Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAR 23 2012
Farmington Field Office
Bureau of Land Management

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.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.
NMNM28812

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 14 B 2H

2. Name of Operator
Energen Resources Corporation

9. API Well No.
30-039-30962

3a. Address
2010 Afton Place, 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)*
SHL: 1702' FNL, 1865' FEL Sec. 15 T32N R04W (G) SW/NE
BHL: 250' FSL, 1850' FEL Sec. 14 T32N R04W (O) SW/SE

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 Finish Drilling & Completions
	☐ 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.)

Due to drilling operation problems last year, Energen Resources would like to pull the liner set from 4,052' to 4,551' and contine drilling to the orginal proposed TD according to the previously submitted drilling plan. If unsucessful, a side track will be performed according the attached documents.

Hold C104 for Directional Survey and "As Drilled" plat

RECEIVED
B.L.M.-MAILROOM
2012 MAR 28 PM 2:07
STATE OFFICE
SANTA FE, NEW MEXICO

RCVD MAR 29 '12
OIL CONS. DIV.
DIST. 3

Hold C104
for Directional Survey
and "As Drilled" plat

file new C-104 for Approval before Plugging After Deepening well

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)* Andrew Soto
Title Drilling Engineer
Signature
Date 3/19/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Original Signed: Stephen Mason
Title
Date MAR 26 2012

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Office

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

RECEIVED

MAR 23 2012

Farmington Field Office
Bureau of Land Management

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
	71629	BASIN FRUITLAND COAL

4 Property Code	5 Property Name	6 Well Number
35644	CARRACAS 14 B	2

7 OGRID No.	8 Operator Name	9 Elevation
162928	ENERGEN RESOURCES CORPORATION	6536'

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
G	15	32N	4W		1702'	NORTH	1865'	EAST	RIO ARRIBA

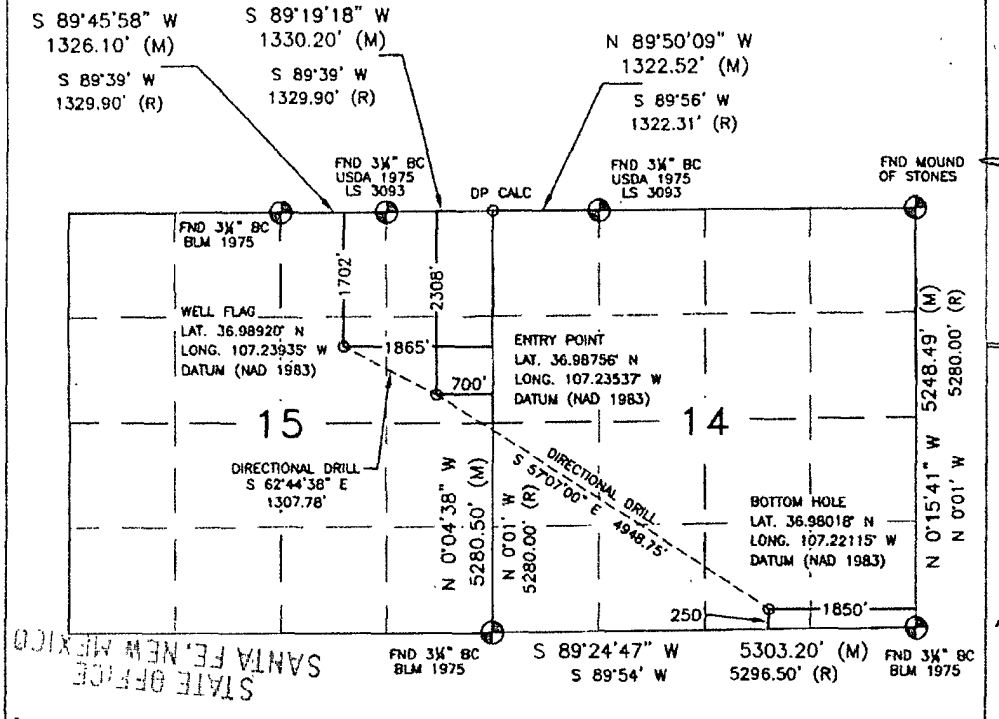
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	14	32N	4W		250'	SOUTH	1850'	EAST	RIO ARRIBA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
640 acres.			

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

16



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 of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 3-15-12

Andrew Soto
Printed Name

asoto@energen.com
E-mail Address

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 24, 2010
Date of Survey

Signature and Seal of Professional Surveyor:

DAVID R. RUSSELL
NEW MEXICO
10201
REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID RUSSELL
Certificate Number 10201

