

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
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.**5. Lease Serial No.
NM-61349 (BHL)

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2.

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

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.
LONGVIEW DEEP FEDERAL 6-212. Name of Operator
RKI EXPLORATION & PRODUCTION, LLC.9. API Well No.
30-015-379673a. Address
3817 NW EXPRESSWAY, SUITE 950
OKLAHOMA CITY, OK. 731123b. Phone No. (include area code)
405-996-5750 (BILL AUBREY)10. Field and Pool or Exploratory Area
UNDESIGNATED MORROW4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL: 1830 FNL & 200 FEL, SECTION 1, T. 23 S., R. 28 E.
BHL: 1400 FNL & 700 FWL, SECTION 6, T. 23 S., R. 29 E.11. Country or Parish, State
EDDY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☒ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other CHANGE NAME
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	DEEPEN WELL
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	EXPAND PAD

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 recompleat 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 & PRODUCTION, LLC. REQUESTS APPROVAL TO CHANGE THE FOLLOWING ACTIONS:

1. CHANGE NAME OF WELL FROM THE LONGVIEW FEDERAL 6-1H TO THE LONGVIEW DEEP FEDERAL 6-21.

2. DEEPEN WELL FROM THE 80 ACRE DEDICATED BONE SPRING HORIZONTAL OIL WELL TO A DIRECTIONAL 320 ACRE DEDICATED (LAY DOWN - NORTH HALF) UNDESIGNATED MORROW GAS WELL. THE TD WILL BE 13,500 FT. (SEE ATTACHED DRILLING PLAN, DIRECTIONAL PLAN, BOP AND CHOKE MANIFOLD)

3. EXPAND PAD SIZE FROM A 300 X 325 FT. PAD TO A 350 X 350 FT. PAD. THE EXPANSION WILL BE 25 FT. TO THE NORTH AND 50 FT. WEST. (SEE ATTACHED PAD SIZE PLAT).

THE V-DOOR SOUTH WILL STAY THE SAME, THE INTERIM RECLAMATION WILL STAY THE SAME, THE ACCESS ROAD WILL STAY THE SAME AND THE PAD RESTRICTION TO 150 FT. EAST WILL ALL REMAIN THE SAME.

Accepted for record
NMOCD 10/24/2011

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)

BARRY W. HUNT

Title PERMIT AGENT FOR RKI EXPLORATION & PRODUCTION, LLC.

Signature

Date

1/9/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ Don Peterson

Title

Date

JAN 19 2012

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

BLM 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.

(Instructions on page 2)

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 15, 2009

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED

JAN 23 2012

NMOCD ARTESIA

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name UNDESIGNATED MORROW
Property Code	Property Name LONGVIEW DEEP FEDERAL	Well Number 6-21
OGRID No. 246289	Operator Name RKI EXPLORATION & PRODUCTION LLC	Elevation 3089'

Surface Location

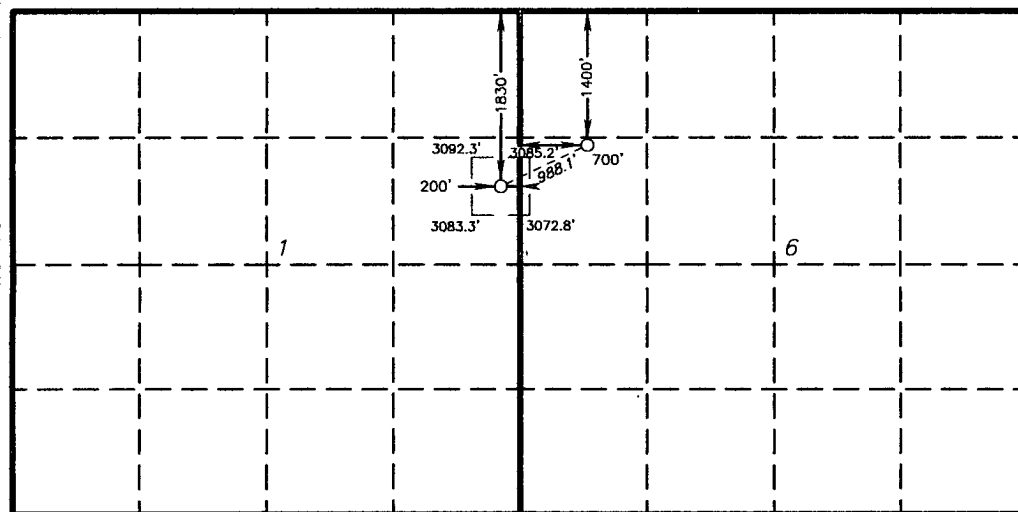
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	1	23 S	28 E		1830	NORTH	200	EAST	EDDY

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
E	6	23 S	29 E		1400	NORTH	700	WEST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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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



SURFACE LOCATION
Lat - N 32°20'13.28"
Long - W 104°01'57.49"
NMSPCE- N 486470.9
E 634207.6
(NAD-83)

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°20'17.27"
Long - W 104°01'46.98"
NMSPCE- N 486876.671
E 635108.606
(NAD-83)

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 a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Barry W. Hunt 1/19/12
Signature Date
Barry W. Hunt
Printed Name

SURVEYOR 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.

