

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 Brazos Road, 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

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

☐ AMENDED REPORT

RECEIVED

JAN 22 2014

NMOC D ARTESIA

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address RKI Exploration & Production, LLC 210 Park Avenue, Suite 900, Oklahoma City, OK 73102		OGRID Number 246289
Property Code 36900	Property Name RDX 16	API Number 30-015-41986 Well No. 25

7. Surface Location

UL - Lot J	Section 16	Township 26S	Range 30E	Lot Idn	Feet from 1650	N/S Line SOUTH	Feet From 1790	E/W Line EAST	County EDDY
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8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
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9. Pool Information

Pool Name BRUSHY DRAW - DELAWARE EAST	Pool Code 8090
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Additional Well Information

Work Type N	Well Type O	Cable/Rotary ROTARY	Lease Type S	Ground Level Elevation 3083 feet
Multiple NO	Proposed Depth 7530	Formation DELAWARE	Contractor	Spud Date ASAP
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	17 1/2 inch	13 3/8 inch	54.5#/ft J-55	750 feet	643	surface
Intermediate	12 1/4 inch	9 5/8 inch	40#/ft J-55	3500 feet	878	surface
Production	7-7/8 inch	5-1/2 inch	17#/ft N-80	7529 feet	801	3,000 feet

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
REFER TO ATTACHED DRILLING PLAN	3,000 PSI	3,000 PSI	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

I further certify that I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

Charles K. Ahn

Printed name: CHARLES K. AHN

Title: EH&S/REGULATORY MANAGER

E-mail Address: cahn@rkixp.com

Date: January 17, 2014

Phone: 405-996-5771

OIL CONSERVATION DIVISION

Approved By:

T. C. Shepard

Title:

"Geologist"

Approved Date:

1-22-2014

Expiration Date:

1-22-2016

Conditions of Approval Attached

✓

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

Revised August 1, 2011
 Submit one copy to appropriate
 District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-41986	Pool Code 8090	Pool Name BRUSHY DRAW - DELAWARE EAST
Property Code 36900	Property Name RDX 16	Well Number 25
OGRID No. 246289	Operator Name RKI EXPLORATION & PRODUCTION	Elevation 3083'


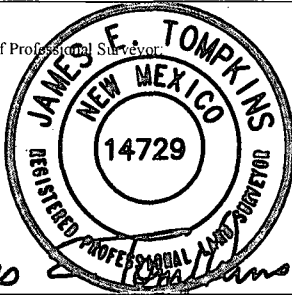
Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	16	26 S	30 E		1650	SOUTH	1790	EAST	EDDY