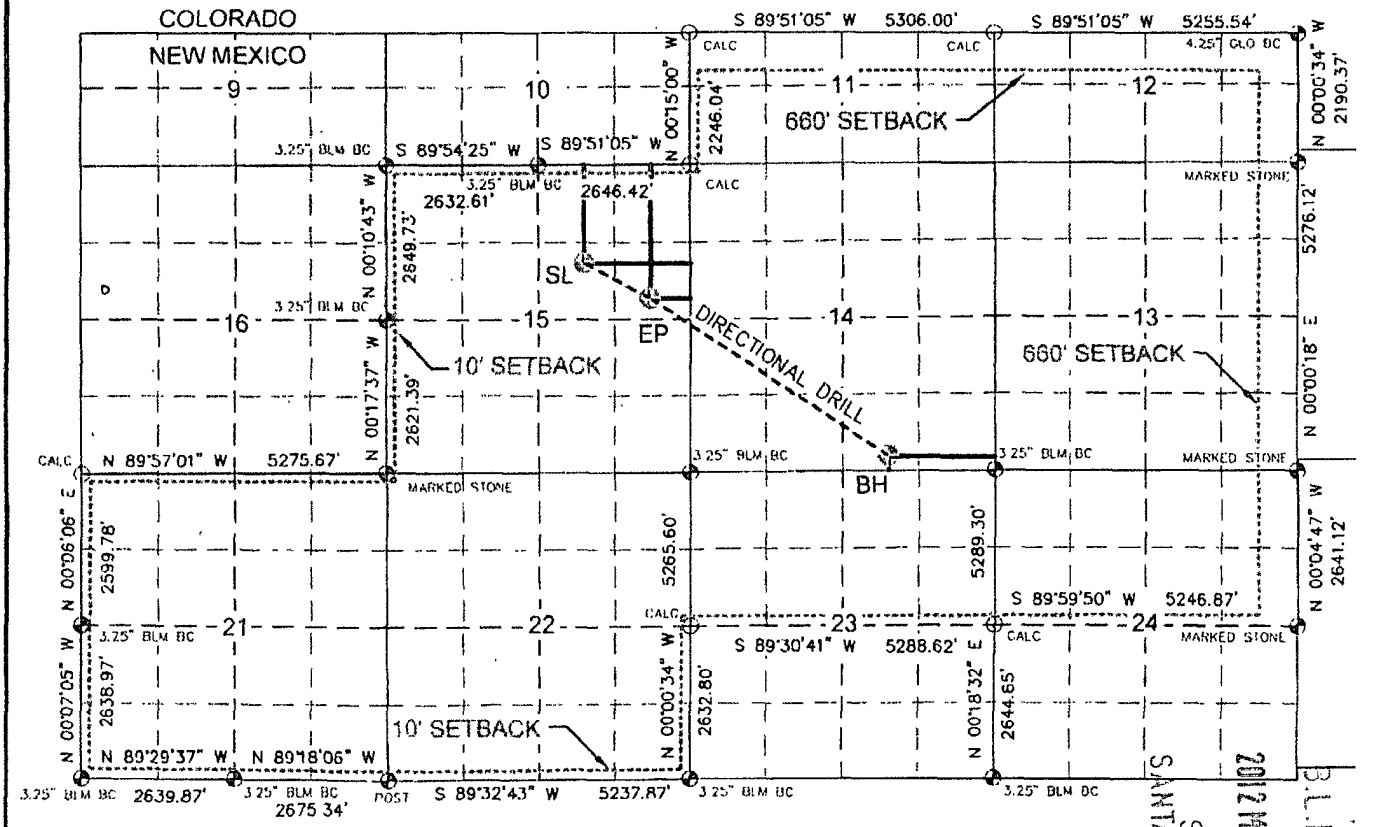
STATE OFFICE
SANTA FE, NEW MEXICO

2012 MAR 28 PM 2:07

RECEIVED
BLM-MAILROOM

CARRACAS SPECIAL PROJECTS AREA
CARRACAS 14 B #2

SURFACE LOCATION
1702' FNL & 1865' FEL, SW/NE SECTION 15
ENTRY POINT
2308' FNL & 700' FEL, SE/NE SECTION 15
BOTTOM HOLE
250' FSL & 1850' FEL, SW/SE SECTION 14
T32N, R4W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



