

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM91078
2. Name of Operator RKI EXPLORATION AND PRODUCTION		6. If Indian, Allottee or Tribe Name
3a. Address 210 PARK AVE., SUITE 900 OKLAHOMA CITY, OK 73102		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 405-996-5774 Fx: 405-996-5772		8. Well Name and No. LONGVIEW FEDERAL 12 13H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 12 T23S R28E Mer NMP NWNW 925FNL 440FWL		9. API Well No. 30-015-41091
		10. Field and Pool, or Exploratory CULEBRA BLUFF; BS SOUTH
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK 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"/> Fracture Treat	<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	Change to Original A PD
	<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 recomplete 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall 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 proposes to change the landing point and total depth of the subject well.

Currently permitted as 8,731' MD landing in Bone Spring 2nd Sand, TD at 14,190' MD.

REQUESTED CHANGE to 7,852' MD landing in Bone Spring 1st Sand, TD at 13,532' MD.
7460. 13526

Accepted for record
NMOCD JCS
12/16/2013

RECEIVED
DEC 16 2013
NMOCD ARTESIA

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

Electronic Submission #226336 verified by the BLM Well Information System For RKI EXPLORATION AND PRODUCTION, sent to the Carlsbad Committed to AFMSS for processing by JOHNNY DICKERSON on 11/13/2013 ()

Name (Printed/Typed) JODY NOERDLINGER	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 11/12/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____	Title _____
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 _____	

APPROVED
DEC 11, 2013
/s/ Chris Walls
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

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RKI Exploration & Production

Eddy County (NM83E)

Sec 12-T23S-R28E

Longview Fed 12-13H

Wellbore #1

Plan: 11-14-13

Standard Planning Report

14 November, 2013

RKI Exploration & Production

Project: Eddy County (NM83E)
 Site: Sec 12-T23S-R28E
 Well: Longview Fed 12-13H
 Wellbore: Wellbore #1
 Design: 11-14-13



M Azimuths to True North
 Magnetic North: 7.52°

Magnetic Field
 Strength: 48409.1snT
 Dip Angle: 60.14°
 Date: 11/13/2013
 Model: IGRF2010

WELL DETAILS: Longview Fed 12-13H

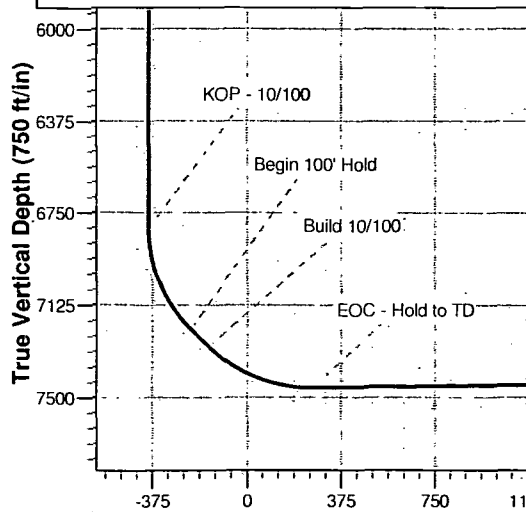
Ground Level: 0.0
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.0 0.0 482006.50 629491.90 32° 19' 29.227 N 104° 2' 52.596 W
 SHL: 925' FNL / 440' FWL of Sec 12
 BHL: 330' FNL / 330' FWL of Sec 1

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1400.0	8.00	179.30	1398.7	-27.9	0.3	2.00	179.30	-27.9	
4	3800.0	8.00	179.30	3775.3	-361.9	4.4	0.00	0.00	-361.9	
5	4200.0	0.00	0.00	4174.0	-389.7	4.8	2.00	180.00	-389.8	
6	6843.0	0.00	0.00	6817.0	-389.7	4.8	0.00	0.00	-389.8	
7	7293.0	45.00	359.30	7222.2	-221.9	2.7	10.00	359.30	-222.0	
8	7393.0	45.00	359.30	7292.9	-151.2	1.8	0.00	0.00	-151.2	
9	7851.0	90.80	359.30	7460.7	261.9	-3.2	10.00	0.00	261.9	
10	13526.4	90.81	359.31	7381.0	5936.3	-72.2	0.00	39.12	5936.8	Longview Fed 1-13H PBHL