GARY L. JONES 1/19/12
Date Surveyed
Signature & Seal of Professional Surveyor
Professional Surveyor
W. C. 100-12484

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

RKI EXPLORATION & PRODUCTION, LLC.

Longview Deep Fed 6-21
SHL: 1830 FNL & 200 FEL
Section 1, T. 23 S., R. 28 E.
BHL: 1400 FNL & 700 FWL
Section 6, T. 23 S., R. 29 E.
EDDY CO., NM

1. The elevation of the unprepared ground is 3,089 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 13,500' 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 13,500'
5. Estimated tops of important geologic markers:

Quaternary - Alluvium	Surface*
Base of Salt	2,555'
Base of Lime	2,775'
Delaware Top	2,820'
Bone Spring	6,355'
Wolfcamp	9,680'
Strawn	11,405'
Atoka	11,770'
Morrow	12,240'
Lower Morrow	12,725'
Barnett	12,885'
TD	13,500'

*Water possible above Rustler (203')

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

Bone Spring	6,355'	(125 degrees F, 2,750 psi)
Wolfcamp	9,680'	(145 degrees F, 4,256 psi)
Strawn	11,405'	(160 degrees F, 4,936 psi)
Atoka	11,770'	(176 degrees F, 5,100 psi)
Morrow	12,240'	(183 degrees F, 6,683 psi)

7. The proposed casing program is as follows:

Surface: 17 ½" Hole. 13-3/8" Casing, 54.5# J-55 ST&C casing set from 0' - 235'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

Intermediate: 12 ¼" Hole. 9-5/8" Casing, 40# J-55 LT&C casing set from 0' - 2,600'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

Production: 8 ¾" Hole. 7" Casing, 26# HCP-110 LT&C casing set from 0' - 11,700'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

Liner: 6 1/8" Hole. 4-1/2" Casing, 13.5# P-110 LT&C casing set from 0' - 13,500'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

8. Casing setting depth and cementing program:

- a. 13-3/8" surface casing set at 235'. Circulate cement to surface with 275 sx "C" with .13 pps D130, 1% CaCl₂ mixed at 14.8 ppg (1.34 cf/sk), excess – 100%.
- b. 9-5/8" intermediate casing set at 2,600'. Circulate cement to surface with 750 sx "C" with 5% D44, 27.5 pps D132, 6% D20, .2% D46, .124 pps D130, 2 pps D42, .1% D201 mixed at 12.6 ppg (2.05 cf/sk) followed by 200 sx "C" with .2% D201 mixed at 14.8 ppg (1.33 cf/sk), excess – 25%.
- c. 7" intermediate casing set at 11,700'. Hole will be callipered to determine cement volume to bring TOC to surface. The well will be cemented in two stages as follows: **Stage 1:** 865 sx "C" with 1.3% D44, 2% D174, .2% D46, .3% D167, .4% D13 mixed at 13.0 ppg (1.44 cf/sk), excess – 25%. **Stage 2:** 200 sx "C" with 5% D44, 27.5 pps D132, 6% D20, .2% D46, 2 pps D42, .124 pps D130 mixed at 12.6 ppg (2.05 cf/sk) followed by 200 sx "C" with .3% D201 mixed at 14.8 ppg (1.33 cf/sk), excess – 25%. DV tool at approximately 5000'
- d. 4-1/2" production casing set at 13,500'. Hole will be callipered to determine cement volume to bring TOC to 11,300' with PVL cement plus 1.3% D44, .2% D46, .2% D167, .5% D800, .2% D65 mixed at 13.0 ppg (1.41 cf/sk).

9. Pressure Control Equipment

The blowout preventor equipment (BOP) will consist of a 5000 psi double ram type preventor, a 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

01/07/12

Longview Deep Fed 6-21

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. BOP's and associated equipment will be tested as a 3M system prior to drilling out all casing shoes. All casing strings will be tested as per Onshore Order #2.

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.

The BOP equipment will consist of the following:

- Annular preventers
- Double ram with blind rams and pipe rams
- Drilling spool, or blowout preventer with 2 side outlets (choke side shall be a 3-inch minimum diameter, kill side shall be at least 2-inch diameter)
- Kill line (2 inch minimum)
- A minimum of 2 choke line valves (3 inch minimum)
- 3 inch diameter choke line
- 2 kill line valves, one of which shall be a check valve (2 inch minimum)
- 2 chokes
- Pressure gauge on choke manifold
- Upper kelly cock valve with handle available
- Safety valve and subs to fit all drill string connections in use
- All BOPE connections subjected to well pressure shall be flanged, welded, or clamped
- Fill-up line above the uppermost preventer.

10. Mud Program:

0' - 235'	Bentonite/Lime mud. Paper for losses and seepage. 8.5 to 9.0 ppg, 32 to 34 vis, PV 3 to 5, YP 5 to 7, WL NC.
235' - 2,600'	Brine. As needed LCM for losses and seepage. 10.0 to 10.2 ppg, 28 to 29 vis, PV 1, YP 1, WL NC.
2,600' – 11,700'	Drill out with fresh water. 8.4 to 8.6 ppg, 28 to 29 vis, PV 1, YP 1, WL NC.
11,700 – 13,500'	Brine. 10.0 to 11.0 ppg, 36 to 50 vis, PV 9 to 15, YP 12 to 20, WL < 8.