NOT TO SCALE
JOB No.: ERG239
DATE: 08/17/11

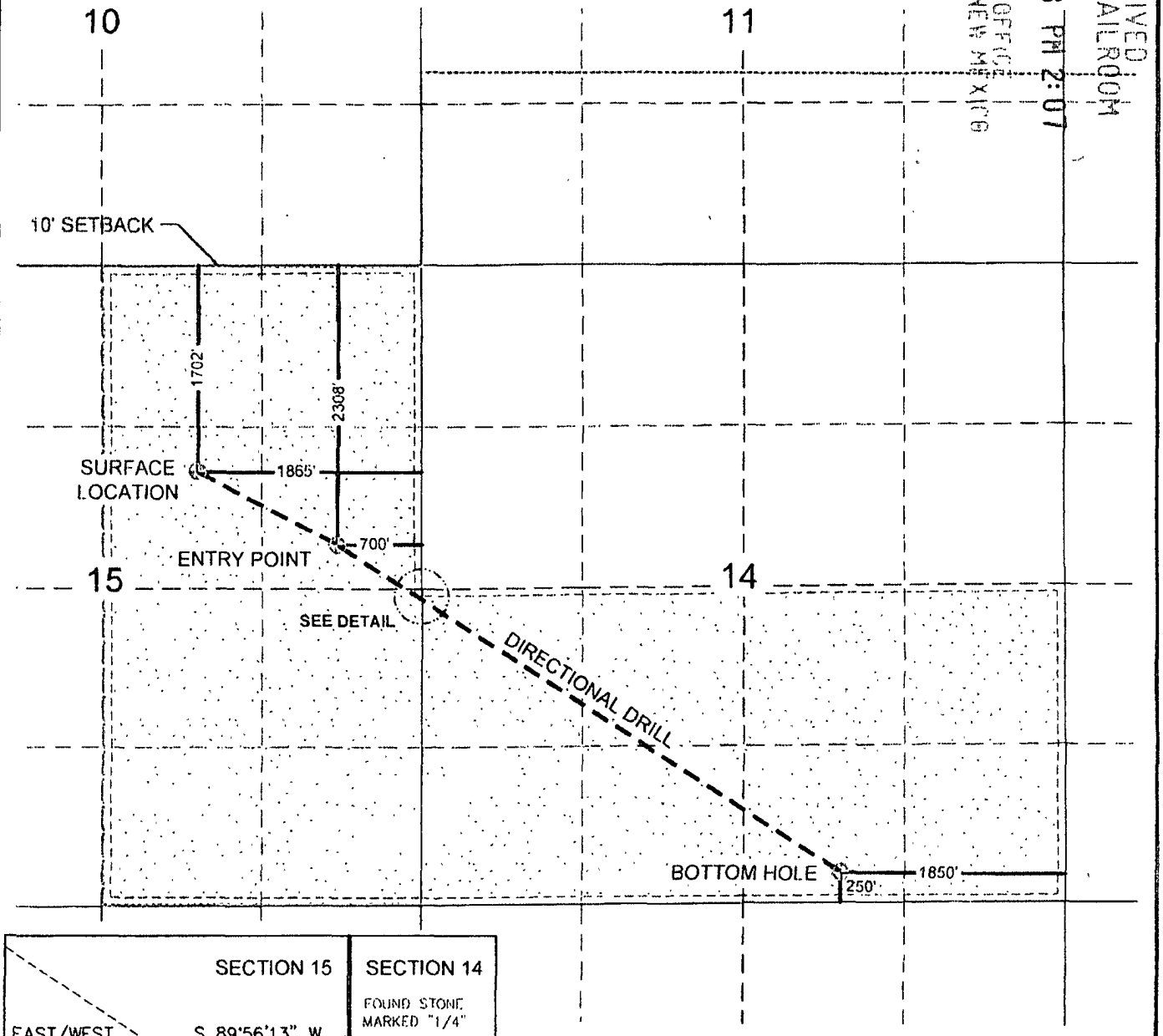
Russell Surveying
1409 W. Aztec Blvd. #2
Aztec, New Mexico 87410
(505) 334-8637

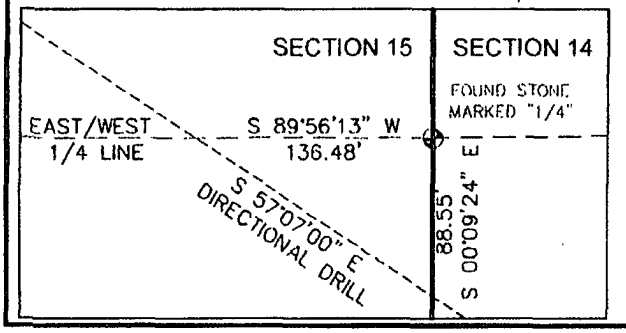
CARRACAS SPECIAL PROJECTS AREA

CARRACAS 14 B #2

SURFACE LOCATION
1702' FNL & 1865' FEL, SW/NE SECTION 15
ENTRY POINT
2308' FNL & 700' FEL, SE/NE SECTION 15
BOTTOM HOLE
250' FSL & 1850' FEL, SW/SE SECTION 14
T32N, R4W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO

DEDICATED ACREAGE
320.00 AC. - E/2 OF SECTION 15 &
320.00 AC. - S/2 OF SECTION 14
640.00 ACRES TOTAL





DETAIL
SCALE: 1"=100'

NOT TO SCALE
JOB No.: ERG239
DATE: 08/17/11

Russell Surveying
1409 W. Aztec Blvd. #2
Aztec, New Mexico 87410
(505) 334-8637

ENERGEN
RESOURCES

Energen Resources Corp

Rio Arriba County, NM
Sec 15 T32N R04W
Carracas 14B #2

ST01

Plan: Design #1

Standard Planning Report

09 March, 2012

PATHFINDER
A Schlumberger Company

ENERGEN RESOURCES

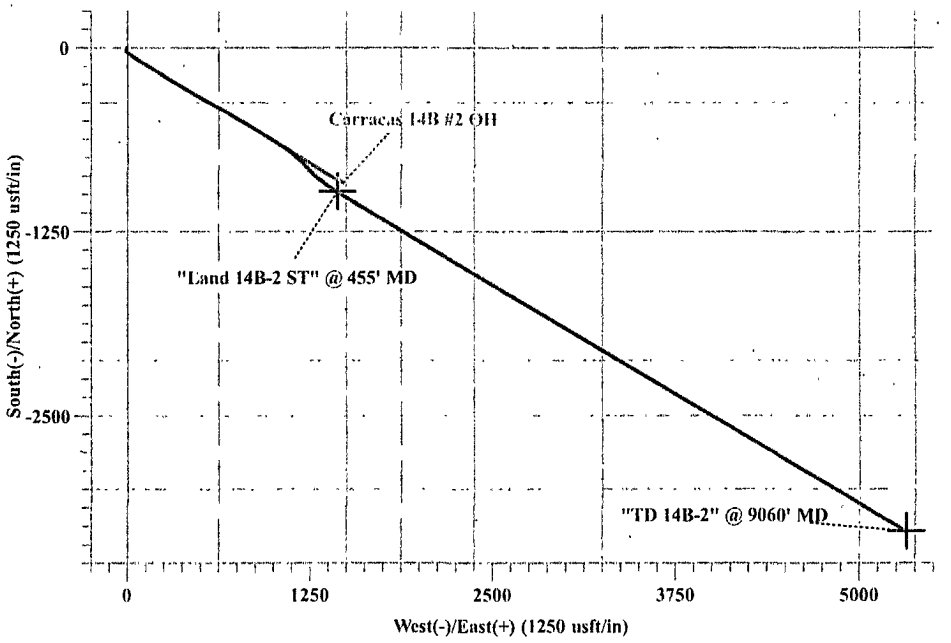
Carracas 14B #2
Sec 15 T32N R04W
Rio Arriba Co., NM

