

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

NOV 06 2008

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.

Bureau of Land Management
Farmington Field Office

5. Lease Serial No. Jicarilla 152
6. If Indian, Allottee or Tribe Name Jicarilla Apache
7. If Unit or CA/Agreement, Name and/or No. Jicarilla 152W 4N
8. Well Name and No. Jicarilla 152W 4N
9. API Well No. 30-039-30123
10. Field and Pool, or Exploratory Area Blanco Mesaverde/Dakota
11. County or Parish, State Rio Arriba NM

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other
2. Name of Operator
ENERGEN RESOURCES CORPORATION
3a. Address 2010 Afton Place, Farmington, NM 87401
3b. Phone No. (include area code)
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1130 FSL, 1100 FWL, Sec. 5, T26N, R5W N.M.P.M.

12. CHECK 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 Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 recomple 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 recomple 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 final site is ready for final inspection.)

Energen Resources would like to make the following changes to the Jicarilla 152W #4N as follows:

-Drill the well as a directional "S"Shape design moving the BHL to 2030 FSL, 730 FWL to better accommodate reservoir drainage. ✓

-Change the setting depth of the intermediate casing to 4732' MD (4600' TVD) and cement with 650 sks 65/35 of lead cement followed by 150 sks of tail.

-Change the setting depth of the production casing to 7805' MD (7636' TVD) and cement as a three stage with 250 sks 50/50 for the 1st stage, 175 sks 50/50 for the 2nd stage, and 340 sks 65/35 for the 3rd stage. Stage volumes will be subject to change with caliper log data.

Attached are a revised Operations Plan, Proposed Directional Plan, and Revised C-102. ✓

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed) Nathan Smith
Signature Nathan Smith
Title Drilling Engineer
Date 11/2/2008

RCVD NOV 13 2008
OIL CONS. DIV.
DIST. 3

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Troy L. Salvors
Title Petroleum Engineer
Date 11/12/2008
Office FFO

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes 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

NMOCD 11/17

DISTRICT I
1825 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised October 12, 2005

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

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

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30123	² Pool Code 92319/71599	³ Pool Name MESA VERDE/DAKOTA
⁴ Property Code 21949	⁵ Property Name JICARILLA 152W	⁶ Well Number 4N
⁷ GRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6564'

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
M	5	26N	5W		1130	SOUTH	1100	WEST	RIO ARriba

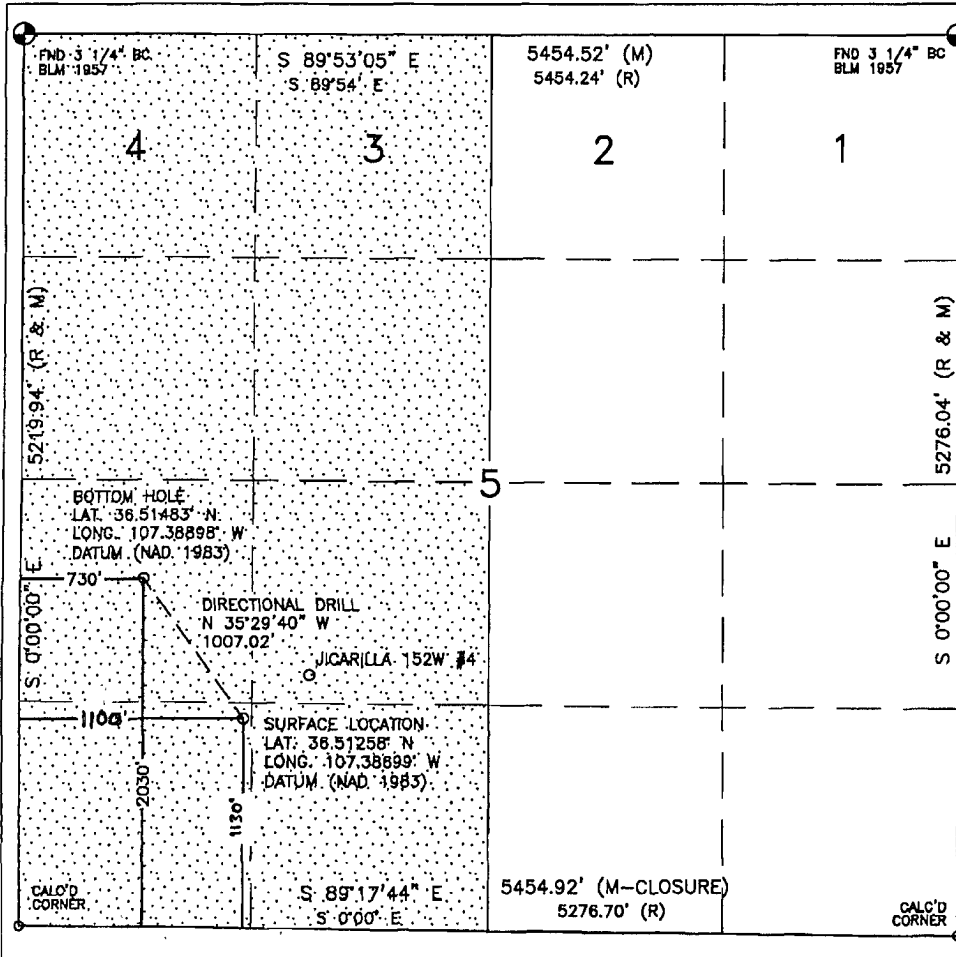
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	5	26N	5W		2030'	SOUTH	730'	WEST	RIO ARriba

