

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV1220 S. St Francis Dr., Santa Fe, NM
87505

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

Form C-102

Permit 16161

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015- 34355 34466	Pool Name COTTONWOOD CREEK; WC, WEST (GAS)	Pool Code 75260
Property Code 34779	Property Name MACKENZIE 13 FEE	Well No. 003H
OGRID No. 7377	Operator Name EOG RESOURCES INC	Elevation 3581

Surface Location

UL or Lot O	Section 13	Township 16S	Range 24E	Lot Idn O	Feet From 660	N/S Line S	Feet From 1980	E/W Line E	County Eddy
----------------	---------------	-----------------	--------------	--------------	------------------	---------------	-------------------	---------------	----------------

Bottom Hole Location If Different From Surface

UL or Lot B	Section 13	Township 16S	Range 24E	Lot Idn B	Feet From 660	N/S Line N	Feet From 1980	E/W Line E	County Eddy
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.						

		☒	
		☒	

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Electronically Signed By: Stan Wagner

Title: Regulatory Analyst

Date: 09/27/2005

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.

Surveyed By: V.L. Bezner

Date of Survey: 08/25/2005

Certificate Number: 7920

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

OIL CONSERVATION DIVISION

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

Form C-102

Revised August 15, 2000

Submit to Appropriate District Office

State Lease - 4 copies

Fee Lease - 3 copies

RECEIVED

DEC 14 2005

OCU-ARTESIA

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-34466	2 Pool Code 75260	3 Pool Name Cottonwood Creek; WC, West (Gas)
4 Property Code	5 Property Name MACKENZIE FEE 13	6 Well Number 4H
7 OGRID No. 7377	8 Operator Name EOG RESOURCES, INC.	9 Elevation 3577'

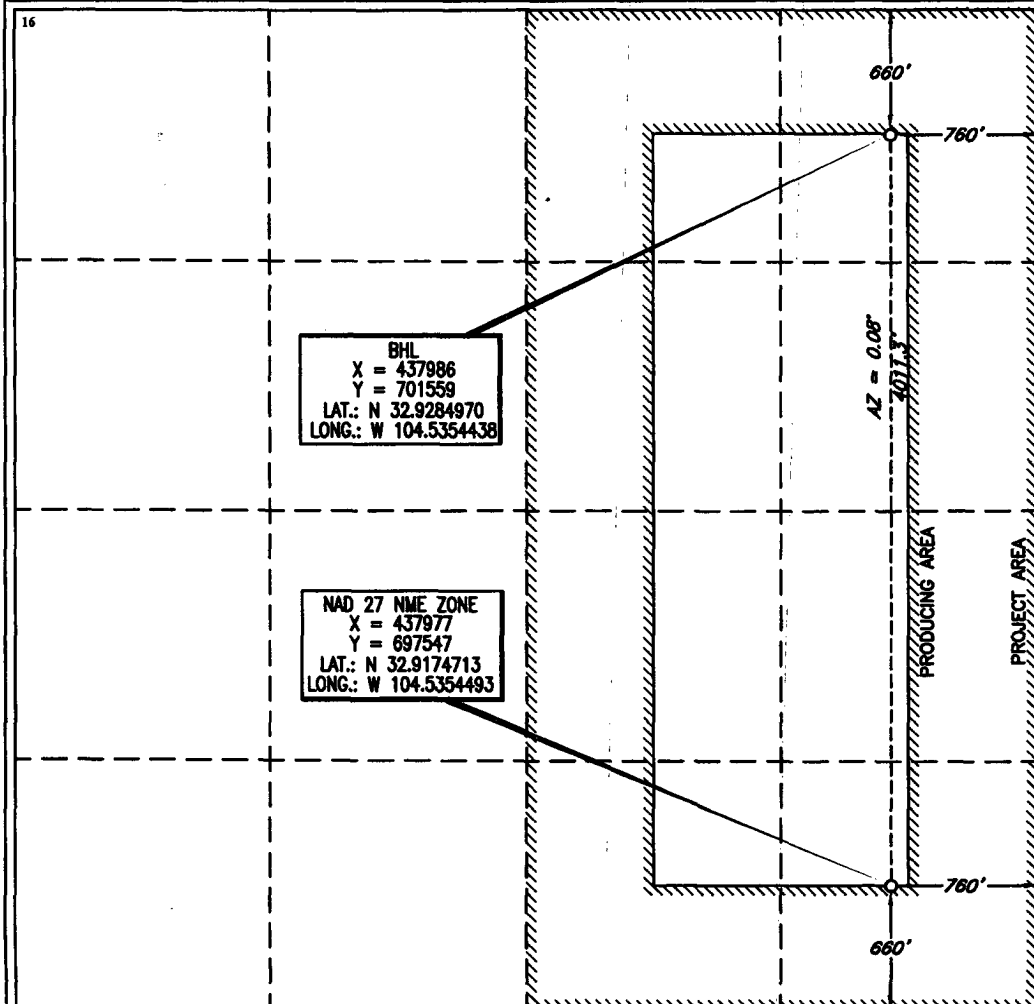
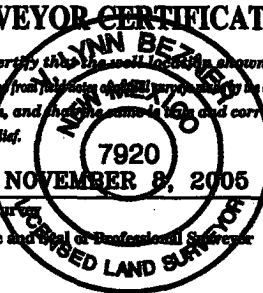
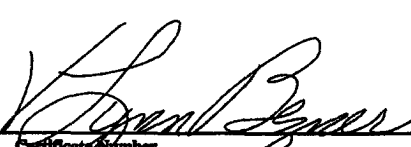
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	13	16 SOUTH	24 EAST, N.M.P.M.		660'	SOUTH	760'	EAST	EDDY