Bottom Hole Location If Different From Surface

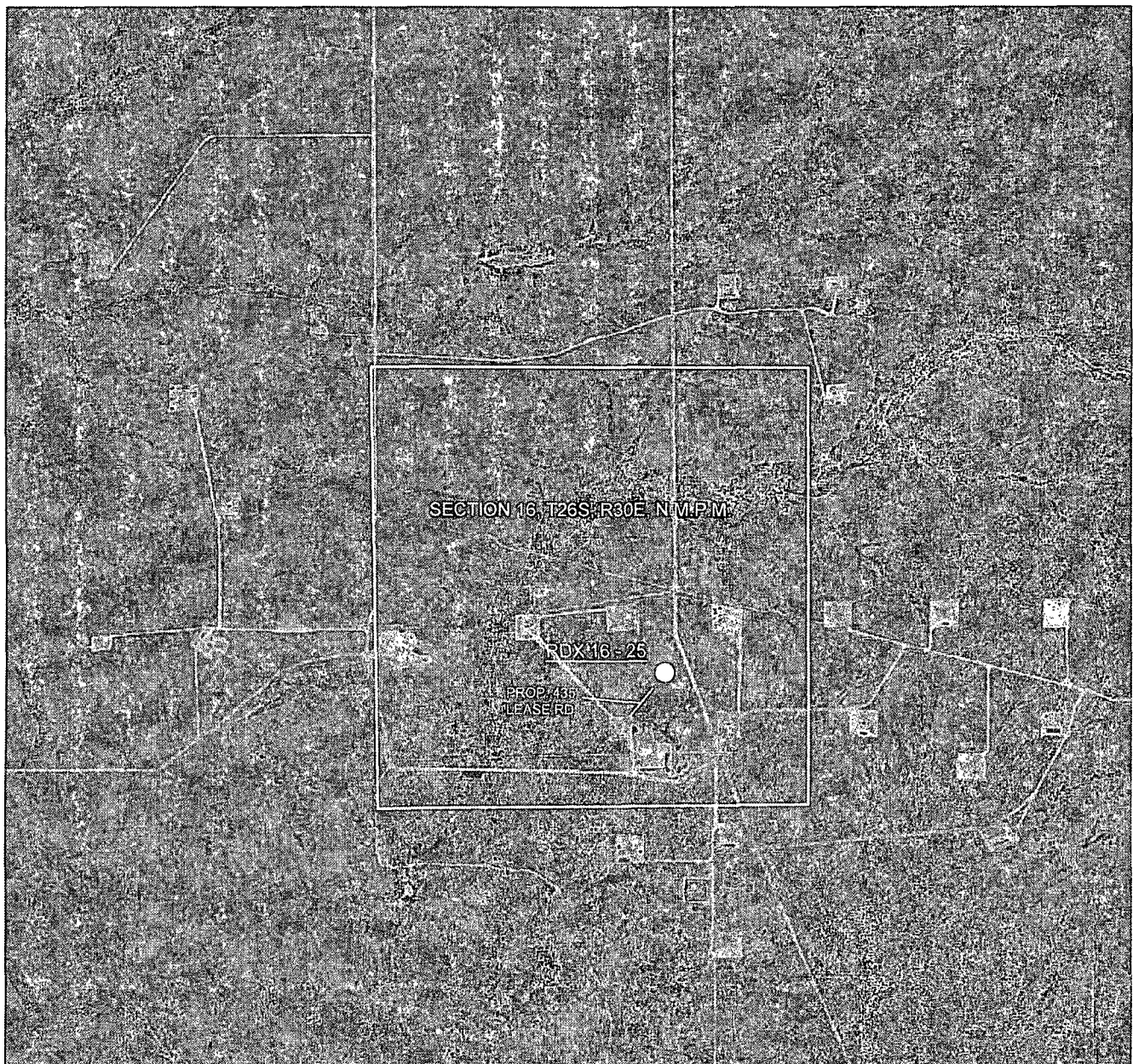
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill	Consolidated Code	Order No.						

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.

NW COR SEC 16 NMSP-E (NAD 83) N (Y) = 382158.2 E (X) = 677178.6	NE COR SEC 16 NMSP-E (NAD 83) N (Y) = 382192.9 E (X) = 682512.0	OPERATOR CERTIFICATION 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.  Signature 1/17/2014 Date Charles K. Ahn - EH&S/Regulatory Manager Print Name cahn@rkixp.com E-mail Address
16		SURVEYORS CERTIFICATION 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. November 18, 2013 Date of Survey Signature and Seal of Professional Surveyor  Job No. WTC49476 JAMES E. TOMPKINS 14729 Certificate Number
RDX 16 - 25 SHL NMSP-E (NAD 83) N (Y) = 378513.7 E (X) = 680722.9 LAT. = 32°02'23.34"N LONG. = 103°53'00.57"W 1790' 1650'		
SW COR SEC 16 NMSP-E (NAD 83) N (Y) = 376840.9 E (X) = 677188.7	SE COR SEC 16 NMSP-E (NAD 83) N (Y) = 376876.3 E (X) = 682519.0	

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AERIAL MAP



SCALE: 1" = 2000'

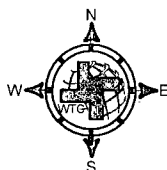
SECTION 16, T26S, R30E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 1650' FSL & 1790' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: RDX 16 - 25



DRIVING DIRECTIONS:

From State Line Road and County Road 1, go west on State Line Road for 9.5 miles and turn right; go 0.67 mile and turn northwesterly go 0.42 turn right (north) go 1.07 miles turn left (west) go 0.17 mile turn right (north) go 0.13 mile to proposed lease road.