¹² Dedicated Acres 319.61 Acres - (W/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCVD NOV 13 '08 OIL CONS. DIV.
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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

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¹⁷ 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 or a compulsory pooling order heretofore entered by the division.

Nathan Smith 11/7/08
Signature Date

Nathan Smith
Printed Name

¹⁸ SURVEYOR CERTIFICATION

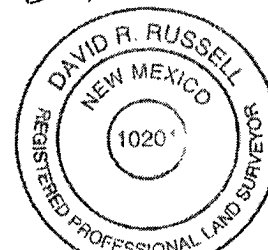
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 18, 2006

Date of Survey

Signature and Seal of Professional Surveyor:

David R. Russell



DAVID RUSSELL
Certificate Number 10201

Operations Plan
Revised October 31, 2008
Jicarilla 152W #4N

General Information

Location	1130 fsl, 1100 fwl at surface 2030 fsl, 730 fwl at bottom swsw S5, T26N, R05W Rio Arriba County, New Mexico
Elevations	6571' GL
Total Depth	7805' (MD), 7636' (TVD)
Formation Objective	Blanco MV / Basin DK

Formation Tops

San Jose	Surface	Cliffhouse Ss	4883' TVD, 5015' MD
Nacimiento	1463' TVD, 1479' MD	Menefee Fm	4953' TVD, 5085' MD
Ojo Alamo Ss	2498' TVD, 2557' MD	Point Lookout Ss	5378' TVD, 5500' MD
Kirtland Sh	2728' TVD, 2795' MD	Mancos Shale	5673' TVD, 5805' MD
Fruitland Fm	3003' TVD, 3081' MD	Graneros Shale	7353' TVD, 7485' MD
Top Coal	3058' TVD, 3138' MD	Dakota "Twowells" Ss	7378' TVD, 7510' MD
Bottom Coal	3173' TVD, 3258' MD	Dakota "Paguete" Ss	7468' TVD, 7600' MD
Pictured Cliffs Ss	3173' TVD, 3258' MD	Dakota "Cubero" Ss	7508' TVD, 7640' MD
Lewis Shale	3328' TVD, 3419' MD	Dakota "Oak Canyon" Sh	7623' TVD, 7755' MD
Int Csg Point	4600' TVD, 4732' MD	Total Depth	7636' TVD, 7805' MD

Drilling

The 12 1/4" wellbore will be drilled with a fresh water mud system.