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Longview Deep Fed 6-21

11. Testing, Logging and Coring Program:

Testing program: No drillstem tests are anticipated.

Electric logging program: CNL/CAL/GR, DLL/CAL/GR (7-5/8" and 6-1/2" hole Sections). 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 6683 psi and estimated BHT 183 degrees.

13.

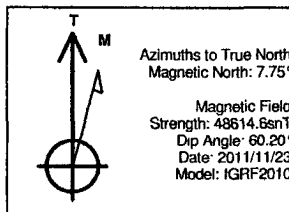
Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be soon after BLM approval and as soon as a rig will be available.

Move in operations and drilling is expected to take 32 days. An additional 30 days will be needed to complete the well and to construct surface facilities.

RKI Exploration & Production

Project: Eddy County (NM83E)
Site: Sec 1-T23S-R28E
Well: Longview Deep Fed 6-21
Wellbore: Wellbore #1
Design: 11-23-11



Wolverine Directional

WELL DETAILS: Longview Deep Fed 6-21

Ground Level: 0.0
+N/-S 0.0 +E/-W 0.0 Northing 486470.90 Easting 634207.60 Latitude 32° 20' 13.278 N Longitude 104° 1' 57.491 W
SHL: 1830' FNL / 200' FEL Sec 1
BHL: 1400' FNL / 700' FWL Sec 6

SECTION DETAILS

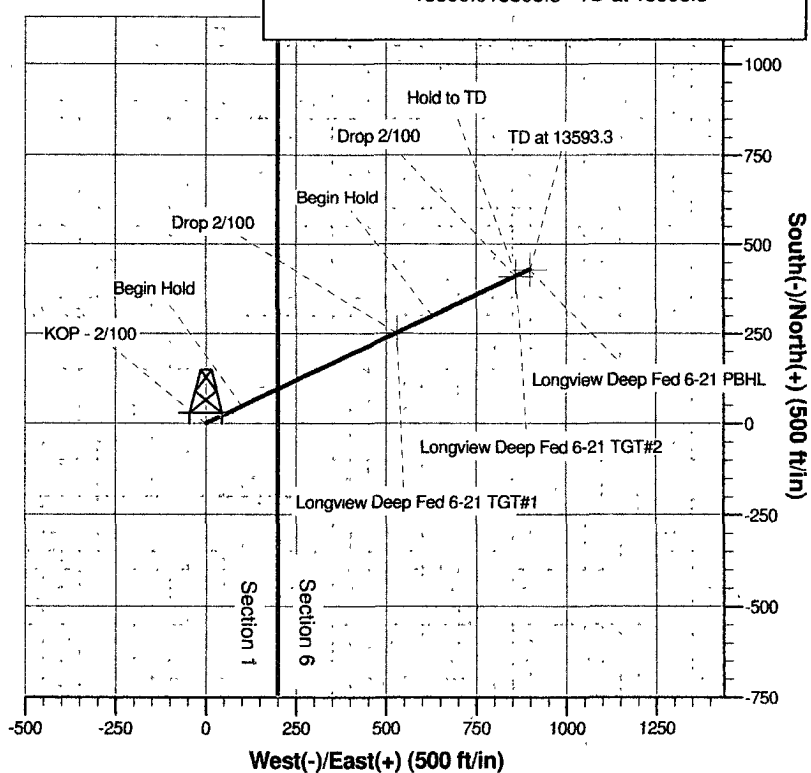
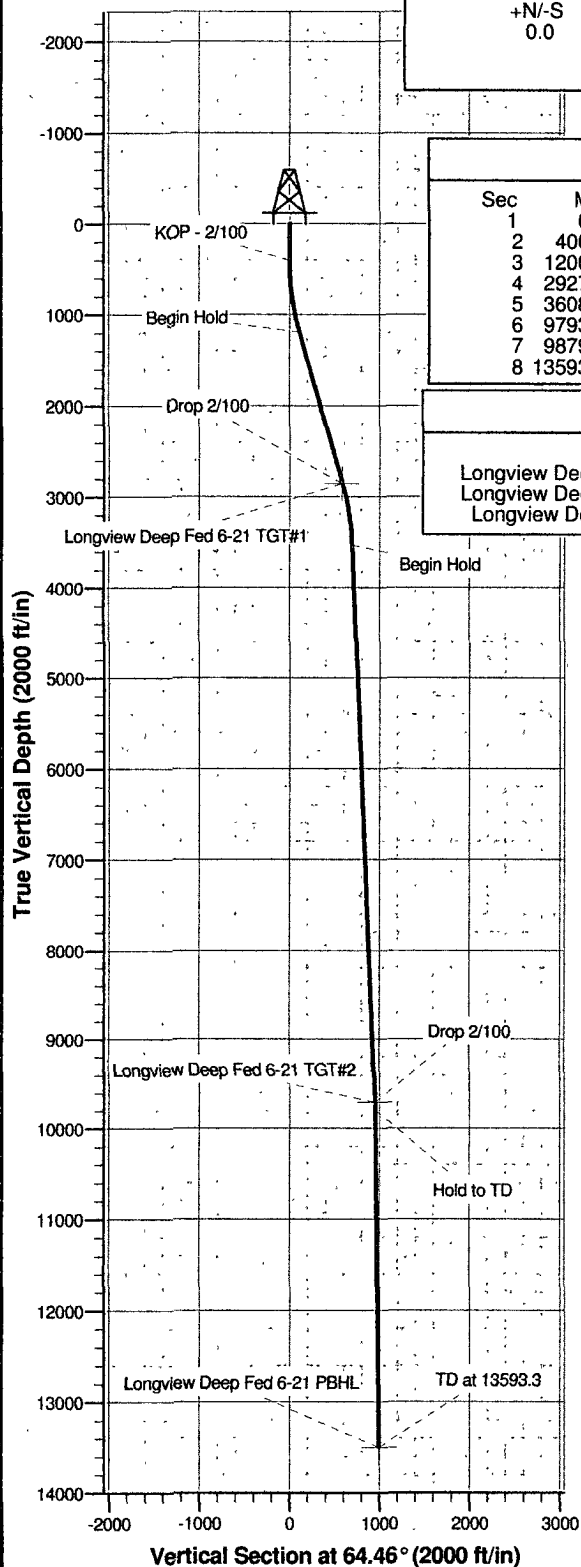
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1200.5	16.01	64.46	1190.1	47.9	100.3	2.00	64.46	111.1	
4	2927.4	16.01	64.46	2850.0	253.2	530.0	0.00	0.00	587.4	Longview Deep Fed 6-21 TGT#1
5	3608.8	2.38	64.46	3521.1	300.0	628.0	2.00	180.00	696.0	
6	9793.0	2.39	64.45	9700.0	410.9	860.0	0.00	-4.08	953.1	Longview Deep Fed 6-21 TGT#2
7	9879.8	0.65	64.47	9786.7	411.9	862.1	2.00	179.99	955.4	
8	13593.3	0.65	64.48	13500.0	430.0	900.0	0.00	177.19	997.4	Longview Deep Fed 6-21 PBHL