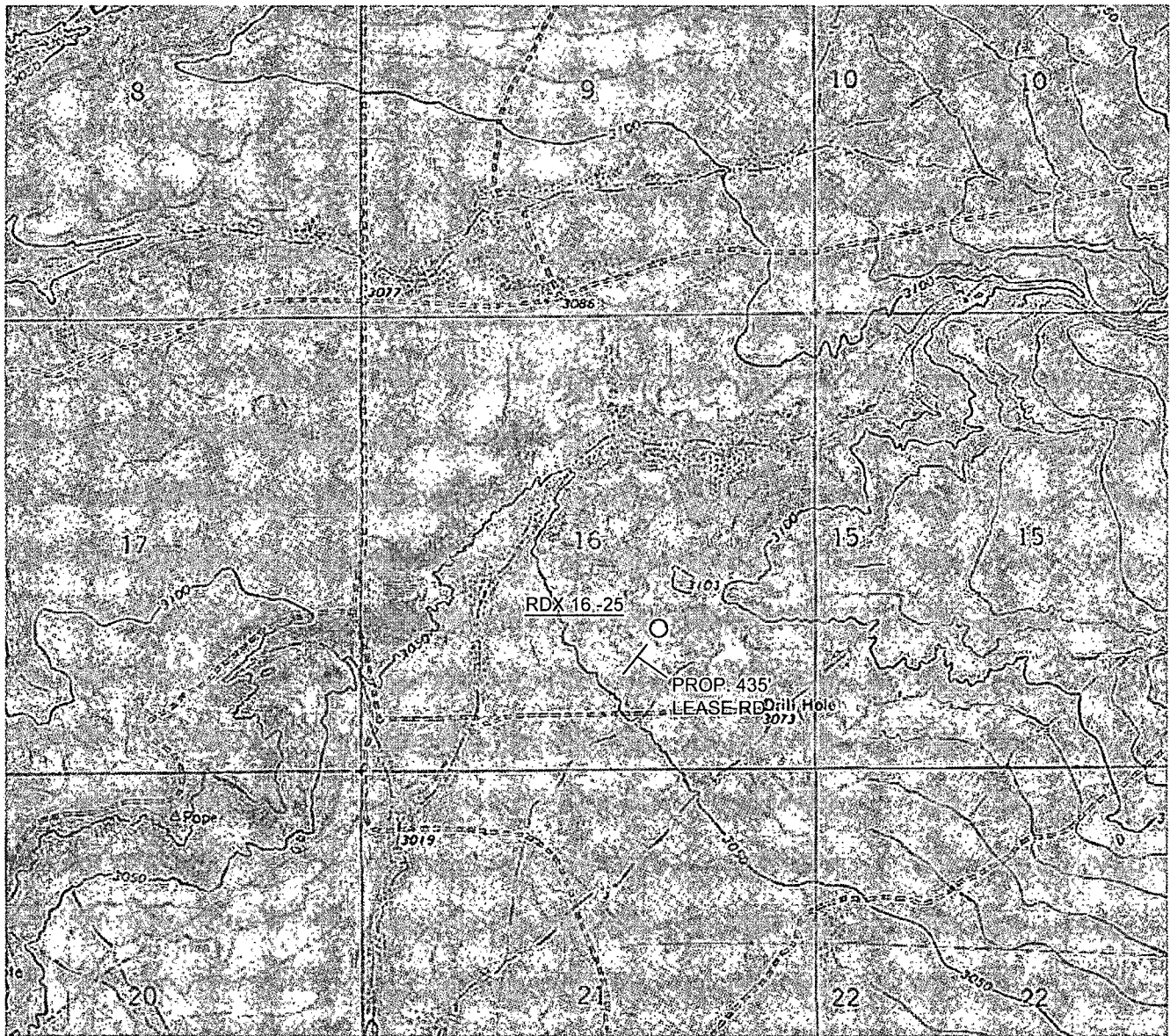


WEST TEXAS CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st STREET
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: 49476

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SECTION 16, T26S, R30E, N.M.P.M.