The 8 3/4" wellbore will be drilled with a low solids non-dispersed fresh water mud system. Weighting materials will be drill cuttings. Mud density is expected to range from 8.3 ppg to 8.9 ppg.

KOP will be 800'.

The 6 1/4" wellbore will be air/mist from intermediate setting depth to TD.

Blowout Control Specifications:

A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. Pressure test the BOP stack to 250 psi for 15 min and 1500 psi for 15 min. A 2" nominal, 2000 psi minimum choke manifold will also be used. Pressure test choke manifold to 1500 psi for 30 min. An upper Kelly Cock valve handle and drill string valve should be available to fit each drill string and be available on the rig floor during drilling operations.

Logging Program:

Open hole logs: From Surface to Intermediate setting depth - None

From Intermediate setting depth to TD - Temp / HRI / CNT, LDT / GR

Mud Logs: From 4600' TVD (4732' MD) to TD

Coring: None

Surveys: Surface and/or every 500' to TD for vertical drilling and every 200' for directional.

Tubulars

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt.	Grade
Surface	0'-200'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	200'-4732' MD 200-4600' TVD	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	0'-7805' MD 7636' 0- 7673' TVD	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-7750'		2 3/8"	4.7 ppf	J-55

Casing Equipment:

Surface Casing: Texas Pattern Guide Shoe on bottom of first joint with an insert float valve on top of the first joint of casing. Casing centralization with three (3) standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Self Fill Float Shoe on bottom of the first joint with Self Fill Insert Float Collar on top of the second joint of casing for a two joint shoe track. Casing centralization with double bow spring centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

Production Casing: Self Fill Float Shoe on bottom of the first joint with Self Fill Insert Float Collar on top of the first joint of casing and casing centralization from surface to 4700' MD with double bow spring centralizers and standard bow spring centralizers from 4700' MD to 7805' MD to optimize standoff. Place hydraulic multi-stage cementing collars (DV Tool) at 5932' MD and 4530' MD.

Wellhead

11" 3000 x 9 5/8" Casing Head. 11" 3000 x 11" 3000 spool. 11" 5000 x 7 1/16" 5000 Christmas Tree

Cementing

Surface Casing: 225 sks Type V with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 247 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min. Test BOP as per described in the 'Drilling' section above.

Intermediate Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Cement with 650 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 150 sks of Class G cement with 5.0 #/sk Gilsonite, and 1/4 #/sk Flocele (15.4ppg, 1.18 ft³/sk). (1431.5 ft³ of slurry to circulate to surface).

Production Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout.

First Stage: 250 sks 50/50 with 2.0 % Bentonite, 1.20 % Halad-9, 0.10% CFR-3, 5 #/sk Gilsonite, and 1/4 #/sk Flocele (13.5 ppg, 1.30 ft³/sk). (520 ft³ of slurry, 50 % excess to circulate off stage tool).

Second Stage: 175 sks 50/50 with 2.0 % Bentonite, 0.80 % Halad-9, 0.10% CFR-3, 5 #/sk Gilsonite, and 1/4 #/sk Flocele (13.5 ppg, 1.30 ft³/sk). (227.5 ft³ of slurry, 50 % excess to circulate off stage tool).

Third Stage: 340 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂ (12.6 ppg, 1.86 ft³/sk) followed by 50 sks Class G with 2.0 % CaCl₂ (15.4ppg, 1.18 ft³/sk). (691.4 ft³ of slurry, 25 % excess to circulate to surface).

Volumes will change with caliper volumes. 30% excess on first and second stage, 25% on third. ✓

Other Information

- 1) This well will be cased and the Blanco Mesa Verde / Basin Dakota fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control.
- 3) Mesa Verde pore pressure is anticipated to be 800 psi, the Pictured Cliffs is 600 psi and the Fruitland is 500 psi. ✓
- 4) No abnormal temperatures or pressures are anticipated.
- 5) This gas is dedicated.