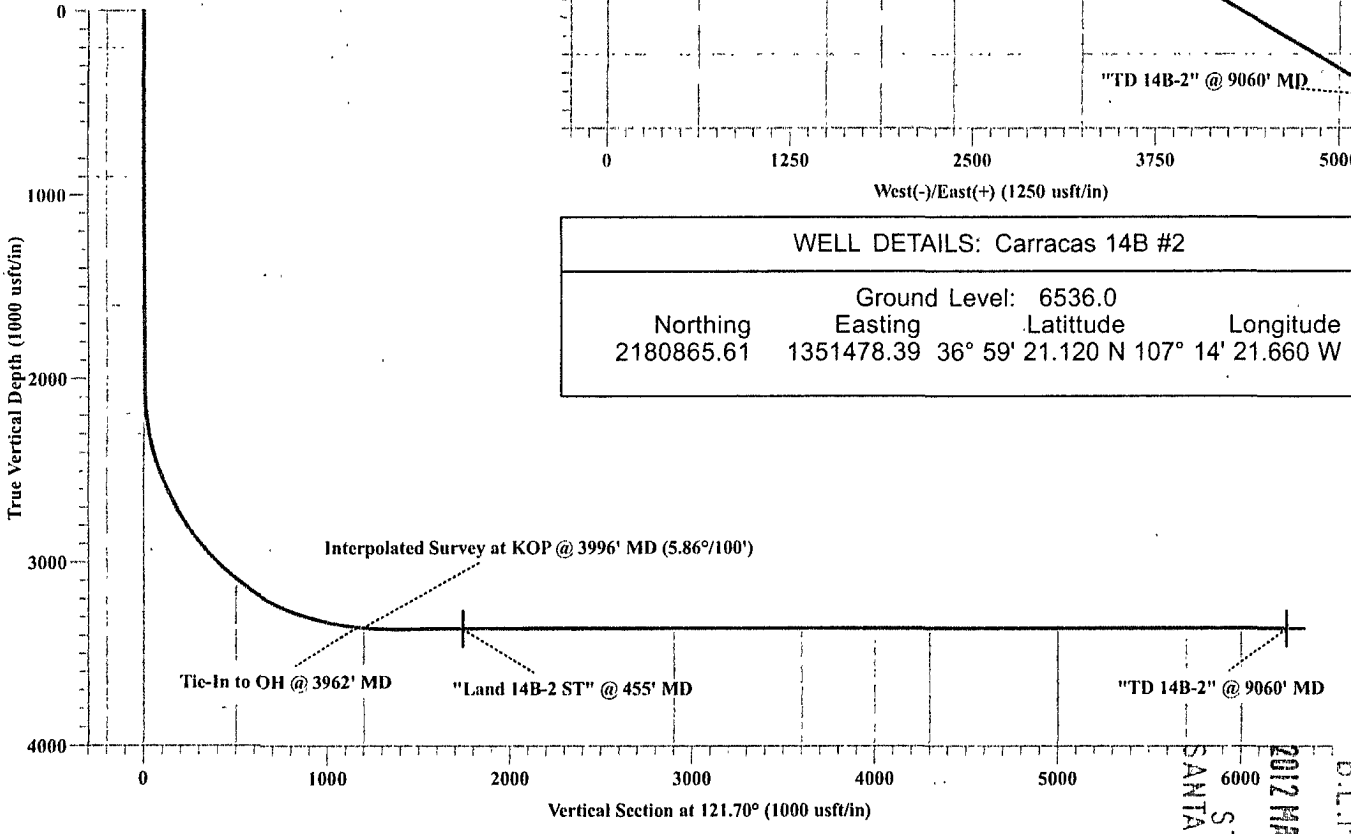
GE: 6536'/ KB: 14'

PATHFINDER
A Schlumberger Company

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Land 14B-2	3364.0	-980.0	1440.0	2179870.70	1352908.13	Point
TD - 14B #2	3364.0	-3283.6	5316 3	2177526.92	1356760.33	Point