COUNTY: EDDY STATE: NM

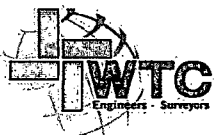
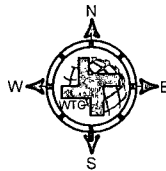
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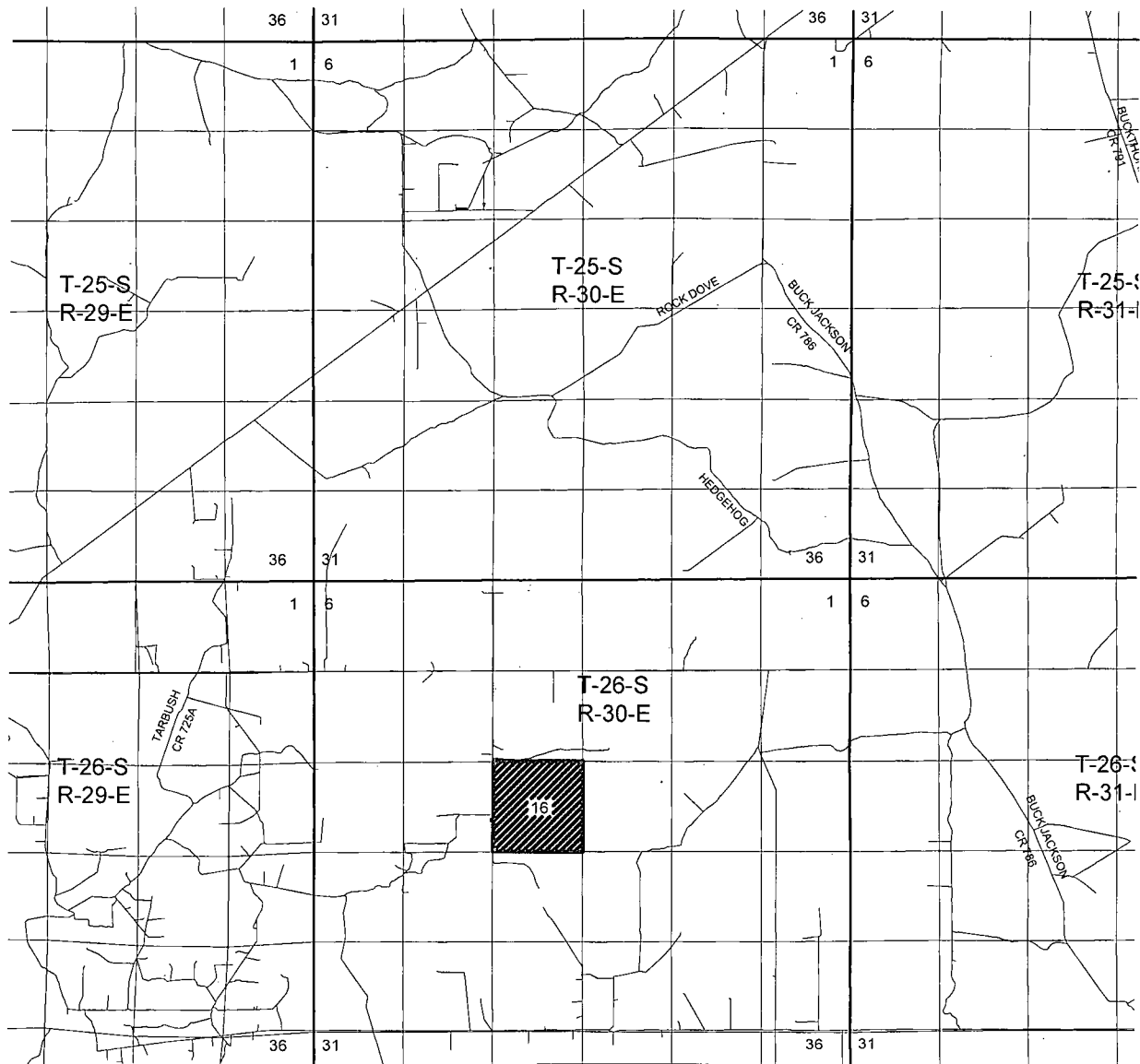


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RKI EXPLORATION & PRODUCTION

JOB No.: 49476

VICINITY MAP



SECTION 16, T26S, R30E, N.M.P.M.