Wellbore Targets

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Longview Deep Fed 6-21 TGT#1	2850.0	253.2	530.0	486725.59	634736.89	Point
Longview Deep Fed 6-21 TGT#2	9700.0	410.9	860.0	486884.21	635066.44	Point
Longview Deep Fed 6-21 PBHL	13500.0	430.0	900.0	486903.42	635106.39	Point

ANNOTATIONS

TVD	MD	Annotation
400.0	400.0	KOP - 2/100
1190.1	1200.5	Begin Hold
2850.0	2927.4	Drop 2/100
3521.1	3608.8	Begin Hold
9700.0	9793.0	Drop 2/100
9786.7	9879.8	Hold to TD
13500.0	13593.3	TD at 13593.3



RKI Exploration & Production

Eddy County (NM83E)

Sec 1-T23S-R28E

Longview Deep Fed 6-21

Wellbore #1

Plan: 11-23-11

Standard Planning Report

23 November, 2011

Wolverine Directional, LLC

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Longview Deep Fed 6-21
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 1-T23S-R28E	North Reference:	True
Well:	Longview Deep Fed 6-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-23-11		

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 1-T23S-R28E				
Site Position:		Northing:	486,470.90 ft	Latitude:	32° 20' 13.278 N
From:	Map	Easting:	634,207.60 ft	Longitude:	104° 1' 57.491 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.16 °

Well	Longview Deep Fed 6-21				
Well Position	+N/-S	0.0 ft	Northing:	486,470.90 ft	Latitude: 32° 20' 13.278 N
	+E/-W	0.0 ft	Easting:	634,207.60 ft	Longitude: 104° 1' 57.491 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 0.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/11/23	7.75	60.20	48,615

Design	11-23-11				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	64.46	

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.5	16.01	64.46	1,190.1	47.9	100.3	2.00	2.00	0.00	64.46	
2,927.4	16.01	64.46	2,850.0	253.2	530.0	0.00	0.00	0.00	0.00	Longview Deep Fed
3,608.8	2.38	64.46	3,521.1	300.0	628.0	2.00	-2.00	0.00	-180.00	
9,793.0	2.39	64.45	9,700.0	410.9	860.0	0.00	0.00	0.00	-4.08	Longview Deep Fed
9,879.8	0.65	64.47	9,786.7	411.9	862.1	2.00	-2.00	0.02	179.99	
13,593.3	0.65	64.48	13,500.0	430.0	900.0	0.00	0.00	0.00	177.19	Longview Deep Fed

Wolverine Directional, LLC

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Longview Deep Fed 6-21
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 1-T23S-R28E	North Reference:	True
Well:	Longview Deep Fed 6-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-23-11		

