Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007

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

5. Lease Serial No.
NM 59704

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Carracas Canyon #5
Unit 36A

2. Name of Operator
Energen Resources Corporation

9. API Well No.
30-039-26477

3a. Address
2198 Bloomfield Highway, Farmington, NM 87401

3b. Phone No. *(include area code)*
505.325.6800

10. Field and Pool, or Exploratory Area
Basin Fruitland Coal

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
1450' FNL, 910' FWL NW/4
(E) S36, T32N, R5W

11. County or Parish, State
Rio Arriba NM

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 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 final site is ready for final inspection.)

Energen Resources proposes a recompletion of the Carracas Canyon Unit 36A 35 in the Basin Fruitland Coal by drilling a horizontal lateral off the existing vertical wellbore as indicated on the attached C-102 and directional wellplan. A whipstock will be set at 3393' +/- (TVD) and a window milled in the existing 5 1/2" casing. The lateral will be drilled to 4559' (MD), 3653' (TVD). This will be an open hole completion. 2 3/8" tubing will be landed at 3711' (TVD) in the 5 1/2" casing.

RECEIVED
2006 MAY 5 PM 1 33
070 FARMINGTON NM

JUN 2006
RECEIVED
OIL CONS. DIV.
DIST. 3

SEE ATTACHED FOR CONDITIONS OF APPROVAL

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

HOLD C104 FOR directional survey

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

Title
Drilling Engineer

Date 5/5/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Matt Walker

Title PETE ENG

Date 6-12-06

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 - FFO

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NMOCD

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 & Natural Resources

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

Form C-102
Revised June 10, 2003

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

[X] AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-26477	71629	Basin Fruitland Coal

[4] Property Code	[5] Property Name	[6] Well Number
	Carracas Canyon Unit 36A	#5

[7] OGRID No.	[8] Operator Name	[9] Elevation
162928	Energen Resources Corporation	6902'

[10] Surface Location

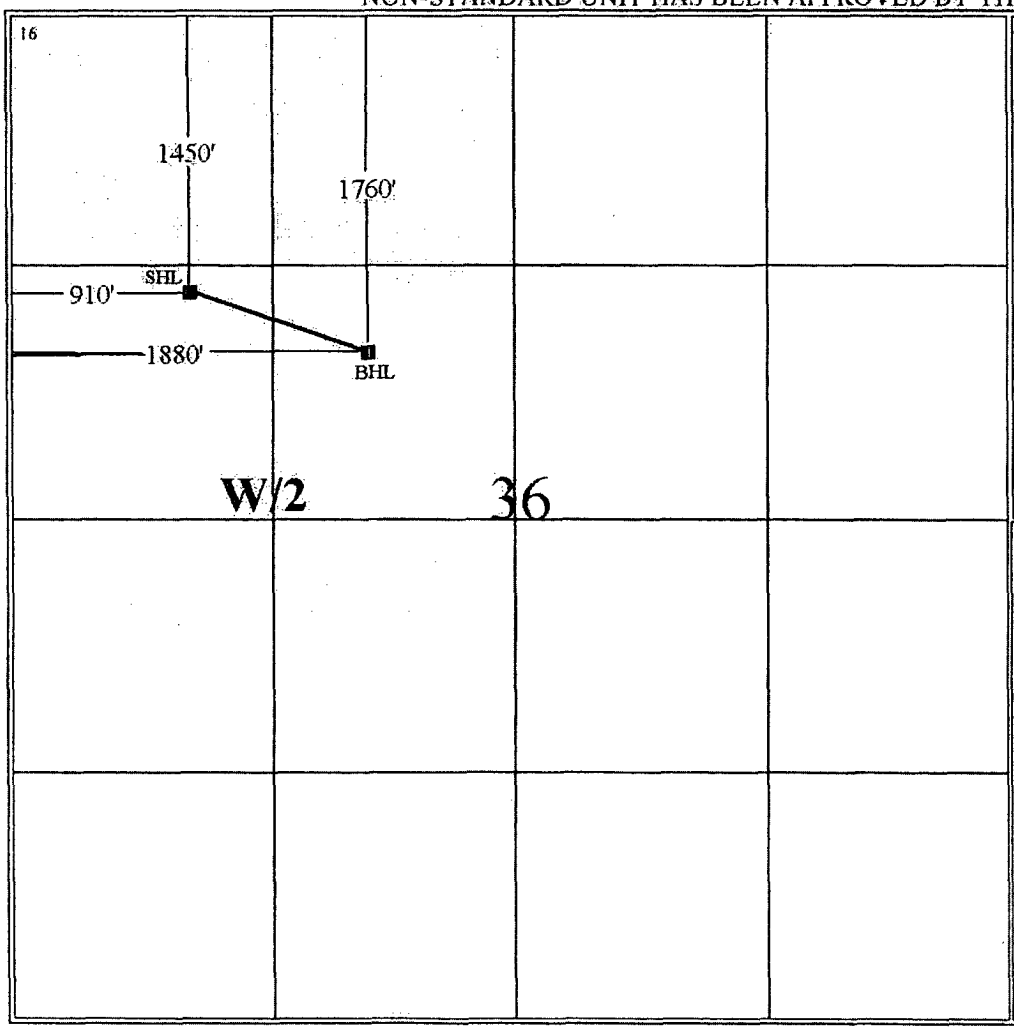
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	36	32N	5W		1450	fnl	910	fwl	Rio Arriba

[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
F	36	32N	5W		1760	fnl	1880	fwl	Rio Arriba

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
W/2			

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



[17] OPERATOR CERTIFICATION

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

Signature

Nathan Smith
Printed Name

Drilling Engineer
Title and E-mail Address

4/26/06
Date

[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.

September 1, 1988
Date of Survey
Signature and Seal of Professional Surveyer:

Original survey with footages of 1450' fnl and 910' fwl conducted and recorded by Edgar L. Risenhoover on 9/1/88.

NM Surveyor #5979
Certificate Number

Energen Resources Corporation

PATHFINDER

Field: Carracas Canyon
Site: Carracas Canyon Unit 36 A #5
Well: Carracas Canyon Unit 36 A #5
Wellpath: Original Hole
Plan: Plan #1 5-4-06

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Carracas Canyon Unit 36 A #5	0.00	0.00	0.00	0.00	30°59'24.512N	109°25'44.094W	N/A

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	107.72	0.00	0.00	0.00	0.00	0.00	0.00	
2	3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	0.00	
3	3801.66	90.00	107.72	3653.00	-79.28	248.07	22.00	107.72	260.44	
4	4559.55	90.00	107.72	3653.00	-310.00	970.00	0.00	0.00	1018.33	PBHL