WELL DETAILS: Carracas 14B #2			
Ground Level: 6536.0			
Northing	Easting	Latittude	Longitude
2180865.61	1351478.39	36° 59' 21.120 N	107° 14' 21.660 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
3962.0	82.92	121.28	3356.3	-618.1	977.7	0.00	0.00	1156.6	
3996.0	84.74	120.86	3359.9	-635.6	1006.6	5.49	-12.95	1190.4	
4268.1	91.64	135.26	3368.6	-802.7	1220.0	5.86	64.76	1459.8	
4302.1	91.64	135.26	3367.6	-826.9	1243.9	0.00	0.00	1492.8	
4551.6	90.00	120.72	3364.0	-980.0	1440.0	5.86	-96.29	1740.1	Land 14B-2
9060.8	90.00	120.72	3364.0	-3283.6	5316.3	0.00	0.00	6248.7	TD - 14B #2

Plan: Design #1 (Carracas 14B #2/ST01)

Created By: Breck Enoch Date: 09-Mar-2012

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Carracas 14B #2
Company:	Energen Resources Corp	**TVD Reference:**	WELL @ 6550.0usft (Original Well Elev)
Project:	Rio Arriba County, NM	**MD Reference:**	WELL @ 6550.0usft (Original Well Elev)
Site:	Sec 15 T32N R04W	**North Reference:**	True
Well:	Carracas 14B #2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST01		
Design:	Design #1		

Project Rio Arriba County, NM

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site Sec 15 T32N R04W

Site Position:		**Northing:**	2,180,865.61 usft	**Latitude:**	36° 59' 21.120 N
From:	Lat/Long	**Easting:**	1,351,478.39 usft	**Longitude:**	107° 14' 21 660 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.60 °

Well Carracas 14B #2

Well Position	**+N/-S**	0.0 usft	**Northing:**	2,180,865.61 usft	**Latitude:**	36° 59' 21.120 N
	+E/-W	0.0 usft	**Easting:**	1,351,478.39 usft	**Longitude:**	107° 14' 21.660 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	6,536 0 usft

Wellbore ST01

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2012/03/09	9.61	63.76	50,873

Design Design #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	3,962.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	121.70

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
3,962 0	82.92	121 28	3,356 3	-618 1	977.7	0.00	0.00	0.00	0 00	
3,996.0	84.74	120.86	3,359.9	-635 6	1,006.6	5.49	5.35	-1.24	-12.95	
4,268.1	91.64	135.26	3,368.6	-802.7	1,220.0	5.86	2.53	5.29	64.76	
4,302:1	91.64	135.26	3,367.6	-826.9	1,243 9	0.00	0.00	0.00	0.00	
4,551.6	90.00	120 72	3,364 0	-980.0	1,440.0	5.86	-0 66	-5.83	-96.29	Land 14B-2
9,060.8	90.00	120.72	3,364.0	-3,283.6	5,316.3	0.00	0.00	0.00	0.00	TD - 14B #2