COUNTY: EDDY STATE: NM

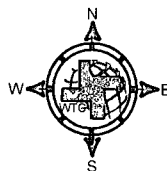
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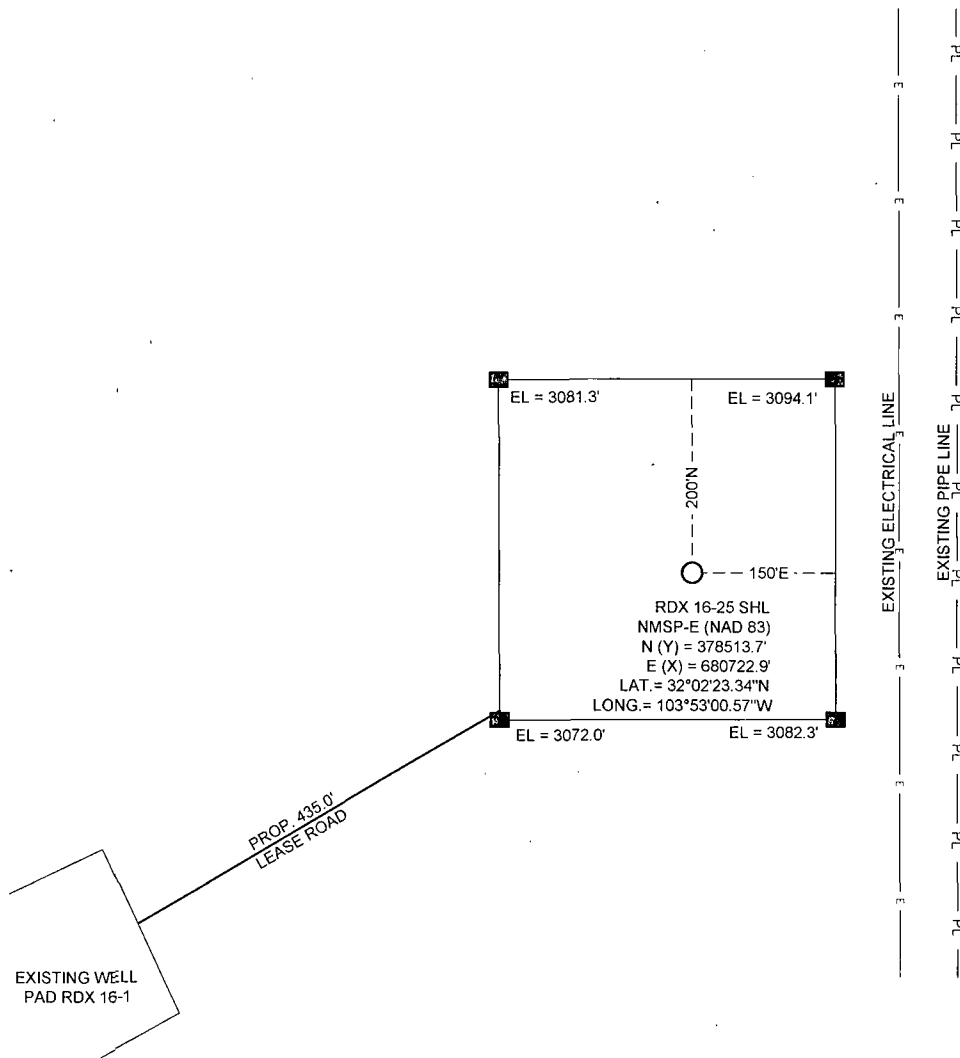


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ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: 49476

SITE LOCATION



SCALE: 1" = 200'

SECTION 16, T26S, R30E, N.M.P.M.