WELLPATH DETAILS

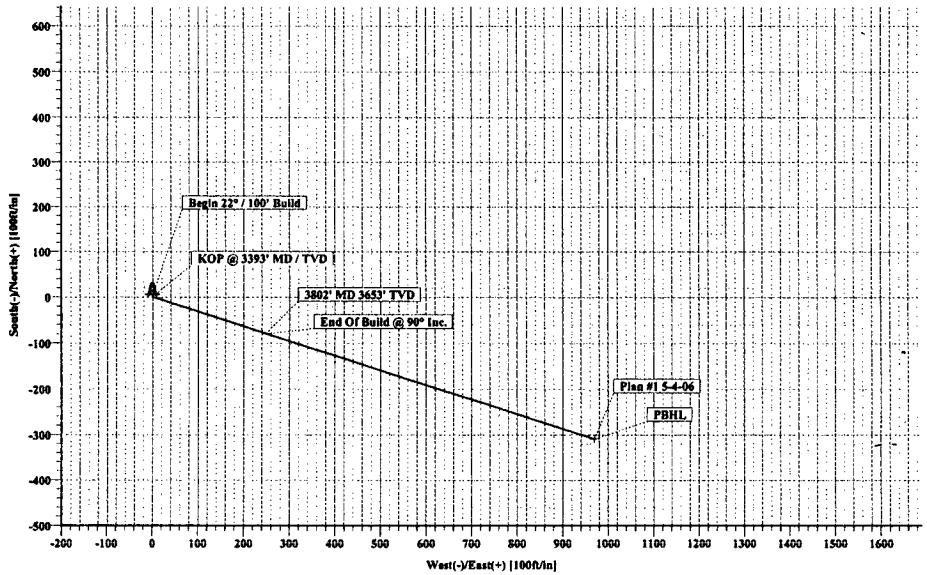
Original Hole

Rig:
Ref. Datum: Mean Sea Level 0.00ft

V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
107.72°	0.00	0.00	0.00

ANNOTATIONS

No.	TVD	MD	Annotation
1	3393.00	3393.00	KOP @ 3393' MD / TVD
2	3393.00	3393.00	Begin 22° / 100' Build
3	3653.00	3802.00	End Of Build @ 90° Inc.
4	3653.00	3802.00	3802' MD 3653' TVD



COMPANY DETAILS

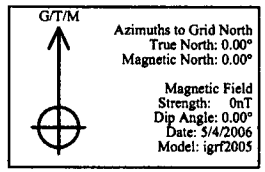
Energen Resources Corporation
2198 Bloomfield Hwy
Farmington, NM 87401

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

SITE DETAILS

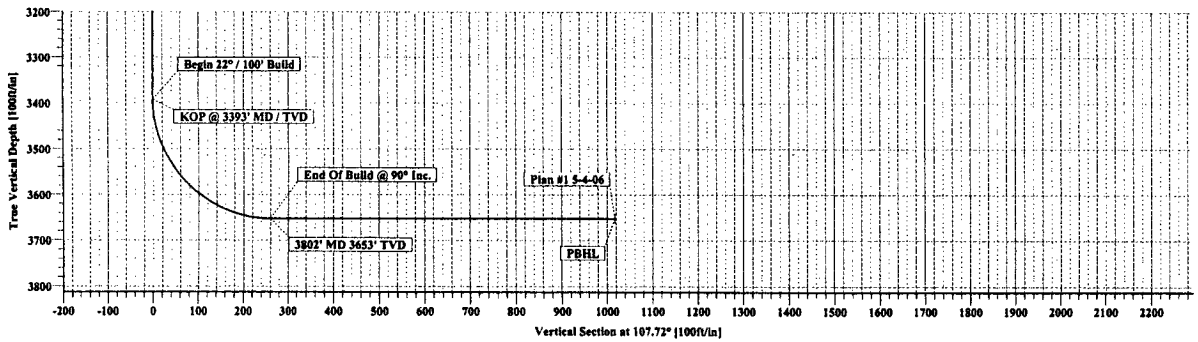
Carracas Canyon Unit 36 A #5
Rio Arriba County, New Mexico
1450' FNL 910' FWL Sec. 36; T32N; R5W

Ground Level: 6902.00
Positional Uncertainty: 0.00
Convergence: 0.00



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 5/4/2006
Model: igrf2005



WELLPATH DETAILS

Original Hole

Rig:
Ref. Datum: Mean Sea Level 0.00ft

V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
107.72°	0.00	0.00	0.00

Pathfinder Energy
Planning Report - Geographic

Company:	Energen Resources Corporation	**Date:** 5/4/2006	**Time:** 15:36:53	**Page:**	1
Field:	Carracas Canyon	**Co-ordinate(NE) Reference:**	Well: Carracas Canyon Unit 36 A #5		
Site:	Carracas Canyon Unit 36 A #5	**Vertical (TVD) Reference:**	System: Mean Sea Level		
Well:	Carracas Canyon Unit 36 A #5	**Section (VS) Reference:**	Well (0.00N,0.00E,107.72Azi)		
Wellpath:	Original Hole	**Plan:**	Plan #1 5-4-06		

Field: Carracas Canyon
Rio Arriba County, NM

Map System:	US State Plane Coordinate System 1927	**Map Zone:**	New Mexico, Western Zone
Geo Datum:	NAD27 (Clarke 1866)	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf2005

Site: Carracas Canyon Unit 36 A #5
Rio Arriba County, New Mexico
1450' FNL 910' FWL Sec. 36; T32N; R5W

Site Position:		**Northing:**	ft	**Latitude:**	
From:	Lease Line	**Easting:**	ft	**Longitude:**	
Position Uncertainty:	0.00 ft			**North Reference:**	Grid
Ground Level:	6902.00 ft			**Grid Convergence:**	0.00 deg

Well: Carracas Canyon Unit 36 A #5 **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	0.00 ft	**Latitude:**	30	59	24.512	N
	+E/-W	0.00 ft	**Easting :**	0.00 ft	**Longitude:**	109	25	44.094	W
Position Uncertainty:		0.00 ft							

Wellpath: Original Hole **Drilled From:** Surface
Tie-on Depth: 0.00 ft
Current Datum: Mean Sea Level **Height** 0.00 ft **Above System Datum:** Mean Sea Level
Magnetic Data: 5/4/2006 **Declination:** 0.00 deg
Field Strength: 0 nT **Mag Dip Angle:** 0.00 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	107.72

Plan: Plan #1 5-4-06 **Date Composed:** 5/4/2006
Version: 1
Principal: Yes **Tied-to:** From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	107.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	0.00	0.00	
3801.66	90.00	107.72	3653.00	-79.28	248.07	22.00	22.00	0.00	107.72	
4559.55	90.00	107.72	3653.00	-310.00	970.00	0.00	0.00	0.00	0.00	PBHL

Section 1 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.00	0.00	107.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3200.00	0.00	107.72	3200.00	0.00	0.00	0.00	0.00	0.00	0.00	107.72
3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	0.00	0.00	107.72

Section 2 : Start Build 22.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3393.00	0.10	107.72	3393.00	0.00	0.00	0.00	22.00	22.00	0.00	0.00
3400.00	1.64	107.72	3400.00	-0.03	0.10	0.11	22.00	22.00	0.00	0.00
3600.00	45.64	107.72	3578.75	-23.85	74.62	78.33	22.00	22.00	0.00	0.00
3800.00	89.64	107.72	3652.99	-78.78	246.50	258.78	22.00	22.00	0.00	0.00
3801.66	90.00	107.72	3653.00	-79.28	248.07	260.44	22.00	22.00	0.00	0.00

Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3802.00	90.00	107.72	3653.00	-79.39	248.40	260.78	0.00	0.00	0.00	0.00
4000.00	90.00	107.72	3653.00	-139.66	437.01	458.78	0.00	0.00	0.00	0.00