11 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
A	13	16 SOUTH	24 EAST, N.M.P.M.		660'	NORTH	760'	EAST	EDDY
12 Dedicated Acres 320	13 Joint or Infill	14 Consolidation Code	15 Order No.						

NO ALLOWABLE WELL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	 BHL X = 437986 Y = 701559 LAT.: N 32.9284970 LONG.: W 104.5354438 NAD 27 NME ZONE X = 437977 Y = 697547 LAT.: N 32.9174713 LONG.: W 104.5354493 660' 760' AZ = 0.08° PRODUCING AREA PROJECT AREA	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Mike Francis Printed Name Agent Title 12/13/2005 Date
		18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from the notes of the survey made by me or under my supervision, and that the same is true and correct to the best of my belief.  Date of Survey Signature and Title of Professional Surveyor  Certificate Number V. A. BEZNER R.P.S. #7920 JOB #108002 / 101 NE / J.W.W.

Permit Information:

Well Name: MacKenzie 13 Fee #4H

Location:

SL 660' FSL & 760' FEL, Section 13, T-16-S, R-24-E, Eddy Co., N.M.

BHL 660' FNL & 760' FEL, Section 13, T-16-S, R-24-E, Eddy Co., N.M.

Casing Program:

Casing	Setting Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Desired TOC
Surface	900'	9-7/8"	7"	26#	J-55	Surface
Production	8,608'	6-1/8"	4 1/2"	11.6/ 13.5#	P-110	Surface

Cement Program:

Depth	No. Sacks	Slurries:
900'	300	Lead: Premium Plus + 2% CaCl ₂ + 3% Econolite + 1/4 pps Flocele
	200	Tail: Premium Plus + 2% CaCl ₂ + 1/4 pps Flocele
8,608'	400	Lead: Interfill C + 1/4 pps Flocele
	350	Tail: Premium Cement + 100% Acid Soluble Additive + 0.6% Halad@-344 + 0.8% Econolite + 0.2% HR-55

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 950'	Fresh - Gel	8.6-8.8	28-34	N/c
950' - 4,400'	Cut Brine	8.8-9.2	28-34	N/c
4,400' - 5,200'	Cut Brine	8.8-9.2	28-34	10-15
4,300' - 8,608'	Polymer (Lateral)	9.0-9.4	40-45	10-25



EOG Resources, Inc.
P.O. Box 2267
Midland, TX 79702
(915) 686-3600

December 12, 2005

State of New Mexico Energy, Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
DEC 14 2005
UUC-ANTENNA

To Whom It May Concern:

I am writing to request a waiver for the inclusion of an H₂S Contingency Plan for the MacKenzie 13 Fee #4H. The current plan is to complete this well in the Wolfcamp, which is sweet, and I do not anticipate encountering any H₂S bearing formations during drilling operations.