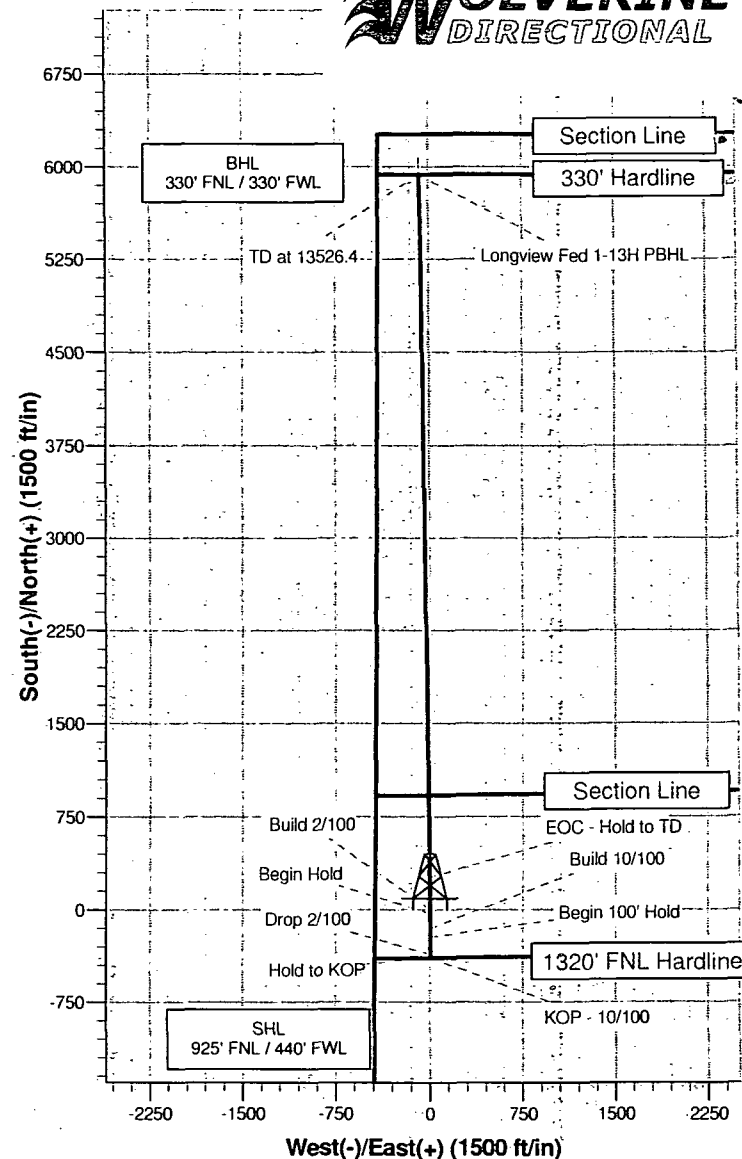
PROJECT TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Longview Fed 1-13H PBHL	7381.0	5936.3	-72.2	487942.60	629403.90	Point



Annotations

TVD	MD	Annotation
1000.0	1000.0	Build 2/100
1398.7	1400.0	Begin Hold
3775.3	3800.0	Drop 2/100
4174.0	4200.0	Hold to KOP
6817.0	6843.0	KOP - 10/100
7222.2	7293.0	Begin 100' Hold
7292.9	7393.0	Build 10/100
7460.7	7851.0	EOC - Hold to TD
7381.0	13526.4	TD at 13526.4



Vertical Section at 359.30° (750 ft/in)

Wolverine Directional, LLC

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well: Longview Fed 12-13H
Company:	RKI Exploration & Production	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	North Reference:	True
Well:	Longview Fed 12-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-14-13		

Project: Eddy County (NM83E)			
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site: Sec 12-T23S-R28E			
Site Position:	Northing:	482,006.50ft	Latitude: 32° 19' 29.227 N
From: Map	Easting:	629,491.90ft	Longitude: 104° 2' 52.596 W
Position Uncertainty:	0.0 ft	Slot Radius: "	Grid Convergence: 0.15 °

Well: Longview Fed 12-13H			
Well Position	+N/-S	0.0 ft	Northing: 482,006.50 ft
	+E/-W	0.0 ft	Easting: 629,491.90 ft
			Latitude: 32° 19' 29.227 N
			Longitude: 104° 2' 52.596 W
Position Uncertainty		0.0 ft	Wellhead Elevation: ft
			Ground Level: 0.0 ft

Wellbore: Wellbore #1			
Magnetics	Model Name:	Sample Date:	Declination
	IGRF2010	2013/11/13	(°) 7.52
			Dip Angle (°) 60.14
			Field Strength (nT) 48,409

Design: 11-14-13			
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction (°) 359.30