Pathfinder Energy
Planning Report - Geographic

Company:	Energen Resources Corporation	**Date:** 5/4/2006 **Time:** 15:36:53	**Page:** 2
Field:	Carracas Canyon	**Co-ordinate(NE) Reference:**	Well: Carracas Canyon Unit 36 A #5
Site:	Carracas Canyon Unit 36 A #5	**Vertical (TVD) Reference:**	System: Mean Sea Level
Well:	Carracas Canyon Unit 36 A #5	**Section (VS) Reference:**	Well (0.00N,0.00E,107.72Azi)
Wellpath:	Original Hole	**Plan:**	Plan #1 5-4-06

Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
4200.00	90.00	107.72	3653.00	-200.55	627.51	658.78	0.00	0.00	0.00	0.00
4400.00	90.00	107.72	3653.00	-261.43	818.02	858.78	0.00	0.00	0.00	0.00
4559.55	90.00	107.72	3653.00	-310.00	970.00	1018.33	0.00	0.00	0.00	0.00

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<— Latitude —> Deg Min Sec	<— Longitude —> Deg Min Sec
3200.00	0.00	107.72	3200.00	0.00	0.00	0.00	0.00	30 59 24.512 N	109 25 44.094 W
3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	30 59 24.512 N	109 25 44.094 W
3393.00	0.10	107.72	3393.00	0.00	0.00	0.00	0.00	30 59 24.512 N	109 25 44.094 W
3400.00	1.64	107.72	3400.00	-0.03	0.10	-0.03	0.10	30 59 24.512 N	109 25 44.093 W
3600.00	45.64	107.72	3578.75	-23.85	74.62	-23.85	74.62	30 59 24.287 N	109 25 43.233 W
3800.00	89.64	107.72	3652.99	-78.78	246.50	-78.78	246.50	30 59 23.768 N	109 25 41.250 W
3801.66	90.00	107.72	3653.00	-79.28	248.07	-79.28	248.07	30 59 23.763 N	109 25 41.232 W
3802.00	90.00	107.72	3653.00	-79.39	248.40	-79.39	248.40	30 59 23.762 N	109 25 41.228 W
4000.00	90.00	107.72	3653.00	-139.66	437.01	-139.66	437.01	30 59 23.192 N	109 25 39.052 W
4200.00	90.00	107.72	3653.00	-200.55	627.51	-200.55	627.51	30 59 22.617 N	109 25 36.854 W
4400.00	90.00	107.72	3653.00	-261.43	818.02	-261.43	818.02	30 59 22.041 N	109 25 34.656 W
4559.55	90.00	107.72	3653.00	-310.00	970.00	-310.00	970.00	30 59 21.582 N	109 25 32.903 W

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<— Latitude —> Deg Min Sec	<— Longitude —> Deg Min Sec
PBHL			3653.00	-310.00	970.00	-310.00	970.00	30 59 21.582 N	109 25 32.903 W

Annotation

MD ft	TVD ft	
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3802.00	3653.00	3802' MD 3653' TVD

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(April 2004)

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OMB NO. 1004-0137
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1450' FNL, 910' FWL NW/4
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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
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RECEIVED
070 FARMINGTON NM
2006 MAY 5 AM 11 35

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

Title
Drilling Engineer

Date 5/5/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Mike A. Acton

Title DFA

Date 6/6/06

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

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State of New Mexico
Energy, Minerals & Natural Resources

OIL CONSERVATION DIVISION
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Form C-102
Revised June 10, 2003

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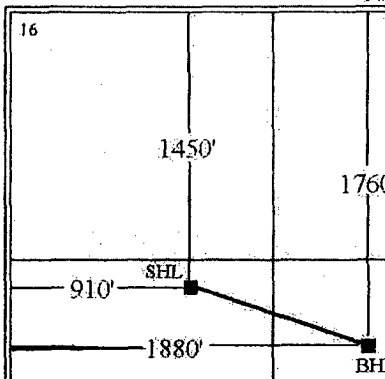

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Signature

Nathan Smith
Printed Name

Drilling Engineer
Title and E-mail Address

4/26/06
Date

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Date of Survey
Signature and Seal of Professional Surveyer:

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NM Surveyor #5979
Certificate Number

Energen Resources Corporation

PATHFINDER

Field: Carracas Canyon
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Well: Carracas Canyon Unit 36 A #5
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WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Carracas Canyon Unit 36 A #5	0.00	0.00	0.00	0.00	30°59'24.512N	109°25'44.094W	N/A

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	107.72	0.00	0.00	0.00	0.00	0.00	0.00	
2	3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	0.00	
3	3801.66	90.00	107.72	3653.00	-79.28	248.07	22.00	107.72	260.44	
4	4559.55	90.00	107.72	3653.00	-310.00	970.00	0.00	0.00	1018.33	PBHL

WELLPATH DETAILS

Original Hole

Rig:			
Ref. Datum:	Mean Sea Level		0.00ft
V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
107.72°	0.00	0.00	0.00

ANNOTATIONS

No.	TVD	MD	Annotation
1	3393.00	3393.00	KOP @ 3393' MD / TVD
2	3393.00	3393.00	Begin 22° / 100' Build
3	3653.00	3802.00	End Of Build @ 90° Inc.
4	3653.00	3802.00	3802' MD 3653' TVD

COMPANY DETAILS

Energen Resources Corporation
2198 Bloomfield Hwy
Farmington, NM 87401

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

SITE DETAILS

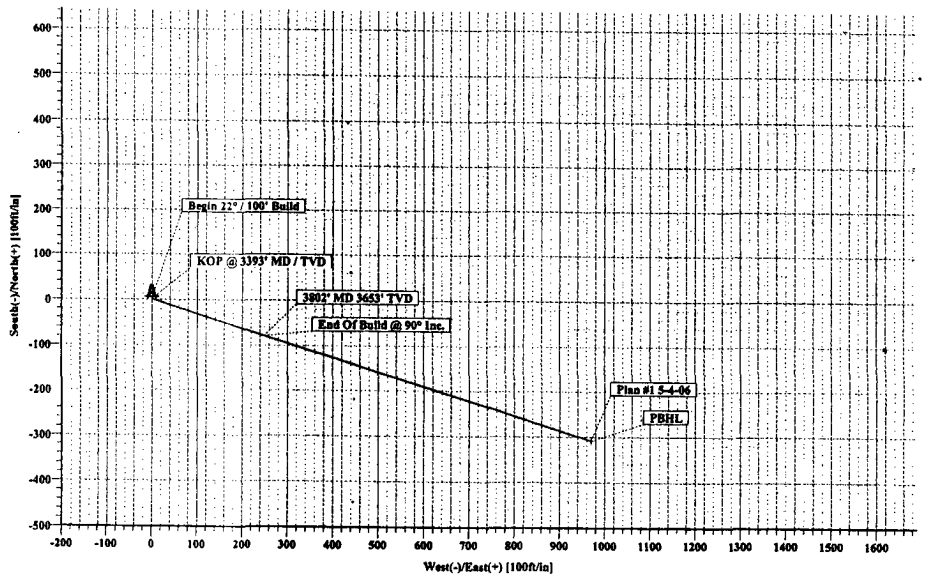
Carracas Canyon Unit 36 A #5
Rio Arriba County, New Mexico
1450' FNL 910' FWL Sec. 36; T32N; R5W

