00	177.86	8,300.0	-3,171.0	118.5	3,173.2	0.00	0.00	0.00
11,300.0	90.00	177.86	8,300.0	-3,270.9	122.2	3,273.2	0.00	0.00	0.00
11,400.0	90.00	177.86	8,300.0	-3,370.9	126.0	3,373.2	0.00	0.00	0.00
11,500.0	90.00	177.86	8,300.0	-3,470.8	129.7	3,473.2	0.00	0.00	0.00
11,600.0	90.00	177.86	8,300.0	-3,570.7	133.4	3,573.2	0.00	0.00	0.00
11,700.0	90.00	177.86	8,300.0	-3,670.7	137.2	3,673.2	0.00	0.00	0.00
11,800.0	90.00	177.86	8,300.0	-3,770.6	140.9	3,773.2	0.00	0.00	0.00
11,900.0	90.00	177.86	8,300.0	-3,870.5	144.6	3,873.2	0.00	0.00	0.00
12,000.0	90.00	177.86	8,300.0	-3,970.4	148.4	3,973.2	0.00	0.00	0.00
12,100.0	90.00	177.86	8,300.0	-4,070.4	152.1	4,073.2	0.00	0.00	0.00
12,200.0	90.00	177.86	8,300.0	-4,170.3	155.8	4,173.2	0.00	0.00	0.00
12,300.0	90.00	177.86	8,300.0	-4,270.2	159.6	4,273.2	0.00	0.00	0.00
12,400.0	90.00	177.86	8,300.0	-4,370.2	163.3	4,373.2	0.00	0.00	0.00
12,500.0	90.00	177.86	8,300.0	-4,470.1	167.0	4,473.2	0.00	0.00	0.00
12,600.0	90.00	177.86	8,300.0	-4,570.0	170.8	4,573.2	0.00	0.00	0.00
12,700.0	90.00	177.86	8,300.0	-4,670.0	174.5	4,673.2	0.00	0.00	0.00
12,800.0	90.00	177.86	8,300.0	-4,769.9	178.2	4,773.2	0.00	0.00	0.00
12,900.0	90.00	177.86	8,300.0	-4,869.8	182.0	4,873.2	0.00	0.00	0.00
13,000.0	90.00	177.86	8,300.0	-4,969.8	185.7	4,973.2	0.00	0.00	0.00
13,100.0	90.00	177.86	8,300.0	-5,069.7	189.4	5,073.2	0.00	0.00	0.00
13,200.0	90.00	177.86	8,300.0	-5,169.6	193.2	5,173.2	0.00	0.00	0.00
13,300.0	90.00	177.86	8,300.0	-5,269.5	196.9	5,273.2	0.00	0.00	0.00
13,400.0	90.00	177.86	8,300.0	-5,369.5	200.6	5,373.2	0.00	0.00	0.00
13,500.0	90.00	177.86	8,300.0	-5,469.4	204.4	5,473.2	0.00	0.00	0.00
13,600.0	90.00	177.86	8,300.0	-5,569.3	208.1	5,573.2	0.00	0.00	0.00
13,700.0	90.00	177.86	8,300.0	-5,669.3	211.8	5,673.2	0.00	0.00	0.00
13,800.0	90.00	177.86	8,300.0	-5,769.2	215.6	5,773.2	0.00	0.00	0.00
13,900.0	90.00	177.86	8,300.0	-5,869.1	219.3	5,873.2	0.00	0.00	0.00
14,000.0	90.00	177.86	8,300.0	-5,969.1	223.0	5,973.2	0.00	0.00	0.00
14,100.0	90.00	177.86	8,300.0	-6,069.0	226.8	6,073.2	0.00	0.00	0.00
14,183.8	90.00	177.86	8,300.0	-6,152.7	229.9	6,157.0	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
T1	0.00	0.01	8,300.0	-6,152.8	229.6	-3,091,159.99	1,057,415.92	32° 0' 7.070 N	103° 52' 20.360 W
- plan misses target center by 0.4usft at 14183.8usft MD (8300.0 TVD, -6152.7 N, 229.9 E)									
- Point									

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

Gene Simer
Production Superintendent

DESIGNATION OF AGENT

The undersigned is, on the records of the Bureau of Land Management, Unit Operator under the Ross Draw unit agreement, Eddy County, New Mexico, No. 14-08-0001-13810 approved and effective on December 21, 1973 and hereby designates

NAME: RKI Exploration & Production, LLC
ADDRESS: 3817 NW Expressway, Suite 950
Oklahoma City, OK 73112

as its agent, with full authority to act on its behalf in complying with the terms of the unit agreement and regulations applicable thereto and on whom the Authorized Officer or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to drilling, testing and completing the RDU 27 #2H Well in the E ½ of the W ½, Sec. 27, T. 26S R. 30E, Eddy County, New Mexico. Bond coverage will be provided under Statewide Bond No. NMB000460.

It is understood that this Designation of Agent does not relieve the Unit Operator of responsibility for compliance with the terms of the unit agreement and the oil and gas operating regulations. It is also understood that this Designation of Agent does not constitute an assignment of any interest under the unit agreement of any lease committed thereto.

In case of default on the part of the designated agent, the Unit Operator will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his duly authorized representative.

The unit operator agrees promptly to notify the Authorized Officer of any change in the designated agent.

This Designation of Agent is deemed to be temporary and in no manner a permanent arrangement, and a designated agent may not designate another party as agent.

This designation is given only to enable the agent herein designated to drill the above specified well. It is understood that this Designation of Agent is limited to the field operations performed while drilling and completing the specified well and does not include administrative actions requiring specific authorization of the Unit Operator. This designation in no way will serve as authorization for the agent to conduct field operations for the specified well after it has been completed for production. Unless sooner terminated, this designation shall terminate when there is filed in the appropriate office of the Bureau of Land Management all reports and a Well Completion Report and Log (Form 3160-4) as required by the approved Application for Permit to Drill for the specified well.

In the event the above specified well is completed as a non-paying unit well, the authority for the designated agent to operate this well shall be established by completion of the Delegation of Authority to Operate Non-paying Unit Well form and submittal of the form to the appropriate office of the Authorized Officer.

J.C. Williamson

8/23/2010
Date

(Unit Operator)
Ralph E. Williamson, COO

Date

By:_____
Authorized Officer