SJ BR

SW Sec 5, T26N, 5W

Jicarilla

Jicarilla Apache Reservation

Jicarilla 152 W #4N ✓

Plan: Plan #1

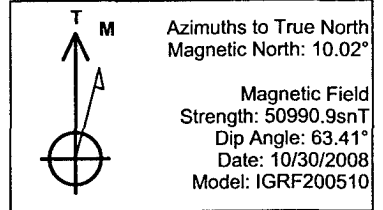
Planned Wellpath

31 October, 2008

Project: SW Sec 5, T26N, 5W
Site: Jicarilla
Well: Jicarilla Apache Reservation
Wellbore: Jicarilla 152 W #4N
Plan: Plan #1 (Jicarilla Apache Reservation/Jicarilla 152 W #4N)

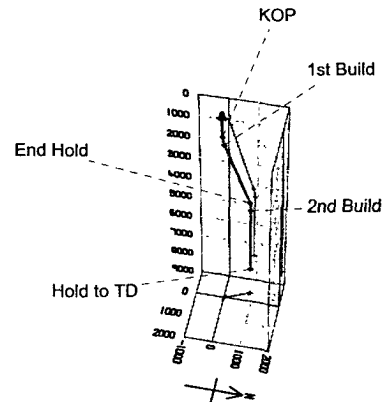
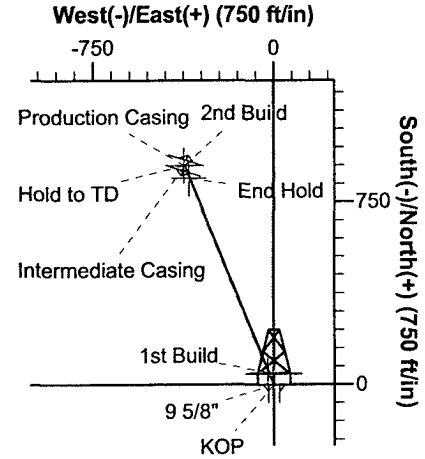
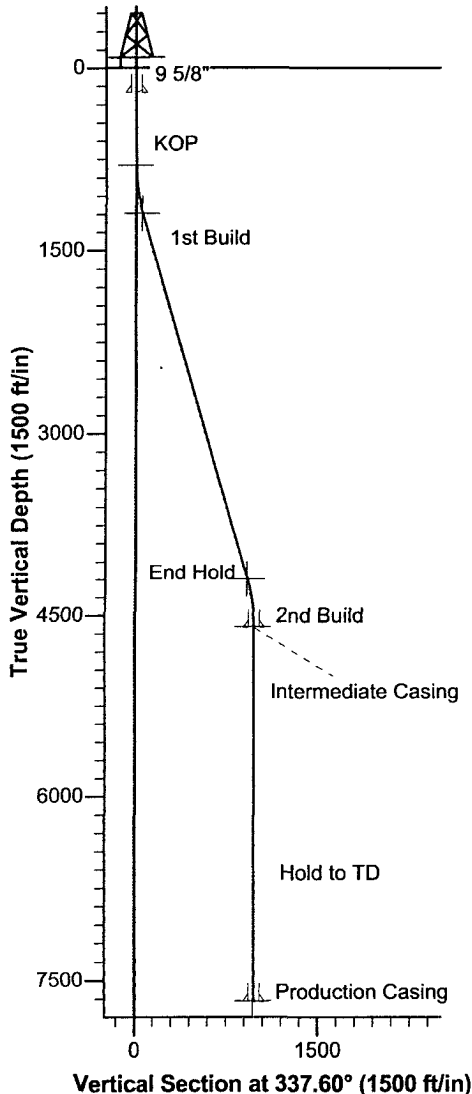
PROJECT DETAILS: SW Sec 5, T26N, 5W

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Central Zone
 System Datum: Mean Sea Level