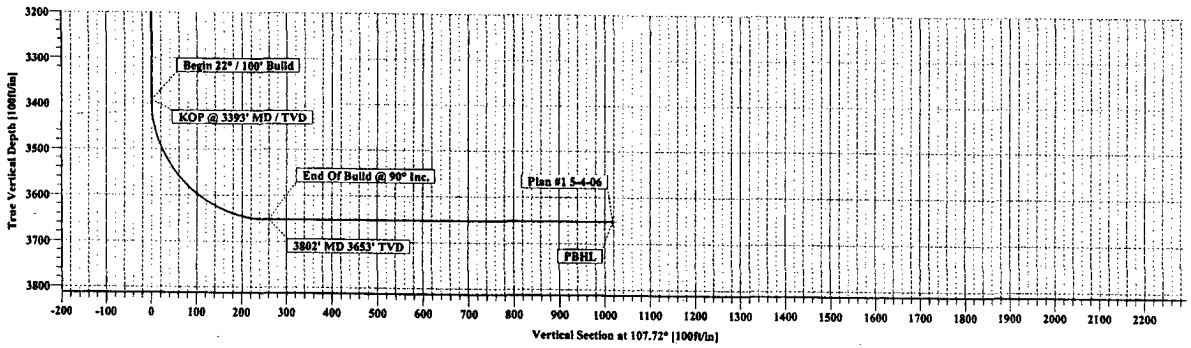
Ground Level: 6902.00
Positional Uncertainty: 0.00
Convergence: 0.00

G/T/M

Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 5/4/2006
Model: igrf2005





WELLPATH DETAILS

Original Hole

Rig:			
Ref. Datum:	Mean Sea Level		0.00ft
V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
107.72°	0.00	0.00	0.00

Pathfinder Energy
Planning Report - Geographic

Company:	Energen Resources Corporation	**Date:** 5/4/2006	**Time:** 15:36:53	**Page:**	1
Field:	Carracas Canyon	**Co-ordinate(NE) Reference:**	Well: Carracas Canyon Unit 36 A #5		
Site:	Carracas Canyon Unit 36 A #5	**Vertical (TVD) Reference:**	System: Mean Sea Level		
Well:	Carracas Canyon Unit 36 A #5	**Section (VS) Reference:**	Well (0.00N,0.00E,107.72Azi)		
Wellpath:	Original Hole	**Plan:**	Plan #1 5-4-06		

Field: Carracas Canyon
Rio Arriba County, NM

Map System:	US State Plane Coordinate System 1927	**Map Zone:**	New Mexico, Western Zone
Geo Datum:	NAD27 (Clarke 1866)	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf2005

Site: Carracas Canyon Unit 36 A #5
Rio Arriba County, New Mexico
1450' FNL 910' FWL Sec. 36; T32N; R5W

Site Position:		**Northing:**	ft	**Latitude:**	
From:	Lease Line	**Easting:**	ft	**Longitude:**	
Position Uncertainty:	0.00 ft			**North Reference:**	Grid
Ground Level:	6902.00 ft			**Grid Convergence:**	0.00 deg

Well: Carracas Canyon Unit 36 A #5 **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	0.00 ft	**Latitude:**	30 59 24.512 N
	+E/-W	0.00 ft	**Easting :**	0.00 ft	**Longitude:**	109 25 44.094 W
Position Uncertainty:		0.00 ft				

Wellpath:	Original Hole			**Drilled From:**	Surface
				Tie-on Depth:	0.00 ft
Current Datum:	Mean Sea Level	**Height**	0.00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	5/4/2006			**Declination:**	0.00 deg
Field Strength:	0 nT			**Mag Dip Angle:**	0.00 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	107.72

Plan:	Plan #1 5-4-06	**Date Composed:**	5/4/2006
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	107.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	0.00	0.00	
3801.66	90.00	107.72	3653.00	-79.28	248.07	22.00	22.00	0.00	107.72	
4559.55	90.00	107.72	3653.00	-310.00	970.00	0.00	0.00	0.00	0.00	PBHL

Section 1 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.00	0.00	107.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3200.00	0.00	107.72	3200.00	0.00	0.00	0.00	0.00	0.00	0.00	107.72
3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	0.00	0.00	107.72

Section 2 : Start Build 22.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3393.00	0.10	107.72	3393.00	0.00	0.00	0.00	22.00	22.00	0.00	0.00
3400.00	1.64	107.72	3400.00	-0.03	0.10	0.11	22.00	22.00	0.00	0.00
3600.00	45.64	107.72	3578.75	-23.85	74.62	78.33	22.00	22.00	0.00	0.00
3800.00	89.64	107.72	3652.99	-78.78	246.50	258.78	22.00	22.00	0.00	0.00
3801.66	90.00	107.72	3653.00	-79.28	248.07	260.44	22.00	22.00	0.00	0.00

Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3802.00	90.00	107.72	3653.00	-79.39	248.40	260.78	0.00	0.00	0.00	0.00
4000.00	90.00	107.72	3653.00	-139.66	437.01	458.78	0.00	0.00	0.00	0.00

Pathfinder Energy
Planning Report - Geographic

Company:	Energen Resources Corporation	**Date:** 5/4/2006	**Time:** 15:36:53	**Page:**	2
Field:	Carracas Canyon	**Co-ordinate(NE) Reference:**	Well: Carracas Canyon Unit 36 A #5		
Site:	Carracas Canyon Unit 36 A #5	**Vertical (TVD) Reference:**	System: Mean Sea Level		
Well:	Carracas Canyon Unit 36 A #5	**Section (VS) Reference:**	Well (0.00N,0.00E,107.72Azi)		
Wellpath:	Original Hole	**Plan:**	Plan #1 5-4-06		

Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
4200.00	90.00	107.72	3653.00	-200.55	627.51	658.78	0.00	0.00	0.00	0.00
4400.00	90.00	107.72	3653.00	-261.43	818.02	858.78	0.00	0.00	0.00	0.00
4559.55	90.00	107.72	3653.00	-310.00	970.00	1018.33	0.00	0.00	0.00	0.00

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<— Latitude —> Deg Min Sec	<— Longitude —> Deg Min Sec
3200.00	0.00	107.72	3200.00	0.00	0.00	0.00	0.00	30 59 24.512 N	109 25 44.094 W
3392.56	0.00	107.72	3392.56	0.00	0.00	0.00	0.00	30 59 24.512 N	109 25 44.094 W
3393.00	0.10	107.72	3393.00	0.00	0.00	0.00	0.00	30 59 24.512 N	109 25 44.094 W
3400.00	1.64	107.72	3400.00	-0.03	0.10	-0.03	0.10	30 59 24.512 N	109 25 44.093 W
3600.00	45.64	107.72	3578.75	-23.85	74.62	-23.85	74.62	30 59 24.287 N	109 25 43.233 W
3800.00	89.64	107.72	3652.99	-78.78	246.50	-78.78	246.50	30 59 23.768 N	109 25 41.250 W
3801.66	90.00	107.72	3653.00	-79.28	248.07	-79.28	248.07	30 59 23.763 N	109 25 41.232 W
3802.00	90.00	107.72	3653.00	-79.39	248.40	-79.39	248.40	30 59 23.762 N	109 25 41.228 W
4000.00	90.00	107.72	3653.00	-139.66	437.01	-139.66	437.01	30 59 23.192 N	109 25 39.052 W
4200.00	90.00	107.72	3653.00	-200.55	627.51	-200.55	627.51	30 59 22.617 N	109 25 36.854 W
4400.00	90.00	107.72	3653.00	-261.43	818.02	-261.43	818.02	30 59 22.041 N	109 25 34.656 W
4559.55	90.00	107.72	3653.00	-310.00	970.00	-310.00	970.00	30 59 21.582 N	109 25 32.903 W