COUNTY: EDDY STATE: NM

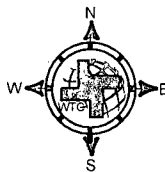
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 ENGINEERS PLANNERS SURVEYORS
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 ANDREWS, TEXAS 79714
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RKI EXPLORATION & PRODUCTION

JOB No.: 49476

Well RDX 16-25
Location Surface: 1,650 FSL 1,790 FEL Sec. 16-26S-30E
Bottom Hole: 1,650 FSL 1,790 FEL Sec. 16-26S-30E
County Eddy
State New Mexico

- 1) The elevation of the unprepared ground is 3,083 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 7,529 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 7,529 feet

5) Estimated tops:

	TVD	
Rustler	710	
Salado	1,137	
Castile	1,639	
Lamar Lime	3,324	
Base of Lime	3,500	
Delaware Top	3,560	BHP = .44 psi/ft x depth
Bell Canyon Sand	3,560	Oil 1,566 psi
Cherry Canyon Sand	4,601	Oil 2,024 psi
Brushy Canyon Sand	5,861	Oil 2,579 psi
Bone Spring	7,329	Oil 3,225 psi
TD	7,529	3,313 psi

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	750	13 3/8"	54.5#/J-55	ST&C	3.42	16.55	12.57
12 1/4"	0	3,500	9 5/8"	40#/J-55	LT&C	1.31	5.13	3.71
7-7/8"	0	7,529	5 1/2"	17#/N-80	LT&C	1.90	1.55	2.72
Collapse	1.125							
Burst	1.0							
Tension	2.0							

7) Cement program:

Surface	17 1/2"	hole					
Pipe OD	13 3/8"						
Setting Depth	750	ft					
Annular Volume	0.69462	cf/ft					
Excess	1					100 %	
Lead	443	sx	1.75	cf/sk	9.13	gal/sk	13.5 ppg
Tail	200	sx	1.33	cf/sk	6.32	gal/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 1/4"	hole					
Pipe OD	9 5/8"						
Setting Depth	3,500	ft					
Annular Volume	0.31318	cf/ft				0.3627	cf/ft
Excess	0.5					50 %	

Lead	678 sx	1.92 cf/sk	9.95 gal/sk	12.6 ppg
Tail	200 sx	1.33 cf/sk	6.32 gal/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"			
Setting Depth	7,529	ft		
Annular Volume	0.1732699	cf/ft	0.26074	cf/ft
Excess	0.32		32	%
DV Tool Depth	5500	ft		
Stage 1				
Lead:	430	sx	1.48	cf/sk
			7.58	gal/sk
			13.0	ppg
Lead:	PVL + 1.3% PF44 + 5% PF174 + 0.5% PF606 + 0.1% PF153 + 0.4 pps PF46 + 0.4% PF13			
Stage 2				
Lead:	196	sx	1.89	cf/sk
			10.03	gal/sk
			12.9	ppg
Tail:	175	sx	1.48	cf/sk
			7.58	gal/sk
			14.8	ppg
Lead:	35/65 Poz "C" + 5% PF44 (salt) + 6% PF20 (gel) + .125 pps PF29 (cellophane) + .25 pps PF46 (antifoam) + .2% PF13 (retarder			
Tail:	PVL + 1.3% PF44 + 5% PF174 + 0.5% PF606 + 0.1% PF153 + 0.4 pps PF46 + 0.4% PF13			
	Top of cement:		3,000	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	Fluid Loss	Type System
0	750	8.5 to 8.9	32 to 36	NC	Fresh Water
750	3,500	9.8 to 10.0	28 to 30	NC	Brine
3,500	7,529	8.9 to 9.1	28 to 36	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 pressures or temperatures are expected. There is no known presences of H2S in this area, although some form a of H2S detection equipment will be utilized. Gas and pit level monitoring equipment will be utilized below the 9 5/8" casing as deemed necessary. Lost circulation and weighting material will be available.

12) Anticipated start date
Duration

ASAP
25 days

Permit Conditions of Approval

API: 30-015-41986

OCD Reviewer	Condition
CSHAPARD	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string