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
KOP 2/100									
500.0	2.00	64.46	500.0	0.8	1.6	1.7	2.00	2.00	0.00
600.0	4.00	64.46	599.8	3.0	6.3	7.0	2.00	2.00	0.00
700.0	6.00	64.46	699.5	6.8	14.2	15.7	2.00	2.00	0.00
800.0	8.00	64.46	798.7	12.0	25.2	27.9	2.00	2.00	0.00
900.0	10.00	64.46	897.5	18.8	39.3	43.5	2.00	2.00	0.00
1,000.0	12.00	64.46	995.6	27.0	56.5	62.6	2.00	2.00	0.00
1,100.0	14.00	64.46	1,093.1	36.7	76.8	85.1	2.00	2.00	0.00
1,200.5	16.01	64.46	1,190.1	47.9	100.3	111.1	2.00	2.00	0.00
Begin Hold									
1,300.0	16.01	64.46	1,285.8	59.7	125.0	138.6	0.00	0.00	0.00
1,400.0	16.01	64.46	1,381.9	71.6	149.9	166.1	0.00	0.00	0.00
1,500.0	16.01	64.46	1,478.0	83.5	174.8	193.7	0.00	0.00	0.00
1,600.0	16.01	64.46	1,574.1	95.4	199.7	221.3	0.00	0.00	0.00
1,700.0	16.01	64.46	1,670.3	107.3	224.6	248.9	0.00	0.00	0.00
1,800.0	16.01	64.46	1,766.4	119.2	249.5	276.5	0.00	0.00	0.00
1,900.0	16.01	64.46	1,862.5	131.1	274.3	304.0	0.00	0.00	0.00
2,000.0	16.01	64.46	1,958.6	142.9	299.2	331.6	0.00	0.00	0.00
2,100.0	16.01	64.46	2,054.7	154.8	324.1	359.2	0.00	0.00	0.00
2,200.0	16.01	64.46	2,150.9	166.7	349.0	386.8	0.00	0.00	0.00
2,300.0	16.01	64.46	2,247.0	178.6	373.9	414.4	0.00	0.00	0.00
2,400.0	16.01	64.46	2,343.1	190.5	398.8	441.9	0.00	0.00	0.00
2,500.0	16.01	64.46	2,439.2	202.4	423.7	469.5	0.00	0.00	0.00
2,600.0	16.01	64.46	2,535.3	214.3	448.5	497.1	0.00	0.00	0.00
2,700.0	16.01	64.46	2,631.5	226.2	473.4	524.7	0.00	0.00	0.00
2,800.0	16.01	64.46	2,727.6	238.1	498.3	552.3	0.00	0.00	0.00
2,900.0	16.01	64.46	2,823.7	249.9	523.2	579.8	0.00	0.00	0.00
2,927.4	16.01	64.46	2,850.0	253.2	530.0	587.4	0.00	0.00	0.00
Drop 2/100 - Longview Deep Fed 6-21 TGT#1									
3,000.0	14.56	64.46	2,920.1	261.5	547.3	606.5	2.00	-2.00	0.00
3,100.0	12.56	64.46	3,017.3	271.6	568.4	630.0	2.00	-2.00	0.00
3,200.0	10.56	64.46	3,115.3	280.2	586.5	650.0	2.00	-2.00	0.00
3,300.0	8.56	64.46	3,213.9	287.4	601.5	666.6	2.00	-2.00	0.00
3,400.0	6.56	64.46	3,313.0	293.0	613.3	679.7	2.00	-2.00	0.00
3,500.0	4.56	64.46	3,412.5	297.2	622.1	689.4	2.00	-2.00	0.00
3,608.8	2.38	64.46	3,521.1	300.0	628.0	696.0	2.00	-2.00	0.00
Begin Hold									
3,700.0	2.38	64.46	3,612.2	301.7	631.4	699.8	0.00	0.00	0.00
3,800.0	2.38	64.46	3,712.1	303.5	635.2	704.0	0.00	0.00	0.00
3,900.0	2.38	64.46	3,812.1	305.2	638.9	708.1	0.00	0.00	0.00
4,000.0	2.38	64.46	3,912.0	307.0	642.7	712.3	0.00	0.00	0.00
4,100.0	2.38	64.46	4,011.9	308.8	646.4	716.4	0.00	0.00	0.00
4,200.0	2.38	64.46	4,111.8	310.6	650.2	720.6	0.00	0.00	0.00
4,300.0	2.38	64.46	4,211.7	312.4	653.9	724.7	0.00	0.00	0.00
4,400.0	2.38	64.46	4,311.6	314.2	657.7	728.9	0.00	0.00	0.00
4,500.0	2.38	64.46	4,411.5	316.0	661.4	733.0	0.00	0.00	0.00
4,600.0	2.38	64.46	4,511.5	317.8	665.2	737.2	0.00	0.00	0.00
4,700.0	2.38	64.46	4,611.4	319.6	668.9	741.3	0.00	0.00	0.00
4,800.0	2.38	64.46	4,711.3	321.4	672.7	745.5	0.00	0.00	0.00

Wolverine Directional, LLC

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Longview Deep Fed 6-21
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 1-T23S-R28E	North Reference:	True
Well:	Longview Deep Fed 6-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-23-11		