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<— Latitude —> Deg Min Sec	<— Longitude —> Deg Min Sec
PBHL			3653.00	-310.00	970.00	-310.00	970.00	30 59 21.582 N	109 25 32.903 W

Annotation

MD ft	TVD ft	
3393.00	3393.00	KOP @ 3393' MD / TVD
3393.00	3393.00	Begin 22° / 100' Build
3802.00	3653.00	End Of Build @ 90° Inc.
3802.00	3653.00	3802' MD 3653' TVD

Energen Resources Corporation
Carracas Canyon Unit 36A #5 Recompletion
T.32N.,R.5W. N.M.P.M. Sec. 36 1450'FNL/910'FWL
Bottom Hole Location 1760'FNL/1880'FWL

JICARILLA RANGER DISTRICT
CARSON NATIONAL FOREST

CONDITIONS OF APPROVAL
FOR
Sundry Notice to Recomplete
With a Horizontal Lateral

June 2006

The following conditions of approval will apply to this well on the Jicarilla Ranger District of the Carson National Forest.

A. Construction and Drilling Operation

1. Surface Disturbance

All surface Disturbance will be kept to the existing well pad and access road.

2. Topsoil Stockpile

A. **The top 4 to 6 inches of soil materials shall be stripped from the permitted area and be deposited in storage piles apart from other excavated material. It will be kept separate and protected.** If the ground is too wet to remove the soil and keep it separate and protected, work shall cease. After the desired amount of material has been removed, and at reclamation, the resulting pad has been trimmed and smoothed as required, the stored soil shall be evenly spread over exposed subsoil to the extent that

may be practicable and shall be revegetated. Gravel will be utilized to stabilize the pad area.

B. **When workover pits and other significant surface disturbance is required during production, soil that was previously salvaged and redistributed MUST be stripped off areas to be redisturbed and kept separate and protected.** After the workover or other operation that required the surface disturbance is completed, the stripped topsoil must be evenly spread over the exposed subsoil and shall be revegetated.

3. Reserve Pit

A. Large vegetation such as sagebrush, pinon, juniper, oak, and browse species will not be incorporated in the pit walls. Sagebrush, stumps, and other slash must be disposed of. They may be buried in the reserve pit when it is filled in .

B. The reserve pit will have a minimum of one-half the total depth below the original ground surface at the lowest point within the pit and will be designed to prevent the collection of surface runoff.

C. All drilling and production pits will be constructed so as not to break, or allow discharge of liquids. The bottom of the reserve pit shall not be in fill material. Pits are not to be located in natural drainages. Pit walls are to be "walked down" by a crawler-type tractor and stabilized prior to usage. All pits will be lined with an impervious material at least 12 mil thick and/or 200 psi resistance. Plastic material used to line pits must be removed to below-ground level before pits are covered. Pit walls are to be "walked down" by a crawler-type tractor and stabilized prior to usage.

D. The fluid level, within the pit, is to be maintained at least two (2) feet below the lowest point of the pit wall. The reserve pit will be backfilled and reclaimed when dry. In addition, stockpiled material will be evenly distributed and landscaped to the surrounding topography over all areas on the pad which are not needed for production.

4. Fencing

All pits will be fenced with woven wire. A top rail or barbs will be utilized. Fence the reserve pit with fencing on three sides during the drilling phase and the fourth side immediately after the rig is removed. **Corner "H" bracing must be constructed at all corners.**

5. Equipment and Vehicles

A. Road building, pad construction, drilling, and completion activities are permitted from April 1 through October 31 of each year. Approval of activities between November 1 and March 31 may be granted on a case by case basis by permission from the Jicarilla District Ranger.

B. All equipment and vehicles must be confined to the access road and pad. The Jicarilla Ranger District does not allow off-road vehicle use unless specifically authorized.

C. Driving on Forest Roads will be done in a responsible and safe manner, or be in violation of 36CFR 261.54(f).

6. Sanitation

The operation and maintenance of all sanitation, food service, and water-supply methods, systems, and facilities shall comply with the standards of the local and state authorities and the Federal Water Pollution Control Administration of the United States. The operator shall dispose of all garbage and refuse in a place and manner specified by the Forest Officer in charge. Sewage will be confined to a chemically-treated portable unit on location. Burying of sewage will not be allowed.

7. Refuse Disposal

The operator shall dispose of refuse resulting from this use, including waste materials, garbage, and rubbish of all kinds in an approved sanitary landfill or appropriate recycling center. A trash cage must be on location throughout all drilling, testing and completion activities. Burying trash or trash in the reserve pit will not be allowed. Burning of trash will not be allowed.

8. Rat and Mouse Hole

For safety purposes, the rat/mouse hole must be filled and compacted immediately after the rig is removed.

9. Hydrocarbons and Produced Water

Produced hydrocarbons shall be put in tanks on location during completion work, and not allowed into the reserve pit. If produced hydrocarbons, or machinery oil find their way into a reserve pit, they shall be removed immediately. Produced water will be put in onsite tanks or within lined reserve pit during completion work. Under no circumstances will pits be cut and drained. No produced water is to be released from the storage tanks but is to be physically removed from the site, for proper disposal.

10. Ground Water

All state permits are required prior to hauling water. State procedures concerning disposal of saltwater will be followed. Fiberglass tanks or metal tank battery will be used to store saltwater prior to disposal.

11. Spills

The operator shall inform the Forest Service immediately of the nature, time, date, location, and action taken for any oil or hazardous substance spill (including salt water). The operator shall list all hazardous substances to be used by the drilling operator, and provide this list to the Forest Service.

12. Explosives

Should the use of explosives be required during construction, the operator shall comply with all applicable local, State, and Federal laws, regulations and requirements involving the storage, handling, preparation and use thereof. Prior to any blasting, the District Ranger will be notified and an approved blasting plan will be prepared.

13. Company Signs

Drilling company signs will be allowed on National Forest System lands during the construction and drilling phase. These signs are not to be attached to any trees by any means.

14. Archaeological-Paleontological Discoveries

A. The operator will employ an archaeologist permitted by the Forest Service to conduct an archaeological survey on any lands which may be disturbed.

B. The operator will not commence construction until an approved heritage resource clearance has been received by the Forest Service office in Bloomfield, and the operator will abide by all of the stipulations contained in the clearance.

C. If, prior to or during excavation work, items of archaeological, paleontological, or historic value are reported or discovered, or an unknown deposit of such items is disturbed, the operator will immediately cease excavation. The operator will then notify the Forest Service immediately and will not resume excavation until written approval is given by the authorized officer.

D. If it is deemed necessary, the Forest Service may require the operator to perform recovery, excavation, and preservation of the site and its artifacts at the operators expense. At the option of the Forest Service, this authorization (permit to drill) may be terminated

with no liability by the United States when such termination is deemed necessary or to preserve or protect archaeological, paleontological, or historic sites and artifacts.