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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	KOP
3	1200.0	16.00	337.64	1194.8	51.3	-21.1	4.00	337.64	55.5	1st Build
4	4326.3	16.00	337.55	4200.0	848.0	-349.5	0.00	-69.54	917.2	End Hold
5	4726.3	0.00	287.59	4594.8	899.3	-370.7	4.00	-179.99	972.7	2nd Build
6	7804.5	0.00	107.59	7679.8 7636	899.3	-370.7	0.00	0.00	972.7	Hold to TD



Energen

Planned Wellpath

Company: SJ BR
Project: SW Sec 5, T26N, 5W
Site: Jicarilla
Well: Jicarilla Apache Reservation
Wellbore: Jicarilla 152 W #4N
Design: Plan #1

Local Co-ordinate Reference: Well Jicarilla Apache Reservation
TVD Reference: KB @ 6586.0ft (Patterson 754)
MD Reference: KB @ 6586.0ft (Patterson 754)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Project	SW Sec 5, T26N, 5W
Map System:	US State Plane 1983
Geo Datum:	North American Datum 1983
Map Zone:	New Mexico Central Zone
System Datum:	Mean Sea Level

Site	Jicarilla				
Site Position:		Northing:	2,007,743.71 ft	Latitude:	36° 30' 44.460 N
From:	Lat/Long	Easting:	1,306,088.63 ft	Longitude:	107° 23' 15.720 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-0.68 °

Well	Jicarilla Apache Reservation					
Well Position	+N/-S	0.0 ft	Northing:	2,007,743.71 ft	Latitude:	36° 30' 44.460 N
	+E/-W	0.0 ft	Easting:	1,306,088.63 ft	Longitude:	107° 23' 15.720 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	6,571.0 ft	Ground Level:	6,571.0 ft	

Wellbore	Jicarilla 152 W #4N				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/30/2008	10.02	63.41	50,991

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	337.60

Survey Tool Program		Date	10/31/2008		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,804.5	Plan #1 (Jicarilla 152 W #4N)			

Planned Survey							
MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
100.0	100.0	0.00	0.00	0.00	0.0	0.0	0.0
200.0	200.0	0.00	0.00	0.00	0.0	0.0	0.0
300.0	300.0	0.00	0.00	0.00	0.0	0.0	0.0
400.0	400.0	0.00	0.00	0.00	0.0	0.0	0.0
500.0	500.0	0.00	0.00	0.00	0.0	0.0	0.0
600.0	600.0	0.00	0.00	0.00	0.0	0.0	0.0
700.0	700.0	0.00	0.00	0.00	0.0	0.0	0.0
800.0	800.0	0.00	0.00	0.00	0.0	0.0	0.0
KOP							
900.0	899.9	4.00	337.64	4.00	3.5	3.2	-1.3
1,000.0	999.4	8.00	337.64	4.00	13.9	12.9	-5.3

Energen

Planned Wellpath

Company: SJ BR
Project: SW Sec 5, T26N, 5W
Site: Jicarilla
Well: Jicarilla Apache Reservation
Wellbore: Jicarilla 152 W #4N
Design: Plan #1