Sincerely,

Jason LaGrega
Drilling Engineer

EOG Resources Inc

Planning Report

Database: RDRILL.eogresources.com
Company: EOG Midland
Project: Thames
Site: MacKenzie 13 Fee #4H
Well: MacKenzie 13 Fee #4H
Wellbore: MacKenzie 13 Fee #4H
Design: Plan #1

Local Co-ordinate Reference: Well MacKenzie 13 Fee #4H
TVD Reference: WELL @ 3594.0ft (Original Well Elev)
MD Reference: WELL @ 3594.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Thames		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	MacKenzie 13 Fee #4H		
Site Position:		Northing:	697,547.00ft
From:	Map	Easting:	437,977.00ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	32° 55' 2.894 N
		Longitude:	104° 32' 7.617 W
		Grid Convergence:	-0.11 °

Well	MacKenzie 13 Fee #4H		
Well Position	+N/-S	0.0 ft	Northing: 697,547.00 ft
	+E/-W	0.0 ft	Easting: 437,977.00 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	32° 55' 2.894 N
		Longitude:	104° 32' 7.617 W
		Ground Level:	3,577.0ft

Wellbore	MacKenzie 13 Fee #4H		
Magnetics	Model Name	Sample Date	Declination
	IGRF2000	12/31/2004	(°)
			9.06
			Dip Angle
			(°)
			60.89
			Field Strength
			(nT)
			49,722

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	4,760.0	0.0	0.0
			Direction
			(°)
			0.13

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	
4,378.0	0.00	0.00	4,378.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,978.0	90.00	0.13	4,760.0	382.0	0.9	15.00	15.00	0.00	0.13	
4,978.1	90.00	0.13	4,760.0	382.0	0.9	3.00	-0.79	-2.89	-105.29	
8,608.0	90.00	0.13	4,760.0	4,011.9	9.0	0.00	0.00	0.00	0.00	
8,608.0	90.00	0.13	4,760.0	4,012.0	9.0	3.00	0.79	2.89	74.71	BHL (MacKenzie #

EOG Resources Inc

Planning Report

Database: RDRILL.eogresources.com
 Company: EOG Midland
 Project: Thames
 Site: MacKenzie 13 Fee #4H
 Well: MacKenzie 13 Fee #4H
 Wellbore: MacKenzie 13 Fee #4H
 Design: Plan #1

Local Co-ordinate Reference: Well MacKenzie 13 Fee #4H
 TVD Reference: WELL @ 3594.0ft (Original Well Elev)
 MD Reference: WELL @ 3594.0ft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,378.0	0.00	0.00	4,378.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	3.30	0.13	4,400.0	0.6	0.0	0.6	15.00	15.00	0.00
4,500.0	18.30	0.13	4,497.9	19.3	0.0	19.3	15.00	15.00	0.00
4,600.0	33.30	0.13	4,587.7	62.7	0.1	62.7	15.00	15.00	0.00
4,700.0	48.30	0.13	4,663.2	127.9	0.3	127.9	15.00	15.00	0.00
4,800.0	63.30	0.13	4,719.2	210.3	0.5	210.3	15.00	15.00	0.00
4,900.0	78.30	0.13	4,752.0	304.5	0.7	304.5	15.00	15.00	0.00
4,978.1	90.00	0.13	4,760.0	382.0	0.9	382.0	14.99	14.99	0.00
5,000.0	90.00	0.13	4,760.0	404.0	0.9	404.0	0.00	0.00	0.00
5,100.0	90.00	0.13	4,760.0	504.0	1.1	504.0	0.00	0.00	0.00

EOG Resources Inc

Planning Report

Database: RDRILL.eogresources.com
Company: EOG Midland
Project: Thames
Site: MacKenzie 13 Fee #4H
Well: MacKenzie 13 Fee #4H
Wellbore: MacKenzie 13 Fee #4H
Design: Plan #1