E. The operator shall be responsible for the protection of all identified cultural resources within the area which may be affected by their actions. In addition, the operator shall be liable for all damage or injury to the identified cultural resources caused by their actions.

15. Threatened, Endangered or Sensitive Species

A survey for threatened, endangered or sensitive species shall be conducted by the Forest Service or by an approved surveyor, prior to any construction activities. The Forest Service will indicate which species require surveys.

16. Slope Ratios

The final cut slope shall not exceed a 4:1 ratio. The final fill slope shall not exceed a 4:1 ratio. To obtain this ratio, pits and slopes shall be backsloped into the pad upon completion of drilling and prior to setting production equipment. Construction slopes can be much steeper during drilling, but will be contoured to the above final slopes upon pit reclamation.

17. Pipelines

All areas disturbed, due to the burial of any gas/oil pipelines, will need to be revegetated and silt fencing installed. The only exception shall be a pipeline that is placed directly into a roadway. The seed mixture is identified in C.2 of this document, and will be done prior to silt fencing installation. Silt fencing will be installed in areas where active erosion is occurring or is likely to occur. Mulching or matting may be required for areas determined to be particularly difficult to revegetate. The top 6 inches of topsoil shall be stripped over the trench of each pipeline and protected. The topsoil shall placed on top during reclamation and will not be used as pipe padding. Utilize Forest Roads as working surface to minimize disturbance for installation of pipeline.

18. Vegetation Removal

A. No vegetation removal is necessary for this project. If any is removed, the Forest Service will indicate the methods of disposal for any timber and fuelwood.

B. Willow, cottonwood, aspen, and Douglas fir tree species will not be destroyed whenever possible.

C. Tree stumps, branches, and tops, uprooted sagebrush, and other slash must be disposed of. The preferred method is to place the slash back on seeded areas to help provide favorable micoclimates for revegetation. Placing the slash back may have to be by hand or by machinery such that seeded areas are not damaged. It may be buried in the reserve pit when the pit is filled in. It may be chipped and broadcast or otherwise broken down and spread out. Burning of slash will not be allowed.

19. Notification

The operator or his contractor will contact the Forest Service (632-2956) at least 48 hours prior to beginning of pad construction activities and prior to rig movement across Forest lands. **Contact the Forest Service Minerals Technician at 505-632-2956 ext. 240 prior to construction. A preconstruction meeting may need to be scheduled with the Forest Service Minerals Technician. Flagging and lath shall be in place and in good condition to identify the well pad and access road prior to the preconstruction meeting. Where archeological fencing is required the archeological fencing should be in place prior to the preconstruction meeting.** The operator will contact the Forest Service and the BLM (599-8900) prior to drilling activity and prior to fluid pumping from the reserve pit.

B. Producing Well

1. Production Facilities

A. Production facilities (including dikes) will be placed on cut and located a minimum of 10 feet from the toe of the backcut.

B. All pits, tanks, and exhaust vents will have devices to prevent bird mortalities to comply with the Migratory Bird Protection Regulations.

C. Due to the cumulative nature of gas extraction activities, a "residential style" muffler is required on production engines to reduce noise levels.

D. This permit is contingent on compliance with the New Mexico Environmental Department, Air Quality Bureau's directive that new engines have NOx emissions limited to 2 grams per horsepower hour.

2. Spacing of Facilities

Maintain a minimum distance of seventy five (75) feet between individual production facilities (treater/separator, storage tanks, well head/pumpjack, etc.).

3. Diking

All storage facilities (including salt water tanks) must be diked. The dikes must be constructed of compacted subsoil, be impervious, be sufficient in size to contain the storage capacity of the facility being diked and be independent of the backcut. The dike must be covered with a layer of gravel to alleviate wind erosion. The loadout line must remain inside the dike, except where a production pit tank is located below ground level. A "walkover" stairstep must be provided to allow access without causing deterioration of the dike.

4. Wind Erosion

Gravel will be placed around the bases of well/meter buildings and on dikes to alleviate wind erosion.

5. Roads & Surfacing

A. No new access road is needed for this project. However, the existing access road may need updgrading to meet current standards. During drilling, completion, and production operations, the operator will be responsible for road maintenance from pavement to well location, including participating in the Carson Roads Committee for maintenance of commonly used roads as well as maintenance of lease roads specific to this well. **All roads on Forest Service lands shall be designed, constructed, and maintained to Gold Book Standards (Surface Operating Standards for Oil and Gas Development prepared by the BLM/FS Rocky Mountain Coordinating committee, 1989 and any revisions thereto).**

B. No gravel or other related minerals from new or existing pits on Federal land will be used in construction of roads, well sites, etc., without prior approval from the Forest Service.

C. Water bars and culverts will be constructed and maintained in working condition on the access road to the well location and conform to surface management specifications. The maximum slope distance between water bars will be:

% Slope	Slope Distance
Less than 1%	400 feet
1% - 5%	300 feet
5% - 15%	200 feet
15% - 25%	100 feet
Greater than 25%	50 feet

D. When the access road is graded, water bars will be left in the road or replaced immediately upon completion of grading. The access road must be crowned and ditched, drained, and surfaced as required. No new unauthorized road(s) (short cut roads) are authorized.

E. Prior to crossing any fence located on federal land, or any fence between Federal land and private land, the operator shall contact the Minerals Staff at the Jicarilla Ranger Station. All cut fences are to be tied to braces prior to cutting.

F. Any cut fence openings will be protected as necessary during construction to prevent the escape of livestock. A temporary closure will be installed on all cut fences the same day the fence is cut. A twelve-foot gate will be installed adjacent to all new cattleguards.

G. All cattleguards must have wings installed on both ends to prevent livestock from stepping around the ends. Cattleguards must be at least 8 feet wide, the length is left to the discretion of the operator. They must be set on concrete or pressure treated wood bases to prevent them from sinking. A 12 foot gate must be installed between the cattleguard and brace assemblies on whichever side of the cattleguard is most convenient. If the gate is made of wire, it must have at least four horizontal strands of barbed wire, with at least four 3 inch diameter vertical wood stays evenly spaced. When the gate is closed the wires must be taut.

H. Produced water will either be piped or trucked. If trucked, operator will be responsible for road maintenance and/or surfacing from the well location to pavement. Maintenance will consist of maintenance of cattleguards, fences, culverts, and the actual road surface. The operator will insure road maintenance is sufficient to insure drainage structures work at all times in the access road. The time-of-day of water hauling may be limited.

I. A proposed use of pesticide, herbicide or other possible hazardous chemical on Forest Service lands and roads shall be cleared for use prior to application.

J. Controlled access roads are to be used by the operators and his contractors for the sole purpose of servicing wells and equipment. Activities not associated with oil and gas production are not allowed. Unauthorized use is in violation of 36 CFR 261.10k, which carries a maximum penalty of $5000.00 and/or six months in jail.

K. No mud plowing will be allowed. If access is needed during wet weather conditions such that mud plowing is desirable, the operator should surface the access road and all Forest Service roads leading to this well so that mud plowing is not necessary.

6. Production Pits

A. Precipitation/production pits and tanks will be constructed of fiberglass or metal. They will be fenced and covered to prevent wildlife access. They will be diked in the manner described under B.3 above.