Local Co-ordinate Reference: Well Jicarilla Apache Reservation
TVD Reference: KB @ 6586.0ft (Patterson 754)
MD Reference: KB @ 6586.0ft (Patterson 754)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
1,100.0	1,097.8	12.00	337.64	4.00	31.3	28.9	-11.9
1,200.0	1,194.8	16.00	337.64	4.00	55.5	51.3	-21.1
1st Build							
1,300.0	1,291.0	16.00	337.64	0.00	83.0	76.8	-31.6
1,400.0	1,387.1	16.00	337.64	0.00	110.6	102.3	-42.1
1,500.0	1,483.2	16.00	337.63	0.00	138.1	127.8	-52.6
1,600.0	1,579.3	16.00	337.63	0.00	165.7	153.2	-63.0
1,700.0	1,675.5	16.00	337.63	0.00	193.3	178.7	-73.5
1,800.0	1,771.6	16.00	337.63	0.00	220.8	204.2	-84.0
1,900.0	1,867.7	16.00	337.62	0.00	248.4	229.7	-94.5
2,000.0	1,963.8	16.00	337.62	0.00	275.9	255.2	-105.0
2,100.0	2,060.0	16.00	337.62	0.00	303.5	280.7	-115.5
2,200.0	2,156.1	16.00	337.61	0.00	331.1	306.2	-126.0
2,300.0	2,252.2	16.00	337.61	0.00	358.6	331.6	-136.5
2,400.0	2,348.4	16.00	337.61	0.00	386.2	357.1	-147.0
2,500.0	2,444.5	16.00	337.61	0.00	413.7	382.6	-157.5
2,600.0	2,540.6	16.00	337.60	0.00	441.3	408.1	-168.0
2,700.0	2,636.7	16.00	337.60	0.00	468.9	433.6	-178.5
2,800.0	2,732.9	16.00	337.60	0.00	496.4	459.1	-189.0
2,900.0	2,829.0	16.00	337.59	0.00	524.0	484.5	-199.5
3,000.0	2,925.1	16.00	337.59	0.00	551.6	510.0	-210.0
3,100.0	3,021.2	16.00	337.59	0.00	579.1	535.5	-220.5
3,200.0	3,117.4	16.00	337.59	0.00	606.7	561.0	-231.0
3,300.0	3,213.5	16.00	337.58	0.00	634.3	586.5	-241.5
3,400.0	3,309.6	16.00	337.58	0.00	661.8	612.0	-252.1
3,500.0	3,405.7	16.00	337.58	0.00	689.4	637.4	-262.6
3,600.0	3,501.9	16.00	337.58	0.00	717.0	662.9	-273.1
3,700.0	3,598.0	16.00	337.57	0.00	744.5	688.4	-283.6
3,800.0	3,694.1	16.00	337.57	0.00	772.1	713.9	-294.1
3,900.0	3,790.2	16.00	337.57	0.00	799.7	739.4	-304.6
4,000.0	3,886.4	16.00	337.56	0.00	827.2	764.9	-315.2
4,100.0	3,982.5	16.00	337.56	0.00	854.8	790.3	-325.7
4,200.0	4,078.6	16.00	337.56	0.00	882.4	815.8	-336.2
4,300.0	4,174.7	16.00	337.56	0.00	910.0	841.3	-346.7
4,326.3	4,200.0	16.00	337.55	0.00	917.2	848.0	-349.5
End Hold							
4,400.0	4,271.4	13.06	337.55	-4.00	935.7	865.1	-356.6
4,500.0	4,369.5	9.05	337.55	-4.00	954.9	882.8	-363.9
4,600.0	4,468.7	5.05	337.54	-4.00	967.1	894.2	-368.6
4,700.0	4,568.5	1.05	337.44	-4.00	972.5	899.1	-370.6
4,726.3	4,594.8	0.00	287.59	-4.00	972.7	899.3	-370.7
2nd Build							
4,800.0	4,668.5	0.00	287.59	0.00	972.7	899.3	-370.7
4,900.0	4,768.5	0.00	287.59	0.00	972.7	899.3	-370.7
5,000.0	4,868.5	0.00	287.59	0.00	972.7	899.3	-370.7

Planned Wellpath

Company: SJ BR
Project: SW Sec 5, T26N, 5W
Site: Jicarilla
Well: Jicarilla Apache Reservation
Wellbore: Jicarilla 152 W #4N
Design: Plan #1