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,400.0	8.00	179.30	1,398.7	-27.9	0.3	2.00	2.00	0.00	0.00	179.30
3,800.0	8.00	179.30	3,775.3	-361.9	4.4	0.00	0.00	0.00	0.00	0.00
4,200.0	0.00	0.00	4,174.0	-389.7	4.8	2.00	-2.00	0.00	0.00	180.00
6,843.0	0.00	0.00	6,817.0	-389.7	4.8	0.00	0.00	0.00	0.00	0.00
7,293.0	45.00	359.30	7,222.2	-221.9	2.7	10.00	10.00	0.00	0.00	359.30
7,393.0	45.00	359.30	7,292.9	-151.2	1.8	0.00	0.00	0.00	0.00	0.00
7,851.0	90.80	359.30	7,460.7	261.9	-3.2	10.00	10.00	0.00	0.00	0.00
13,526.4	90.81	359.31	7,381.0	5,936.3	-72.2	0.00	0.00	0.00	0.00	39.12 Longview Fed 1-13

Wolverine Directional, LLC
Planning Report

Database:	EDM 2003.21 Single User Db.	Local Co-ordinate Reference:	Well Longview Fed.12-13H.
Company:	RKI:Exploration & Production.	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	North Reference:	True
Well:	Longview Fed 12-13H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-14-13		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
Build 2/100										
1,100.0	2.00	179.30	1,100.0	-1.7	0.0	-1.7	2.00	2.00	0.00	
1,200.0	4.00	179.30	1,199.8	-7.0	0.1	-7.0	2.00	2.00	0.00	
1,300.0	6.00	179.30	1,299.5	-15.7	0.2	-15.7	2.00	2.00	0.00	
1,400.0	8.00	179.30	1,398.7	-27.9	0.3	-27.9	2.00	2.00	0.00	
Begin Hold										
1,500.0	8.00	179.30	1,497.7	-41.8	0.5	-41.8	0.00	0.00	0.00	
1,600.0	8.00	179.30	1,596.8	-55.7	0.7	-55.7	0.00	0.00	0.00	
1,700.0	8.00	179.30	1,695.8	-69.6	0.9	-69.6	0.00	0.00	0.00	
1,800.0	8.00	179.30	1,794.8	-83.5	1.0	-83.5	0.00	0.00	0.00	
1,900.0	8.00	179.30	1,893.8	-97.5	1.2	-97.5	0.00	0.00	0.00	
2,000.0	8.00	179.30	1,992.9	-111.4	1.4	-111.4	0.00	0.00	0.00	
2,100.0	8.00	179.30	2,091.9	-125.3	1.5	-125.3	0.00	0.00	0.00	
2,200.0	8.00	179.30	2,190.9	-139.2	1.7	-139.2	0.00	0.00	0.00	
2,300.0	8.00	179.30	2,289.9	-153.1	1.9	-153.1	0.00	0.00	0.00	
2,400.0	8.00	179.30	2,389.0	-167.0	2.0	-167.1	0.00	0.00	0.00	
2,500.0	8.00	179.30	2,488.0	-181.0	2.2	-181.0	0.00	0.00	0.00	
2,600.0	8.00	179.30	2,587.0	-194.9	2.4	-194.9	0.00	0.00	0.00	
2,700.0	8.00	179.30	2,686.1	-208.8	2.6	-208.8	0.00	0.00	0.00	
2,800.0	8.00	179.30	2,785.1	-222.7	2.7	-222.7	0.00	0.00	0.00	
2,900.0	8.00	179.30	2,884.1	-236.6	2.9	-236.6	0.00	0.00	0.00	
3,000.0	8.00	179.30	2,983.1	-250.5	3.1	-250.6	0.00	0.00	0.00	
3,100.0	8.00	179.30	3,082.2	-264.5	3.2	-264.5	0.00	0.00	0.00	
3,200.0	8.00	179.30	3,181.2	-278.4	3.4	-278.4	0.00	0.00	0.00	
3,300.0	8.00	179.30	3,280.2	-292.3	3.6	-292.3	0.00	0.00	0.00	
3,400.0	8.00	179.30	3,379.2	-306.2	3.7	-306.2	0.00	0.00	0.00	
3,500.0	8.00	179.30	3,478.3	-320.1	3.9	-320.1	0.00	0.00	0.00	
3,600.0	8.00	179.30	3,577.3	-334.0	4.1	-334.1	0.00	0.00	0.00	
3,700.0	8.00	179.30	3,676.3	-348.0	4.3	-348.0	0.00	0.00	0.00	
3,800.0	8.00	179.30	3,775.3	-361.9	4.4	-361.9	0.00	0.00	0.00	
Drop 2/100										
3,900.0	6.00	179.30	3,874.6	-374.1	4.6	-374.1	2.00	-2.00	0.00	
4,000.0	4.00	179.30	3,974.2	-382.8	4.7	-382.8	2.00	-2.00	0.00	
4,100.0	2.00	179.30	4,074.1	-388.0	4.7	-388.0	2.00	-2.00	0.00	
4,200.0	0.00	0.00	4,174.0	-389.7	4.8	-389.8	2.00	-2.00	-179.30	
Hold to KOP										
4,300.0	0.00	0.00	4,274.0	-389.7	4.8	-389.8	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,374.0	-389.7	4.8	-389.8	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,474.0	-389.7	4.8	-389.8	0.00	0.00	0.00	
4,600.0	0.00	0.00	4,574.0	-389.7	4.8	-389.8	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,674.0	-389.7	4.8	-389.8	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,774.0	-389.7	4.8	-389.8	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,874.0	-389.7	4.8	-389.8	0.00	0.00	0.00	