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)
4,900.0	2.38	64.46	4,811.2	323.2	676.4	749.6	0.00	0.00	0.00
5,000.0	2.38	64.46	4,911.1	324.9	680.2	753.8	0.00	0.00	0.00
5,100.0	2.38	64.46	5,011.0	326.7	683.9	758.0	0.00	0.00	0.00
5,200.0	2.38	64.46	5,110.9	328.5	687.7	762.1	0.00	0.00	0.00
5,300.0	2.38	64.46	5,210.8	330.3	691.4	766.3	0.00	0.00	0.00
5,400.0	2.38	64.46	5,310.8	332.1	695.2	770.4	0.00	0.00	0.00
5,500.0	2.38	64.46	5,410.7	333.9	698.9	774.6	0.00	0.00	0.00
5,600.0	2.38	64.46	5,510.6	335.7	702.7	778.7	0.00	0.00	0.00
5,700.0	2.38	64.46	5,610.5	337.5	706.4	782.9	0.00	0.00	0.00
5,800.0	2.38	64.46	5,710.4	339.3	710.2	787.0	0.00	0.00	0.00
5,900.0	2.38	64.46	5,810.3	341.1	713.9	791.2	0.00	0.00	0.00
6,000.0	2.38	64.46	5,910.2	342.9	717.7	795.4	0.00	0.00	0.00
6,100.0	2.38	64.46	6,010.2	344.7	721.4	799.5	0.00	0.00	0.00
6,200.0	2.38	64.46	6,110.1	346.4	725.2	803.7	0.00	0.00	0.00
6,300.0	2.38	64.46	6,210.0	348.2	728.9	807.8	0.00	0.00	0.00
6,400.0	2.38	64.46	6,309.9	350.0	732.7	812.0	0.00	0.00	0.00
6,500.0	2.38	64.46	6,409.8	351.8	736.4	816.1	0.00	0.00	0.00
6,600.0	2.38	64.46	6,509.7	353.6	740.2	820.3	0.00	0.00	0.00
6,700.0	2.38	64.46	6,609.6	355.4	743.9	824.5	0.00	0.00	0.00
6,800.0	2.38	64.46	6,709.6	357.2	747.7	828.6	0.00	0.00	0.00
6,900.0	2.38	64.45	6,809.5	359.0	751.4	832.8	0.00	0.00	0.00
7,000.0	2.38	64.45	6,909.4	360.8	755.2	836.9	0.00	0.00	0.00
7,100.0	2.38	64.45	7,009.3	362.6	758.9	841.1	0.00	0.00	0.00
7,200.0	2.38	64.45	7,109.2	364.4	762.7	845.2	0.00	0.00	0.00
7,300.0	2.38	64.45	7,209.1	366.2	766.4	849.4	0.00	0.00	0.00
7,400.0	2.38	64.45	7,309.0	368.0	770.2	853.6	0.00	0.00	0.00
7,500.0	2.38	64.45	7,408.9	369.8	773.9	857.7	0.00	0.00	0.00
7,600.0	2.38	64.45	7,508.9	371.6	777.7	861.9	0.00	0.00	0.00
7,700.0	2.38	64.45	7,608.8	373.3	781.4	866.0	0.00	0.00	0.00
7,800.0	2.38	64.45	7,708.7	375.1	785.2	870.2	0.00	0.00	0.00
7,900.0	2.38	64.45	7,808.6	376.9	788.9	874.4	0.00	0.00	0.00
8,000.0	2.38	64.45	7,908.5	378.7	792.7	878.5	0.00	0.00	0.00
8,100.0	2.38	64.45	8,008.4	380.5	796.4	882.7	0.00	0.00	0.00
8,200.0	2.38	64.45	8,108.3	382.3	800.2	886.8	0.00	0.00	0.00
8,300.0	2.38	64.45	8,208.3	384.1	803.9	891.0	0.00	0.00	0.00
8,400.0	2.38	64.45	8,308.2	385.9	807.7	895.2	0.00	0.00	0.00
8,500.0	2.38	64.45	8,408.1	387.7	811.5	899.3	0.00	0.00	0.00
8,600.0	2.38	64.45	8,508.0	389.5	815.2	903.5	0.00	0.00	0.00
8,700.0	2.38	64.45	8,607.9	391.3	819.0	907.6	0.00	0.00	0.00
8,800.0	2.38	64.45	8,707.8	393.1	822.7	911.8	0.00	0.00	0.00
8,900.0	2.38	64.45	8,807.7	394.9	826.5	916.0	0.00	0.00	0.00
9,000.0	2.38	64.45	8,907.6	396.7	830.2	920.1	0.00	0.00	0.00
9,100.0	2.38	64.45	9,007.6	398.5	834.0	924.3	0.00	0.00	0.00
9,200.0	2.38	64.45	9,107.5	400.3	837.7	928.4	0.00	0.00	0.00
9,300.0	2.39	64.45	9,207.4	402.1	841.5	932.6	0.00	0.00	0.00
9,400.0	2.39	64.45	9,307.3	403.8	845.2	936.8	0.00	0.00	0.00
9,500.0	2.39	64.45	9,407.2	405.6	849.0	940.9	0.00	0.00	0.00
9,600.0	2.39	64.45	9,507.1	407.4	852.8	945.1	0.00	0.00	0.00
9,700.0	2.39	64.45	9,607.0	409.2	856.5	949.2	0.00	0.00	0.00
9,793.0	2.39	64.45	9,700.0	410.9	860.0	953.1	0.00	0.00	0.00
Drop 2/100 - Longview Deep Fed 6-21 TGT#2									
9,800.0	2.25	64.45	9,707.0	411.0	860.3	953.4	2.00	-2.00	0.01
9,879.8	0.65	64.47	9,786.7	411.9	862.1	955.4	2.00	-2.00	0.02