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Carracas 14B #2
Company:	Energen Resources Corp	**TVD Reference:**	WELL @ 6550.0usft (Original Well Elev)
Project:	Rio Arriba County, NM	**MD Reference:**	WELL @ 6550.0usft (Original Well Elev)
Site:	Sec 15 T32N R04W	**North Reference:**	True
Well:	Carracas 14B #2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST01		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0 00	0.0	0 0	0.0	0.0	0.00	0.00	0.00
329.0	0.79	187.50	329.0	-2 2	-0.3	0.9	0.24	0.24	0 00
424.0	0 97	190.93	424.0	-3 7	-0.5	1.5	0 20	0.19	3.61
520.0	1 14	194 94	520.0	-5 4	-0 9	2.0	0 19	0 18	4.18
616 0	0.62	175.32	616.0	-6.8	-1.1	2 6	0.62	-0.54	-20 44
711.0	0 70	172.12	710 9	-7.9	-1.0	3.3	0.09	0.08	-3.37
807.0	0.70	177.01	806.9	-9.1	-0.9	4 0	0.06	0.00	5.09
902 0	0.62	188.55	901.9	-10.2	-1.0	4.5	0.16	-0.08	12.15
998.0	0 79	188.90	997.9	-11.4	-1.1	5.0	0.18	0 18	0.36
1,093 0	0.70	194.21	1,092.9	-12 6	-1.4	5.4	0.12	-0 09	5.59
1,189.0	0.62	202 64	1,188.9	-13.6	-1.7	5.7	0.13	-0.08	8 78
1,284.0	0 79	199.58	1,283.9	-14.7	-2.1	5.9	0.18	0.18	-3.22
1,380.0	0.88	218 65	1,379.9	-15.9	-2.8	6 0	0.30	0 09	19.86
1,475 0	0.97	213.03	1,474.9	-17.1	-3.7	5.9	0.13	0.09	-5.92
1,568.0	0.79	213.65	1,567.9	-18.3	-4.5	5.8	0 19	-0.19	0.67
1,658.0	0.79	210.66	1,657.9	-19.4	-5.2	5 8	0.05	0.00	-3.32
1,751.0	0.88	216.70	1,750.9	-20.5	-5.9	5.8	0.14	0.10	6.49
1,846.0	0.88	210.99	1,845.8	-21.7	-6.7	5 7	0.09	0.00	-6.01
1,938.0	0.79	216.63	1,937.8	-22.8	-7.5	5 7	0.13	-0.10	6.13
2,031.0	0.62	213.84	2,030.8	-23.8	-8.1	5.6	0.19	-0.18	-3.00
2,062 0	0.62	173.90	2,061.8	-24.1	-8.2	5.7	1.37	0.00	-128.84
2,092.0	1.41	152.09	2,091.8	-24.6	-8.0	6 1	2.89	2.63	-72.70
2,122.0	2 55	140.45	2,121.8	-25.4	-7.4	7.0	4.01	3.80	-38.80
2,151.0	4.13	136.49	2,150.7	-26.7	-6.3	8.7	5 50	5 45	-13.66
2,180.0	5.80	133.30	2,179.6	-28.4	-4.5	11 1	5.83	5.76	-11.00
2,211 0	7 47	132.23	2,210.4	-30.9	-1.9	14.6	5 40	5.39	-3.45
2,242.0	8.62	128.84	2,241.1	-33.7	1.4	18.9	4.01	3 71	-10.94
2,271.0	9.67	127.79	2,269.8	-36.5	5 1	23.5	3 67	3.62	-3.62
2,302.0	10 82	127.35	2,300 3	-39.9	9 4	29 0	3.72	3.71	-1.42
2,333.0	12.22	126 53	2,330.6	-43.6	14.4	35.1	4.55	4.52	-2.65
2,364.0	13 63	126.08	2,360.8	-47.7	20.0	42.1	4 56	4.55	-1 45
2,394.0	15.21	125.91	2,389.9	-52.1	26.0	49.5	5.27	5.27	-0.57
2,423 0	16.71	125.97	2,417.8	-56.8	32.5	57.5	5.17	5 17	0 21
2,455 0	18 29	124.98	2,448 3	-62.4	40.3	67.1	5 02	4.94	-3.09
2,485.0	19.79	124.54	2,476.7	-67.9	48.3	76 8	5.02	5.00	-1.47
2,516.0	20.93	123 80	2,505.7	-74.0	57.3	87.6	3.77	3.68	-2.39
2,546.0	21.98	123.66	2,533.6	-80.1	66.4	98.6	3.50	3.50	-0.47
2,577 0	23 04	123.51	2,562.3	-86 6	76.3	110 4	3.42	3 42	-0.48
2,607.0	24 27	123.80	2,589.8	-93.3	86.3	122.5	4.12	4.10	0.97
2,637.0	25.41	122.59	2,617.0	-100.2	96.8	135 1	4.16	3.80	-4.03
2,666.0	26.20	121.19	2,643 1	-106.9	107.6	147 7	3.44	2.72	-4.83
2,697.0	26.56	118.69	2,670.9	-113.8	119.5	161.4	3.77	1.16	-8.06
2,727.0	27.26	118.21	2,697.6	-120 2	131.4	175 0	2.44	2.33	-1.60
2,757.0	27.96	118.34	2,724.2	-126.8	143.7	188.9	2.34	2.33	0.43
2,787.0	29.46	118.56	2,750.5	-133.7	156.3	203.3	5.01	5.00	0.73
2,818.0	31.22	120.29	2,777.3	-141.4	170.0	218.9	6.34	5.68	5.58
2,850.0	33.15	121.33	2,804.3	-150.1	184.6	236.0	6.27	6.03	3.25
2,882.0	35.00	122.90	2,830.9	-159.6	199.8	253.9	6.40	5.78	4.91
2,914.0	36.49	124.14	2,856.8	-170.0	215.4	272.6	5.18	4.66	3.88
2,946.0	37.72	124 48	2,882.3	-180.8	231.3	291.8	3.90	3.84	1.06
2,978.0	39.04	123.53	2,907.4	-192.0	247.8	311.7	4.52	4.13	-2.97
3,010.0	40.89	123.44	2,932.0	-203.3	264.9	332.2	5.78	5.78	-0.28
3,042.0	42.38	121.40	2,955.9	-214 7	282.9	353.5	6 29	4.66	-6.38
3,073.0	43.88	121.05	2,978.5	-225.7	301.0	374.7	4.90	4.84	-1.13