Wolverine Directional, LLC

Planning Report

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Company:	RKI Exploration & Production	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	North Reference:	True
Well:	Longview Fed 12-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-14-13		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,000.0	0.00	0.00	4,974.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,100.0	0.00	0.00	5,074.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,200.0	0.00	0.00	5,174.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,300.0	0.00	0.00	5,274.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,374.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,500.0	0.00	0.00	5,474.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,574.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,674.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,774.0	-389.7	4.8	-389.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,874.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,974.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,100.0	0.00	0.00	6,074.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,174.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,300.0	0.00	0.00	6,274.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,374.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,500.0	0.00	0.00	6,474.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,574.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,700.0	0.00	0.00	6,674.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,774.0	-389.7	4.8	-389.8	0.00	0.00	0.00
6,843.0	0.00	0.00	6,817.0	-389.7	4.8	-389.8	0.00	0.00	0.00
KOP - 10/100									
6,850.0	0.70	359.30	6,824.0	-389.7	4.8	-389.7	10.00	10.00	0.00
6,900.0	5.70	359.30	6,874.0	-386.9	4.7	-386.9	10.00	10.00	0.00
6,950.0	10.70	359.30	6,923.4	-379.8	4.6	-379.8	10.00	10.00	0.00
7,000.0	15.70	359.30	6,972.1	-368.4	4.5	-368.4	10.00	10.00	0.00
7,050.0	20.70	359.30	7,019.6	-352.8	4.3	-352.8	10.00	10.00	0.00
7,100.0	25.70	359.30	7,065.5	-333.1	4.1	-333.1	10.00	10.00	0.00
7,150.0	30.70	359.30	7,109.6	-309.5	3.8	-309.5	10.00	10.00	0.00
7,200.0	35.70	359.30	7,151.4	-282.1	3.4	-282.1	10.00	10.00	0.00
7,250.0	40.70	359.30	7,190.7	-251.2	3.1	-251.2	10.00	10.00	0.00
7,293.0	45.00	359.30	7,222.2	-221.9	2.7	-222.0	10.00	10.00	0.00
Begin 100' Hold									
7,300.0	45.00	359.30	7,227.1	-217.0	2.7	-217.0	0.00	0.00	0.00
7,393.0	45.00	359.30	7,292.9	-151.2	1.8	-151.3	0.00	0.00	0.00
Build 10/100									
7,400.0	45.70	359.30	7,297.8	-146.3	1.8	-146.3	10.00	10.00	0.00
7,450.0	50.70	359.30	7,331.1	-109.0	1.3	-109.0	10.00	10.00	0.00
7,500.0	55.70	359.30	7,361.1	-69.0	0.8	-69.0	10.00	10.00	0.00
7,550.0	60.70	359.30	7,387.4	-26.5	0.3	-26.5	10.00	10.00	0.00
7,600.0	65.70	359.30	7,410.0	18.1	-0.2	18.1	10.00	10.00	0.00
7,650.0	70.70	359.30	7,428.5	64.5	-0.8	64.5	10.00	10.00	0.00
7,700.0	75.70	359.30	7,443.0	112.4	-1.4	112.4	10.00	10.00	0.00
7,750.0	80.70	359.30	7,453.2	161.3	-2.0	161.3	10.00	10.00	0.00
7,800.0	85.70	359.30	7,459.1	210.9	-2.6	210.9	10.00	10.00	0.00
7,851.0	90.80	359.30	7,460.7	261.9	-3.2	261.9	10.00	10.00	0.00
EOC - Hold to TD									
7,900.0	90.80	359.30	7,460.0	310.9	-3.8	310.9	0.00	0.00	0.00
8,000.0	90.80	359.30	7,458.6	410.8	-5.0	410.9	0.00	0.00	0.00
8,100.0	90.80	359.30	7,457.2	510.8	-6.2	510.9	0.00	0.00	0.00
8,200.0	90.80	359.30	7,455.8	610.8	-7.5	610.9	0.00	0.00	0.00
8,300.0	90.80	359.30	7,454.4	710.8	-8.7	710.8	0.00	0.00	0.00
8,400.0	90.80	359.30	7,453.0	810.8	-9.9	810.8	0.00	0.00	0.00
8,500.0	90.80	359.30	7,451.6	910.8	-11.1	910.8	0.00	0.00	0.00