Wolverine Directional, LLC

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Longview Deep Fed 6-21
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 1-T23S-R28E	North Reference:	True
Well:	Longview Deep Fed 6-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-23-11		

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)
Hold to TD									
9,900.0	0.65	64.47	9,806.9	412.0	862.3	955.6	0.00	0.00	0.00
10,000.0	0.65	64.47	9,906.9	412.5	863.3	956.8	0.00	0.00	0.00
10,100.0	0.65	64.47	10,006.9	413.0	864.3	957.9	0.00	0.00	0.00
10,200.0	0.65	64.47	10,106.9	413.5	865.4	959.1	0.00	0.00	0.00
10,300.0	0.65	64.47	10,206.9	413.9	866.4	960.2	0.00	0.00	0.00
10,400.0	0.65	64.47	10,306.9	414.4	867.4	961.3	0.00	0.00	0.00
10,500.0	0.65	64.47	10,406.9	414.9	868.4	962.5	0.00	0.00	0.00
10,600.0	0.65	64.47	10,506.9	415.4	869.4	963.6	0.00	0.00	0.00
10,700.0	0.65	64.47	10,606.9	415.9	870.5	964.7	0.00	0.00	0.00
10,800.0	0.65	64.47	10,706.9	416.4	871.5	965.9	0.00	0.00	0.00
10,900.0	0.65	64.47	10,806.9	416.9	872.5	967.0	0.00	0.00	0.00
11,000.0	0.65	64.47	10,906.9	417.4	873.5	968.1	0.00	0.00	0.00
11,100.0	0.65	64.47	11,006.8	417.9	874.6	969.3	0.00	0.00	0.00
11,200.0	0.65	64.47	11,106.8	418.3	875.6	970.4	0.00	0.00	0.00
11,300.0	0.65	64.48	11,206.8	418.8	876.6	971.5	0.00	0.00	0.00
11,400.0	0.65	64.48	11,306.8	419.3	877.6	972.6	0.00	0.00	0.00
11,500.0	0.65	64.48	11,406.8	419.8	878.6	973.8	0.00	0.00	0.00
11,600.0	0.65	64.48	11,506.8	420.3	879.7	974.9	0.00	0.00	0.00
11,700.0	0.65	64.48	11,606.8	420.8	880.7	976.0	0.00	0.00	0.00
11,800.0	0.65	64.48	11,706.8	421.3	881.7	977.2	0.00	0.00	0.00
11,900.0	0.65	64.48	11,806.8	421.8	882.7	978.3	0.00	0.00	0.00
12,000.0	0.65	64.48	11,906.8	422.2	883.7	979.4	0.00	0.00	0.00
12,100.0	0.65	64.48	12,006.8	422.7	884.8	980.6	0.00	0.00	0.00
12,200.0	0.65	64.48	12,106.8	423.2	885.8	981.7	0.00	0.00	0.00
12,300.0	0.65	64.48	12,206.8	423.7	886.8	982.8	0.00	0.00	0.00
12,400.0	0.65	64.48	12,306.8	424.2	887.8	984.0	0.00	0.00	0.00
12,500.0	0.65	64.48	12,406.8	424.7	888.9	985.1	0.00	0.00	0.00
12,600.0	0.65	64.48	12,506.8	425.2	889.9	986.2	0.00	0.00	0.00
12,700.0	0.65	64.48	12,606.7	425.7	890.9	987.4	0.00	0.00	0.00
12,800.0	0.65	64.48	12,706.7	426.1	891.9	988.5	0.00	0.00	0.00
12,900.0	0.65	64.48	12,806.7	426.6	892.9	989.6	0.00	0.00	0.00
13,000.0	0.65	64.48	12,906.7	427.1	894.0	990.7	0.00	0.00	0.00
13,100.0	0.65	64.48	13,006.7	427.6	895.0	991.9	0.00	0.00	0.00
13,200.0	0.65	64.48	13,106.7	428.1	896.0	993.0	0.00	0.00	0.00
13,300.0	0.65	64.48	13,206.7	428.6	897.0	994.1	0.00	0.00	0.00
13,400.0	0.65	64.48	13,306.7	429.1	898.0	995.3	0.00	0.00	0.00
13,500.0	0.65	64.48	13,406.7	429.5	899.0	996.4	0.00	0.00	0.00
13,593.3	0.65	64.48	13,500.0	430.0	900.0	997.4	0.00	0.00	0.00
TD at 13593.3 - Longview Deep Fed 6-21 PBHL									

Wolverine Directional, LLC

Planning Report

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Longview Deep Fed 6-21
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 1-T23S-R28E	North Reference:	True
Well:	Longview Deep Fed 6-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	11-23-11		