B. Fluids in the production pit will be hauled away in a timely manner to prevent overflow of the pit. Any overflow will be treated as a spill as described in A.11 above.

7. Reclamation Requirements

A. All areas of the well pad and access road not needed for production facilities will be recontoured to blend as nearly as possible with the natural topography, topsoiled, mulched **(All hay or mulch products used on National Forest lands must be certified weed free)** (weed free straw crimped in at 2 tons per acre or use excelsior mats or equivalent), and revegetated with the seed mix specified in C.2. On slopes greater than 4% waterbars (contour ditches) will be constructed on the contour at seventy-five (75) foot intervals beginning at the top of the disturbed slope. The waterbars should be at least on one (1) foot deep, with approximately two (2) feet of drop per one hundred (100) feet and with the berm on the downhill side. Cut and fill slopes on areas kept for production facilities should be also be topsoiled, mulched as specified above, and revegetated.

B. Recommended seeding date is between September 15 and November 1. **Seeding should be completed prior to November 1 of the year the well is drilled unless waived by the Forest Service.** Seeding will be done with a disc-type drill with two boxes for various seed sizes. The drill rows will be eight (8) to ten (10) inches apart. The seed will be planted between one-half (1/2) and three-forths (3/4) of an inch deep. The seeder will be followed with a drag, packer or roller to insure uniform coverage of the seed, and adequate compaction. Drilling of the seed will be done on the contour where possible. Where slopes are too steep for contour drilling a "cyclone" hand-seeder or similar broadcast seeder will be used, using twice the recommended seed per acre. Seed will then be covered to a depth described above by whatever means is practical.

C. In order for revegetation to be accepted, it must meet current Forest Service Standards. Reclamation will be approved (minimum timeframe of two growing seasons) when the established vegetative cover is equal to 70% of the adjacent areas and the soil is stabilized. There should be no indicators of active erosion including rills and gullies. **Seeding should be repeated annually after two growing seasons until reclamation is accepted by the Forest Service. Where vegetation is redisturbed after establishment it shall be reseeded annually until vegetation is re-established.**

8. Painting

All above ground permanent surface structures and equipment will be painted a non-glare color that simulates the natural color of the site as follows: Green, Federal Standard 595a-34127. The exception being that Occupation Health and Safety Act Rules and Regulations are to be complied with where special safety colors are required. All facilities must be painted within six months of installation. Repainting will be periodically necessary as needed to keep all facilities maintained in a condition satisfactory to the Forest Service.

9. Spark Arrester and Engine Mufflers

A muffler or spark arrester satisfactory to the authorized officer shall be maintained on the exhausts of all trucks, tractors or other internal combustion engines used in connection with this permit.

10. Fencing and Livestock-Wildlife Access

A. Fencing of individual facilities, such as the pump jack (including well head), treater, and tank battery with cattle tight fencing may be required. The fence around any fluid storage facilities must be constructed on the outside perimeter of the dikes to protect them from deterioration due to animals walking over them.

D. A gate for access, through the fence, must be provided at each facility.

C. All well facilities will prevent wildlife (including wild horses) and livestock from having access to all produced fluids and any other onsite fluids or solids that could be harmful. This may include fencing all production pits (48 inch height, braced corners, top rail or barbed top wire) compressors, tank batteries, and containment troughs. Screens, covered troughs, and drip pan covers may be used where suitable. Self closing gates or walk throughs will be needed in conjuction with any fencing. All gates need to be kept closed and fences should not be mashed with hard lines. Fences should be located and maintained to keep all animals at least three feet from any hazardous materials.

11. Noxious Weed/Plant Control

A. Control of noxious weeds that invade the well pad and access road is required. Pesticides/herbicides may be used to control undesirable woody and herbaceous vegetation, insects, rodents, etc., with prior written notification to the Forest Service. A listing of all pesticides/herbicides being used or are planning on being used, will be submitted annually by the operator. The report will cover a 12-month period of planned use and will be due on the last day of the calendar year. Exceptions to this schedule may be allowed, subject to

emergency request and approval, only when unexpected outbreaks of pests require control measures which were not anticipated at the time an annual report was submitted.

B. Only those materials registered by the U.S. Environmental Protection Agency for the specific purposes planned will be considered for use on National Forest System lands. Label instructions will be strictly followed in the application of pesticides and disposal of excess materials and containers. Any barrels of chemicals or fluids needed to maintain well operations will NOT be stored on site.

12. Facility Identification

A. Individual well facilities (oil, gas, injection, saltwater, etc.) shall have a sign in legible condition until final abandonment. The sign will show the operator's name, lease name and unit number, well name and number and location (quarter section, township, range and footages from section lines).
B. Storage tanks must be labled to identify contents.

13. Notification

The operator will contact the Forest Service (632-2956) and the BLM (599-8900) at least 48 hours prior to conducting workover activities.

C. Abandoned Well

1. Abandonment Marker

A Forest Service approved permanent abandonment marker inscribed with operator, well number, and location (quarter section, township, range) is required. This marker will extend 24" underground in concrete, and extend 48" above ground level. The inscription will be made with arc welding directly onto the pipe marker.

2. Reclamation Requirements

A. All gravel will be removed from the location and all disturbed areas will be scarified (the gravel can be placed on roads designated by the Forest Service). The cut and fill slopes will be recontoured to original contours. The entire disturbed area will then be backfilled with topsoil, landscaped, seeded, and mulched. On slopes greater than 4% waterbars (contour ditches) will be constructed on the contour at seventy-five (75) foot intervals beginning at the top of the disturbed slope. The waterbars should be at least on one (1) foot deep, with approximately two (2) feet of drop per one hundred (100) feet and with the berm on the downhill side.

B. Compacted areas of the well pad will be plowed or ripped to a depth of twelve (12) inches before reseeding. Recommended seeding is between July 1 and September 15. Seeding will be done with a disc-type drill with two boxes for various seed sizes. The drill rows will be eight (8) to ten (10) inches apart. The seed will be planted between one-half (1/2) and three-forths (3/4) of an inch deep. The seeder will be followed with a drag, packer or roller to insure uniform coverage of the seed, and adequate compaction. Drilling of the seed will be done on the contour where possible. Where slopes are too steep for contour drilling a "cyclone" hand-seeder or similar broadcast seeder will be used, using twice the recommended seed per acre. Seed will then be covered to a depth described above by whatever means is practical.

C. Recommended Seed Mixtures.
Species to be planted in pounds pure-live-seed per acre: Pure Live Seed = Germination x Purity

Forest Service seed mix	Variety	Pounds/Acre
Indian ricegrass	Paloma	1
Western wheatgrass	Arriba	2
Blue Gramma	Hacheta or Alma	1
Antelope Bitterbrush	Unknown	.10
Four-wing saltbush	Unknown	.25
Pubescent wheatgrass	Luna	2.0
Intermediate wheatgrass	Oahe	2.0
Small burnet	Delar	1.0

D. To maintain purity and quality, certified seed is required.

E. All disturbed areas will be mulched at the rate of 2 tons/acre of native grass hay/straw. The mulch must be crimped into the surface.

F. The operator shall be responsible for prevention and control of soil erosion and gullying on lands covered by this permit and adjacent thereto, resulting from construction, operation, maintenance, and termination of the permitted use. The operator shall so construct permitted improvements to avoid the accumulation of excessive heads of water and to avoid encroachment on streams. The operator shall revegetate or otherwise stabilize all ground where the soil has been exposed and shall construct and maintain necessary preventive measures to supplement the vegetation. This may include the use of silt fencing and erosion control mats as needed.