Local Co-ordinate Reference:	Well Jicarilla Apache Reservation
TVD Reference:	KB @ 6586.0ft (Patterson 754)
MD Reference:	KB @ 6586.0ft (Patterson 754)
North Reference:	True
Survey Calculation Method:	Minimum Curvature
Database:	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
5,100.0	4,968.5	0.00	287.59	0.00	972.7	899.3	-370.7
5,200.0	5,068.5	0.00	287.59	0.00	972.7	899.3	-370.7
5,300.0	5,168.5	0.00	287.59	0.00	972.7	899.3	-370.7
5,400.0	5,268.5	0.00	287.59	0.00	972.7	899.3	-370.7
5,500.0	5,368.5	0.00	287.59	0.00	972.7	899.3	-370.7
5,600.0	5,468.5	0.00	287.59	0.00	972.7	899.3	-370.8
5,700.0	5,568.5	0.00	287.59	0.00	972.7	899.3	-370.8
5,800.0	5,668.5	0.00	287.59	0.00	972.8	899.3	-370.8
5,900.0	5,768.5	0.00	287.59	0.00	972.8	899.3	-370.8
6,000.0	5,868.5	0.01	287.59	0.00	972.8	899.3	-370.8
6,100.0	5,968.5	0.01	287.59	0.00	972.8	899.3	-370.8
6,200.0	6,068.5	0.01	287.59	0.00	972.8	899.3	-370.8
6,300.0	6,168.5	0.01	287.59	0.00	972.8	899.3	-370.8
6,400.0	6,268.5	0.01	287.59	0.00	972.8	899.3	-370.8
6,500.0	6,368.5	0.01	287.59	0.00	972.8	899.3	-370.8
6,600.0	6,468.5	0.01	287.59	0.00	972.8	899.3	-370.8
6,700.0	6,568.5	0.01	287.59	0.00	972.8	899.3	-370.9
6,800.0	6,668.5	0.01	287.59	0.00	972.8	899.4	-370.9
6,900.0	6,768.5	0.01	287.59	0.00	972.8	899.4	-370.9
7,000.0	6,868.5	0.01	287.59	0.00	972.8	899.4	-370.9
7,100.0	6,968.5	0.01	287.59	0.00	972.8	899.4	-370.9
7,200.0	7,068.5	0.01	287.59	0.00	972.8	899.4	-370.9
7,300.0	7,168.5	0.01	287.59	0.00	972.9	899.4	-370.9
7,400.0	7,268.5	0.01	287.59	0.00	972.9	899.4	-370.9
7,500.0	7,368.5	0.01	287.59	0.00	972.9	899.4	-370.9
7,600.0	7,468.5	0.01	287.59	0.00	972.9	899.4	-371.0
7,700.0	7,568.5	0.01	287.59	0.00	972.9	899.4	-371.0
7,804.5	7,673.6	0.00	107.59	-0.01	972.7	899.3	-370.7
Hold to TD	7,636'						

Energen

Planned Wellpath

Company: SJ BR
Project: SW Sec 5, T26N, 5W
Site: Jicarilla
Well: Jicarilla Apache Reservation
Wellbore: Jicarilla 152 W #4N
Design: Plan #1

Local Co-ordinate Reference: Well Jicarilla Apache Reservation
TVD Reference: KB @ 6586.0ft (Patterson 754)
MD Reference: KB @ 6586.0ft (Patterson 754)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
2nd Build - plan hits target - Point	0.00	0.00	4,594.8	899.3	-370.7	2,008,647.33	1,305,728.59	36° 30' 53.352 N	107° 23' 20.261 W
KOP - plan hits target - Point	0.00	0.00	800.0	0 0	0.0	2,007,743.71	1,306,088.63	36° 30' 44.460 N	107° 23' 15.720 W
1st Build - plan hits target - Point	0.00	0.00	1,194.8	51.3	-21.1	2,007,795.26	1,306,068.14	36° 30' 44.967 N	107° 23' 15.978 W
End Hold - plan hits target - Point	0.00	0.00	4,200.0	848 0	-349.5	2,008,595.78	1,305,749.18	36° 30' 52.845 N	107° 23' 20.001 W
Hold to TD - plan hits target - Point	0.00	0.00	7,673.0	899.3	-370.7	2,008,647.33	1,305,728.59	36° 30' 53.352 N	107° 23' 20.261 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
200.0	200.0	9 5/8"	9-5/8	12-1/4
4,731.5	4,600.0	Intermediate Casing	7	8-3/4
7,804.5	7,673.0	Production Casing	4-1/2	7-7/8

7636

Checked By: _____ Approved By: _____ Date: _____