Database:	EDM 5000 1 Single User Db	**Local Co-ordinate Reference:**	Well Carracas 14B #2
Company:	Energen Resources Corp	**TVD Reference:**	WELL @ 6550 0usft (Original Well Elev)
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Well:	Carracas 14B #2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST01		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,105.0	45.11	120.40	3,001.3	-237.1	320 3	397 1	4.10	3.84	-2.03
3,137.0	46.25	119.93	3,023.7	-248.6	340 1	420.0	3.71	3.56	-1.47
3,168.0	47.13	120.06	3,044.9	-259 9	359.6	442.5	2.86	2.84	0.42
3,200.0	49.07	119 96	3,066 3	-271.8	380.2	466 4	6.07	6 06	-0.31
3,232 0	51 09	120.25	3,086.8	-284.1	401 5	490.9	6.35	6.31	0.91
3,264.0	52.58	120 29	3,106 6	-296.8	423.2	516 0	4.66	4.66	0.13
3,295.0	52.76	120.89	3,125.4	-309.4	444.4	540 7	1.64	0 58	1.94
3,327.0	52.85	120.95	3,144.8	-322 5	466.3	566.2	0.32	0.28	0.19
3,391 0	57.42	118.79	3,181.3	-348 6	511.8	618.6	7.66	7.14	-3.38
3,455 0	62.08	118 32	3,213.6	-375.0	560.4	673.8	7.31	7.28	-0.73
3,518 0	64 90	118.36	3,241.7	-401.8	610.0	730.1	4.48	4.48	0.06
3,582 0	67.44	119.24	3,267.5	-430 0	661.3	788.6	4.16	3.97	1.38
3,644.0	70.70	119.94	3,289 7	-458 5	711.6	846.4	5.36	5.26	1.13
3,707.0	74.39	120 65	3,308.6	-488.9	763.5	906.5	5.95	5.86	1.13
3,771.0	76.24	121.40	3,324.8	-520.8	816.6	968.4	3.10	2.89	1.17
3,835.0	78.96	121.08	3,338.6	-553.2	870.0	1,030.9	4.28	4.25	-0.50
3,898.0	83.01	121.01	3,348.4	-585.3	923.3	1,093.1	6.43	6.43	-0.11
3,962 0	82.92	121 28	3,356.3	-618.1	977.7	1,156.6	0.44	-0.14	0.42
Tie-In to OH @ 3962' MD									
3,996 0	84.74	120.86	3,359.9	-635 6	1,006.6	1,190.4	5.49	5.35	-1.24
Interpolated Survey at KOP @ 3996' MD (5.86°/100')									
4,000.0	84.84	121 07	3,360 3	-637.6	1,010.0	1,194.4	5.86	2.50	5.32
4,050 0	86.10	123 73	3,364 2	-664.3	1,052.1	1,244.2	5.86	2.51	5 31
4,100.0	87.36	126.38	3,367.1	-693.0	1,093 0	1,294.1	5 86	2.53	5.30
4,150.0	88.63	129 02	3,368 8	-723.5	1,132.5	1,343.7	5.86	2.54	5.29
4,200.0	89 90	131 66	3,369.5	-755.9	1,170.6	1,393 2	5.86	2.55	5.28
4,250.0	91.18	134.30	3,369.0	-790.0	1,207.2	1,442 2	5.86	2.55	5.28
4,268.1	91.64	135.26	3,368.6	-802 7	1,220.0	1,459 8	5.86	2 54	5.28
4,302 1	91.64	135.26	3,367.6	-826.9	1,243.9	1,492.8	0.00	0.00	0 00
4,350.0	91.33	132.47	3,366.3	-860.1	1,278 5	1,539.7	5.86	-0.65	-5.83
4,400.0	91.00	129.55	3,365.3	-892 9	1,316.2	1,589.0	5.86	-0 65	-5.83
4,450.0	90.67	126.64	3,364.6	-923.7	1,355.5	1,638.7	5.86	-0.66	-5.83
4,500 0	90.34	123.73	3,364.2	-952 5	1,396.4	1,688.6	5.86	-0.66	-5.83
4,551.6	90 00	120 72	3,364.0	-980.0	1,440.0	1,740.2	5.86	-0.66	-5.82
"Land 14B-2 ST" @ 455' MD									
4,600.0	90 00	120.72	3,364.0	-1,004.7	1,481.6	1,788.5	0.00	0.00	0.00
4,700.0	90.00	120.72	3,364.0	-1,055.8	1,567.6	1,888 5	0.00	0.00	0.00
4,800.0	90.00	120.72	3,364.0	-1,106.9	1,653.6	1,988.5	0.00	0.00	0.00
4,900.0	90.00	120.72	3,364.0	-1,158.0	1,739.5	2,088.5	0.00	0.00	0.00
5,000.0	90.00	120.72	3,364.0	-1,209 1	1,825.5	2,188.5	0.00	0.00	0.00
5,100.0	90.00	120.72	3,364.0	-1,260.2	1,911.5	2,288.5	0.00	0.00	0.00
5,200.0	90.00	120.72	3,364.0	-1,311.3	1,997 4	2,388.5	0.00	0.00	0 00
5,300.0	90.00	120.72	3,364.0	-1,362.4	2,083.4	2,488.4	0.00	0.00	0.00
5,400 0	90.00	120.72	3,364.0	-1,413.4	2,169.4	2,588.4	0.00	0.00	0.00
5,500.0	90.00	120.72	3,364.0	-1,464.5	2,255.3	2,688.4	0.00	0.00	0.00
5,600.0	90.00	120.72	3,364.0	-1,515.6	2,341.3	2,788.4	0.00	0.00	0.00
5,700.0	90.00	120.72	3,364.0	-1,566.7	2,427.2	2,888.4	0.00	0.00	0.00
5,800.0	90.00	120.72	3,364.0	-1,617.8	2,513.2	2,988.4	0.00	0.00	0.00
5,900.0	90.00	120.72	3,364.0	-1,668 9	2,599.2	3,088.4	0.00	0.00	0.00
6,000.0	90.00	120.72	3,364.0	-1,720.0	2,685.1	3,188.3	0.00	0.00	0.00