Wolverine Directional, LLC

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Longview Fed 12-13H
Company:	RKI Exploration & Production	TVD Reference:	WELL @ 0:0ft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0:0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	North Reference:	True
Well:	Longview Fed 12-13H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-14-13		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,600.0	90.80	359.30	7,450.2	1,010.7	-12.3	1,010.8	0.00	0.00	0.00	
8,700.0	90.80	359.30	7,448.8	1,110.7	-13.6	1,110.8	0.00	0.00	0.00	
8,800.0	90.80	359.30	7,447.4	1,210.7	-14.8	1,210.8	0.00	0.00	0.00	
8,900.0	90.80	359.30	7,446.0	1,310.7	-16.0	1,310.8	0.00	0.00	0.00	
9,000.0	90.80	359.30	7,444.6	1,410.7	-17.2	1,410.8	0.00	0.00	0.00	
9,100.0	90.80	359.30	7,443.2	1,510.7	-18.4	1,510.8	0.00	0.00	0.00	
9,200.0	90.80	359.30	7,441.8	1,610.6	-19.7	1,610.8	0.00	0.00	0.00	
9,300.0	90.80	359.30	7,440.4	1,710.6	-20.9	1,710.7	0.00	0.00	0.00	
9,400.0	90.80	359.30	7,439.0	1,810.6	-22.1	1,810.7	0.00	0.00	0.00	
9,500.0	90.80	359.30	7,437.6	1,910.6	-23.3	1,910.7	0.00	0.00	0.00	
9,600.0	90.80	359.30	7,436.2	2,010.6	-24.5	2,010.7	0.00	0.00	0.00	
9,700.0	90.80	359.30	7,434.8	2,110.6	-25.8	2,110.7	0.00	0.00	0.00	
9,800.0	90.80	359.30	7,433.4	2,210.5	-27.0	2,210.7	0.00	0.00	0.00	
9,900.0	90.80	359.30	7,432.0	2,310.5	-28.2	2,310.7	0.00	0.00	0.00	
10,000.0	90.80	359.30	7,430.6	2,410.5	-29.4	2,410.7	0.00	0.00	0.00	
10,100.0	90.80	359.30	7,429.2	2,510.5	-30.6	2,510.7	0.00	0.00	0.00	
10,200.0	90.80	359.30	7,427.8	2,610.5	-31.8	2,610.7	0.00	0.00	0.00	
10,300.0	90.80	359.30	7,426.4	2,710.5	-33.1	2,710.7	0.00	0.00	0.00	
10,400.0	90.80	359.30	7,425.0	2,810.4	-34.3	2,810.6	0.00	0.00	0.00	
10,500.0	90.80	359.30	7,423.6	2,910.4	-35.5	2,910.6	0.00	0.00	0.00	
10,600.0	90.80	359.30	7,422.2	3,010.4	-36.7	3,010.6	0.00	0.00	0.00	
10,700.0	90.80	359.30	7,420.8	3,110.4	-37.9	3,110.6	0.00	0.00	0.00	
10,800.0	90.80	359.30	7,419.4	3,210.4	-39.1	3,210.6	0.00	0.00	0.00	
10,900.0	90.80	359.30	7,418.0	3,310.3	-40.3	3,310.6	0.00	0.00	0.00	
11,000.0	90.80	359.30	7,416.6	3,410.3	-41.6	3,410.6	0.00	0.00	0.00	
11,100.0	90.80	359.30	7,415.2	3,510.3	-42.8	3,510.6	0.00	0.00	0.00	
11,200.0	90.81	359.30	7,413.8	3,610.3	-44.0	3,610.6	0.00	0.00	0.00	
11,300.0	90.81	359.30	7,412.4	3,710.3	-45.2	3,710.6	0.00	0.00	0.00	
11,400.0	90.81	359.30	7,410.9	3,810.3	-46.4	3,810.5	0.00	0.00	0.00	
11,500.0	90.81	359.30	7,409.5	3,910.2	-47.6	3,910.5	0.00	0.00	0.00	
11,600.0	90.81	359.30	7,408.1	4,010.2	-48.8	4,010.5	0.00	0.00	0.00	
11,700.0	90.81	359.30	7,406.7	4,110.2	-50.1	4,110.5	0.00	0.00	0.00	
11,800.0	90.81	359.30	7,405.3	4,210.2	-51.3	4,210.5	0.00	0.00	0.00	
11,900.0	90.81	359.30	7,403.9	4,310.2	-52.5	4,310.5	0.00	0.00	0.00	
12,000.0	90.81	359.31	7,402.5	4,410.2	-53.7	4,410.5	0.00	0.00	0.00	
12,100.0	90.81	359.31	7,401.1	4,510.1	-54.9	4,510.5	0.00	0.00	0.00	
12,200.0	90.81	359.31	7,399.7	4,610.1	-56.1	4,610.5	0.00	0.00	0.00	
12,300.0	90.81	359.31	7,398.3	4,710.1	-57.3	4,710.5	0.00	0.00	0.00	
12,400.0	90.81	359.31	7,396.9	4,810.1	-58.5	4,810.4	0.00	0.00	0.00	
12,500.0	90.81	359.31	7,395.5	4,910.1	-59.8	4,910.4	0.00	0.00	0.00	
12,600.0	90.81	359.31	7,394.1	5,010.1	-61.0	5,010.4	0.00	0.00	0.00	
12,700.0	90.81	359.31	7,392.7	5,110.0	-62.2	5,110.4	0.00	0.00	0.00	
12,800.0	90.81	359.31	7,391.2	5,210.0	-63.4	5,210.4	0.00	0.00	0.00	
12,900.0	90.81	359.31	7,389.8	5,310.0	-64.6	5,310.4	0.00	0.00	0.00	
13,000.0	90.81	359.31	7,388.4	5,410.0	-65.8	5,410.4	0.00	0.00	0.00	
13,100.0	90.81	359.31	7,387.0	5,510.0	-67.0	5,510.4	0.00	0.00	0.00	
13,200.0	90.81	359.31	7,385.6	5,609.9	-68.2	5,610.4	0.00	0.00	0.00	
13,300.0	90.81	359.31	7,384.2	5,709.9	-69.4	5,710.4	0.00	0.00	0.00	
13,400.0	90.81	359.31	7,382.8	5,809.9	-70.7	5,810.3	0.00	0.00	0.00	
13,500.0	90.81	359.31	7,381.4	5,909.9	-71.9	5,910.3	0.00	0.00	0.00	
13,526.4	90.81	359.31	7,381.0	5,936.3	-72.2	5,936.7	0.00	0.00	0.00	