Targets									
Target Name	hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	
Longview Deep Fed 6	- plan hits target	0.00	0.00	9,700.0	410.9	860.0	486,884.21	635,066.44	32° 20' 17.344 N 104° 1' 47.466 W
- Point									
Longview Deep Fed 6	- plan hits target	0.00	0.00	13,500.0	430.0	900.0	486,903.42	635,106.39	32° 20' 17.533 N 104° 1' 47.000 W
- Point									
Longview Deep Fed 6	- plan hits target	0.00	0.00	2,850.0	253.2	530.0	486,725.59	634,736.89	32° 20' 15.784 N 104° 1' 51.313 W
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP - 2/100
1,200.5	1,190.1	47.9	100.3	Begin Hold
2,927.4	2,850.0	253.2	530.0	Drop 2/100
3,608.8	3,521.1	300.0	628.0	Begin Hold
9,793.0	9,700.0	410.9	860.0	Drop 2/100
9,879.8	9,786.7	411.9	862.1	Hold to TD
13,593.3	13,500.0	430.0	900.0	TD at 13593.3

LONGVIEW DEEP FED 6-21

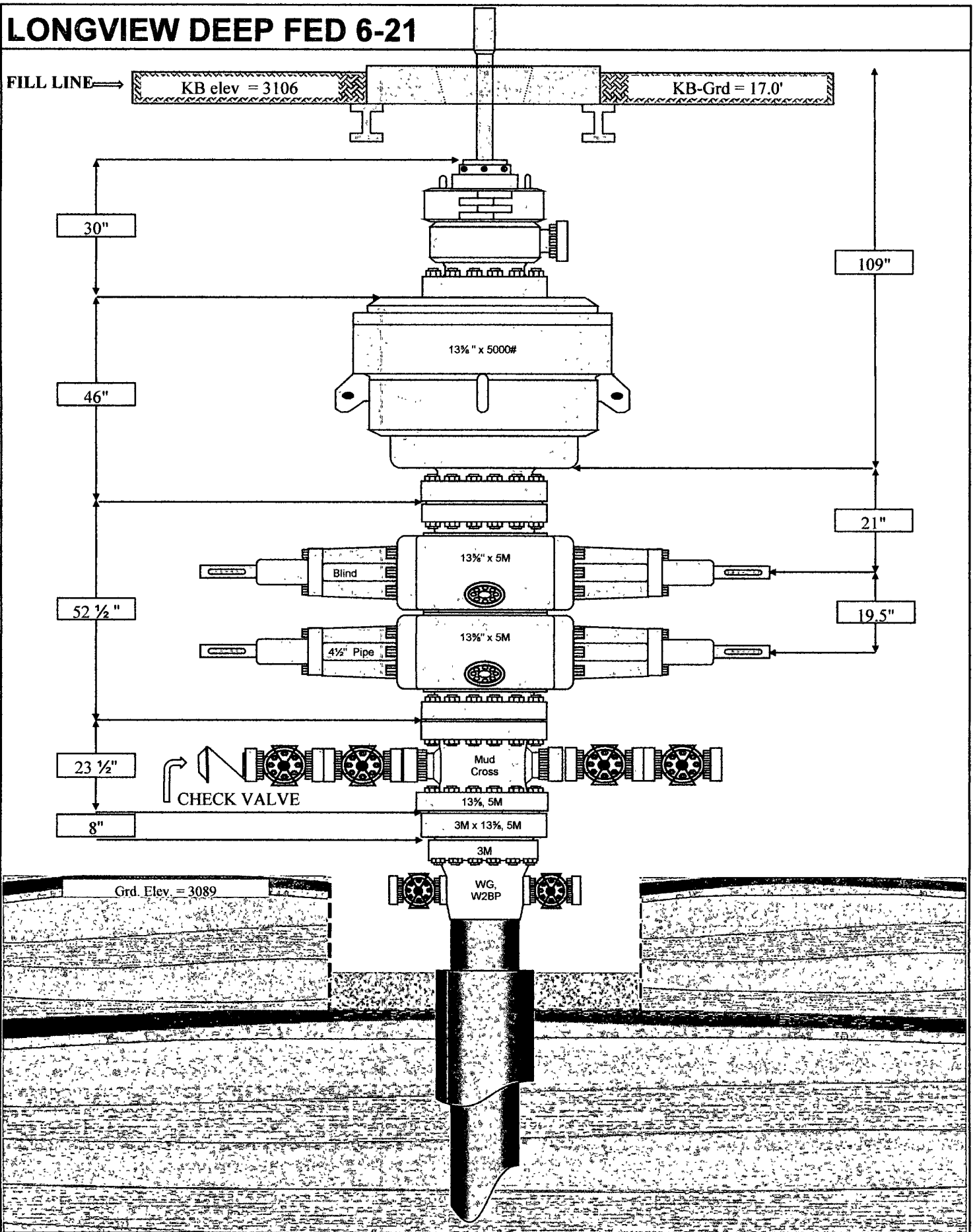


Exhibit E-1 – Choke Manifold Diagram