Local Co-ordinate Reference: Well MacKenzie 13 Fee #4H
TVD Reference: WELL @ 3594.0ft (Original Well Elev)
MD Reference: WELL @ 3594.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
5,200.0	90.00	0.13	4,760.0	604.0	1.4	604.0	0.00	0.00	0.00
5,300.0	90.00	0.13	4,760.0	704.0	1.6	704.0	0.00	0.00	0.00
5,400.0	90.00	0.13	4,760.0	804.0	1.8	804.0	0.00	0.00	0.00
5,500.0	90.00	0.13	4,760.0	904.0	2.0	904.0	0.00	0.00	0.00
5,600.0	90.00	0.13	4,760.0	1,004.0	2.3	1,004.0	0.00	0.00	0.00
5,700.0	90.00	0.13	4,760.0	1,104.0	2.5	1,104.0	0.00	0.00	0.00
5,800.0	90.00	0.13	4,760.0	1,204.0	2.7	1,204.0	0.00	0.00	0.00
5,900.0	90.00	0.13	4,760.0	1,304.0	2.9	1,304.0	0.00	0.00	0.00
6,000.0	90.00	0.13	4,760.0	1,404.0	3.2	1,404.0	0.00	0.00	0.00
6,100.0	90.00	0.13	4,760.0	1,504.0	3.4	1,504.0	0.00	0.00	0.00
6,200.0	90.00	0.13	4,760.0	1,604.0	3.6	1,604.0	0.00	0.00	0.00
6,300.0	90.00	0.13	4,760.0	1,704.0	3.8	1,704.0	0.00	0.00	0.00
6,400.0	90.00	0.13	4,760.0	1,804.0	4.1	1,804.0	0.00	0.00	0.00
6,500.0	90.00	0.13	4,760.0	1,904.0	4.3	1,904.0	0.00	0.00	0.00
6,600.0	90.00	0.13	4,760.0	2,004.0	4.5	2,004.0	0.00	0.00	0.00
6,700.0	90.00	0.13	4,760.0	2,104.0	4.7	2,104.0	0.00	0.00	0.00
6,800.0	90.00	0.13	4,760.0	2,204.0	4.9	2,204.0	0.00	0.00	0.00
6,900.0	90.00	0.13	4,760.0	2,304.0	5.2	2,304.0	0.00	0.00	0.00
7,000.0	90.00	0.13	4,760.0	2,404.0	5.4	2,404.0	0.00	0.00	0.00
7,100.0	90.00	0.13	4,760.0	2,504.0	5.6	2,504.0	0.00	0.00	0.00
7,200.0	90.00	0.13	4,760.0	2,604.0	5.8	2,604.0	0.00	0.00	0.00
7,300.0	90.00	0.13	4,760.0	2,704.0	6.1	2,704.0	0.00	0.00	0.00
7,400.0	90.00	0.13	4,760.0	2,804.0	6.3	2,804.0	0.00	0.00	0.00
7,500.0	90.00	0.13	4,760.0	2,904.0	6.5	2,904.0	0.00	0.00	0.00
7,600.0	90.00	0.13	4,760.0	3,004.0	6.7	3,004.0	0.00	0.00	0.00
7,700.0	90.00	0.13	4,760.0	3,104.0	7.0	3,104.0	0.00	0.00	0.00
7,800.0	90.00	0.13	4,760.0	3,204.0	7.2	3,204.0	0.00	0.00	0.00
7,900.0	90.00	0.13	4,760.0	3,304.0	7.4	3,304.0	0.00	0.00	0.00
8,000.0	90.00	0.13	4,760.0	3,404.0	7.6	3,404.0	0.00	0.00	0.00
8,100.0	90.00	0.13	4,760.0	3,504.0	7.9	3,504.0	0.00	0.00	0.00
8,200.0	90.00	0.13	4,760.0	3,604.0	8.1	3,604.0	0.00	0.00	0.00
8,300.0	90.00	0.13	4,760.0	3,704.0	8.3	3,704.0	0.00	0.00	0.00
8,400.0	90.00	0.13	4,760.0	3,804.0	8.5	3,804.0	0.00	0.00	0.00
8,500.0	90.00	0.13	4,760.0	3,904.0	8.8	3,904.0	0.00	0.00	0.00
8,600.0	90.00	0.13	4,760.0	4,004.0	9.0	4,004.0	0.00	0.00	0.00
8,608.0	90.00	0.13	4,760.0	4,012.0	9.0	4,012.0	0.02	0.01	0.02

BHL (MacKenzie #4H)

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
BHL (MacKenzie #4H	0.00	0.00	4,760.0	4,012.0	9.0	701,559.00	437,986.00	32° 55' 42.594 N	104° 32' 7.602 W
- plan misses by 8.0ft at 8600.0ft MD (4760.0 TVD, 4004.0 N, 9.0 E)									
- Point									

WELL DETAILS: MacKenzie 13 Fee #4H

Ground Level: 3577.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 697547.00 437977.00 52° 55' 2.89404° 32' 7.617 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
4378.0	0.00	0.00	4378.0	0.0	0.0	0.00	0.00	0.0	
4978.0	90.00	0.13	4760.0	382.0	0.9	15.00	0.13	382.0	
4978.1	90.00	0.13	4760.0	382.0	0.9	3.00	105.29	382.0	
8608.0	90.00	0.13	4760.0	4011.9	9.0	0.00	0.00	4012.0	
8608.0	90.00	0.13	4760.0	4012.0	9.0	3.00	74.71	4012.0	BHL (MacKenzie #4H)