TD at 13526.4 - Longview Fed 12-13H PBHL

Wolverine Directional, LLC
 Planning Report

Database:	EDM:2003.21:Single User Db	Local Coordinate Reference:	Well:Longview:Fed 12-13H
Company:	RKI Exploration & Production	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	North Reference:	True
Well:	Longview:Fed 12-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore:#1		
Design:	11-14-13		

Targets										
Target Name	hit/miss target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Longview Fed 1-13H I		0.00	0.00	7,381.0	5,936.3	-72.2	487,942.60	629,403.90	32° 20' 27.972 N	104° 2' 53.437 W
- plan hits target										
- Point										

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
		+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
1,000.0	1,000.0	0.0	0.0	Build 2/100	
1,400.0	1,398.7	-27.9	0.3	Begin Hold	
3,800.0	3,775.3	-361.9	4.4	Drop 2/100	
4,200.0	4,174.0	-389.7	4.8	Hold to KOP	
6,843.0	6,817.0	-389.7	4.8	KOP - 10/100	
7,293.0	7,222.2	-221.9	2.7	Begin 100' Hold	
7,393.0	7,292.9	-151.2	1.8	Build 10/100	
7,851.0	7,460.7	261.9	-3.2	EOC - Hold to TD	
13,526.4	7,381.0	5,936.3	-72.2	TD at 13526.4	