G. In order for revegetation to be accepted, it must meet current Forest Service standards. Reclamation will be approved (minimum timeframe of two growing seasons) when the established vegetative cover is equal to 70% of the adjacent areas and the soil has been stabilized. **Seeding will be repeated annually after two growing seasons until the area has been satisfactorily reclaimed.** The operator's bond will not be released until the area has been successfully reclaimed.

3. <u>Roads</u>

A. If, upon abandonment of a well, the retention of the access road is not considered necessary for the management and multiple use of the natural resources, it will be recontoured to as near natural as possible. The access road and well location will be closed to vehicular travel. Revegetetation of the affected area will be required.
Aternatively, the Forest service may request the road be lightly ripped to eliminate compaction . After ripping, water bars will be installed as stated in B.5.C. Construction of a barricade at the entrance to these areas may be required. Revegetetation of the affected area to the standard in section C 2. G. will be required.

B. If, upon abandonment of the well, the retention of the access road is considered necessary for the management and multiple use of the natural resources, then the gate, if any, will remain in place, and it is to be converted to a single Forest Service locking system.

4. <u>Notification</u>

The operator will contact the Forest Service (632-2956) and the BLM (599-8900) approximately 48 hours prior to conducting any abandonment activities.

5. Esthetics

The operator shall protect the scenic esthetic values of the area under this permit, and the adjacent land, as far as possible with the authorized use, during construction, operation, and maintenance of the improvements.

6. Surveys, Land Corners

A. The operator shall protect, in place, all public land survey monuments, private property corners, and Forest boundary markers. In the event that any such land markers or monuments are destroyed in the exercise of the privileges authorized by this permit, depending on the type of monument destroyed, the operator shall see that they are reestablished or referenced in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States," (2) the specification of the county surveyor, or (3) the specification of the Forest Service.

B. Further, the operator shall cause such official survey records as are affected to be amended as provided by law. Nothing in this clause shall relieve the operator's liability for the willful destruction or modification of any Government survey marker as provided at 18 U.S.C. 1858.

7. Vandalism

The operator will take reasonable measures to prevent and discourage vandalism or disorderly conduct, and when necessary, will call in the appropriate law enforcement officer.

8. Butane and Propane Installations

All butane, propane, or other liquefied petroleum gas equipment shall be installed and operated in accordance with the laws and regulations of the State.

9. Pollution

The operator shall take reasonable precautions to prevent pollution of or deterioration of lands or waters which may result from the exercise of the privileges extended by this permit. In particular, the operator shall, at all times, comply with applicable local, State, and Federal requirements for pollution abatement. Failure of the operator to so comply may result in termination or suspension of this authorization.

10. Area Access

The operator agrees to permit the free and unrestricted access to and upon the premises at all times for all lawful and proper purposes not inconsistent with the intent of the permit or with the reasonable exercise and enjoyment by the operator of the privileges thereof.

11. Subleasing Requirements

The operator, in the exercise of the privileges granted by this permit, shall require that employees, sub-lessees, contractors, subcontractors, or renters and their employees comply with all applicable conditions of this permit and that the conditions of this permit be made a part of all subleases, contracts, subcontracts, or rental agreements. This clause shall not be construed as authorizing such subleases, contracts, subcontracts, or rental agreements unless specifically authorized elsewhere in the permit.

12. Improvements

Prior to crossing, using, or paralleling any improvement on public lands, the operator shall contact the owner of the improvement to obtain mitigation measures to prevent damage to the improvements.

13. Future Mitigation Requirements

The operator shall comply with any future mitigation requirements for air quality and noise as determined by the Jicarilla Ranger District Environmental Impact Statement for Surface Management of Gas Leasing and Development when this EIS is completed and approved.

E. ADDITIONAL FOREST SERVICE CONDITIONS OF APPROVAL

APPLICABLE WHEN MARKED

☒ 1. All surface disturbance will be confined to the existing well pad, access road , and pipeline right-of-way. If additional area is needed it must be approved in advance by the Forest Service Minerals Technician. Additional cultural resource clearance will also be required.

☐ 2. Earthen berm(s) will be placed on the _____side(s) of the location between the reserve pit and the drainage.

☐ 3. The ___ corner(s) of the well pad will be rounded off.

☐ 4. The drainage shall be diverted around the _side of the location.

☐ 5. Ponderosa pine timber will be charged at the current rates for pine timber.

☐ 6. Ponderosa pine logs will be dragged off location, preferably laid across slope, and left lying for wildlife habitat.

☐ 7. Pinyon-juniper logs and slash will be used for erosion control on and around the well pad and access road. They will be placed crossways on the slope and seedbed to aid in soil retention and reclamation. Slash and small trees may be chipped and placed back on the seedbed, stockpiled whole and placed back on the seedbed and cut and fill slopes, or can be shredded and placed into the topsoil. Any excess wood will be made available for public use outside of the closure gate or may be purchased and removed by the Operator. Stump burying may be approved upon request. No burning of trees or branches is authorized

☐ 8. Due to special wildlife concerns, there will be no construction/development activity from _____to _____.

☐ 9. As a mitigation measure, a wildlife guzzler will be purchased and delivered to the location. The guzzler will meet specifications provided by the Forest Service.

☐ 10. A locked gate will be required in a location on proposed well access road. The gate will be constructed of 2" pipe in a design that will prohibit ATV's from driving under or around it. The gate will be painted federal standard green, and incorporate road closed signs and reflectorized barricade signs, and a lock box containing enough holes for all necessary company locks plus one hole for a FS lock. Some wing fencing will be needed. Maintenance of this gate structure and wing fence will be the operator's responsibility for the life of the well.

☐ 11. The existing gate on Forest Road __ will be in functioning condition when drilling and completion are done. The gate may remain unlocked during drilling and completion operations when necessary to accommodate heavy traffic. During periods when the gate is unlocked, a sign will be installed at the gate stating that the road is not open to motorized public travel. If unauthorized travel behind the gate becomes a problem, the gate will remain locked or an individual will be posted at the gate to regulate traffic. If there are periods of inactivity and after completion, the gate will remain locked at all times. Operator shall have routine maintenance responsibility (including required signs as shown on the attached diagrams) for this gate for life of well.

☐ 12. The location must be resurveyed for Mexican spotted owl by a Forest Service approved person before construction may begin.

☐ 13. The location must be surveyed for northern goshawk by a Forest Service approved person before construction may begin.

☐ 14. Spread sandstone 4-6" thick after compaction on the portion of Forest Road ___ from ___ to____.

☒ 15. Note requirements on the IS&A form that construction activities are to be confined to the existing well pad, access road, and pipeline disturbance.

☒ 16. Low Profile: production equipment will be no more than 8' tall.

☒ 17. Liner required in reserve pit.

☒ 18. Well pad may require fencing to protect reclamation efforts. If reclamation fails due to grazing pressure, the Forest Service may request the well pad be fenced. General fence specifications will be provided if a fence is requested.

☒ 20. If this well is cavitated, wash coal fines off vegetation if any coal fines leave the well pad. This should be done promptly upon conclusion of well completion operations.