6,100 0	90.00	120 72	3,364.0	-1,771.1	2,771.1	3,288.3	0.00	0.00	0.00
6,200.0	90.00	120.72	3,364.0	-1,822.1	2,857.1	3,388.3	0.00	0.00	0.00
6,300.0	90.00	120.72	3,364.0	-1,873.2	2,943.0	3,488.3	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Carracas 14B #2
Company:	Energen Resources Corp	**TVD Reference:**	WELL @ 6550.0usft (Original Well Elev)
Project:	Rio Arriba County, NM	**MD Reference:**	WELL @ 6550.0usft (Original Well Elev)
Site:	Sec 15 T32N R04W	**North Reference:**	True
Well:	Carracas 14B #2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST01		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,400.0	90.00	120.72	3,364.0	-1,924.3	3,029 0	3,588.3	0.00	0.00	0 00
6,500.0	90.00	120.72	3,364.0	-1,975.4	3,115 0	3,688.3	0.00	0 00	0.00
6,600.0	90.00	120.72	3,364.0	-2,026.5	3,200.9	3,788.3	0.00	0.00	0 00
6,700 0	90 00	120.72	3,364.0	-2,077.6	3,286.9	3,888.2	0.00	0.00	0.00
6,800 0	90.00	120.72	3,364.0	-2,128.7	3,372 9	3,988.2	0.00	0.00	0 00
6,900.0	90.00	120.72	3,364.0	-2,179.8	3,458 8	4,088 2	0.00	0.00	0.00
7,000.0	90.00	120.72	3,364.0	-2,230.8	3,544.8	4,188.2	0.00	0.00	0.00
7,100.0	90.00	120.72	3,364.0	-2,281 9	3,630.8	4,288.2	0.00	0.00	0.00
7,200 0	90.00	120 72	3,364.0	-2,333.0	3,716.7	4,388.2	0.00	0 00	0.00
7,300.0	90 00	120 72	3,364.0	-2,384.1	3,802.7	4,488.2	0.00	0.00	0.00
7,400.0	90.00	120.72	3,364.0	-2,435.2	3,888.7	4,588.1	0.00	0.00	0.00
7,500.0	90.00	120.72	3,364.0	-2,486.3	3,974.6	4,688.1	0.00	0.00	0.00
7,600.0	90.00	120.72	3,364.0	-2,537.4	4,060.6	4,788.1	0.00	0.00	0.00
7,700.0	90 00	120.72	3,364.0	-2,588.5	4,146.6	4,888.1	0.00	0.00	0.00
7,800.0	90.00	120.72	3,364.0	-2,639.5	4,232.5	4,988 1	0.00	0.00	0.00
7,900.0	90.00	120.72	3,364.0	-2,690.6	4,318.5	5,088.1	0.00	0.00	0.00
8,000 0	90.00	120.72	3,364.0	-2,741.7	4,404 5	5,188.1	0.00	0.00	0.00
8,100.0	90.00	120.72	3,364.0	-2,792.8	4,490.4	5,288.0	0.00	0 00	0.00
8,200.0	90.00	120.72	3,364.0	-2,843.9	4,576.4	5,388.0	0.00	0.00	0.00
8,300 0	90.00	120.72	3,364.0	-2,895 0	4,662.4	5,488.0	0.00	0.00	0.00
8,400.0	90.00	120.72	3,364.0	-2,946.1	4,748.3	5,588.0	0.00	0.00	0.00
8,500.0	90.00	120.72	3,364.0	-2,997.1	4,834.3	5,688.0	0.00	0.00	0.00
8,600.0	90.00	120.72	3,364.0	-3,048.2	4,920.2	5,788.0	0.00	0.00	0.00
8,700.0	90.00	120.72	3,364.0	-3,099.3	5,006.2	5,887.9	0.00	0.00	0.00
8,800.0	90.00	120.72	3,364.0	-3,150 4	5,092.2	5,987.9	0.00	0.00	0.00
8,900.0	90 00	120.72	3,364 0	-3,201.5	5,178.1	6,087.9	0.00	0.00	0.00
9,000 0	90.00	120.72	3,364.0	-3,252.6	5,264.1	6,187.9	0.00	0.00	0.00
9,060.8	90.00	120.72	3,364.0	-3,283.6	5,316 3	6,248.7	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Land 14B-2 - plan hits target center - Point	0.00	0.00	3,364.0	-980.0	1,440.0	2,179,870.70	1,352,908.13	36° 59' 11.430 N	107° 14' 3.912 W
TD - 14B #2 - plan hits target center - Point	0 00	0.00	3,364.0	-3,283 6	5,316.3	2,177,526.92	1,356,760.33	36° 58' 48.648 N	107° 13' 16.140 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
3,962.0	3,356.3	-618.1	977 7	Tie-In to OH @ 3962' MD
3,996.0	3,359.9	-635.6	1,006.6	Interpolated Survey at KOP @ 3996' MD (5.86°/100')
4,551.6	3,364.0	-802 7	1,220.0	"Land 14B-2 ST" @ 455' MD
9,060.8	3,364.0	-826.9	1,243.9	"TD 14B-2" @ 9060' MD

3/19/2012

ENERGEN RESOURCES

OPERATIONS PLAN

WELL NAME.....Carracas 14B #2H
JOB TYPE.....Horizontal OPE FTC
DEPT.....Drilling and Completions

GENERAL INFORMATION

Surface Location	1,702' FNL 1,865' FEL
S-T-R	Sec. 15, T32N, R04W
Bottom Hole Location	250' FSL 1,850' FEL
S-T-R	Sec. 14, T32N, R04W
County, State	Rio Arriba, New Mexico
Elevations	6,536' GL
Total Depth	9,061' +/- (MD); 3,364' (TVD)
Formation Objective	Basin Fruitland Coal

FORMATION TOPS

San Jose	Surface
Nacimiento	1,490' (TVD)
Ojo Alamo Ss	2,740' (TVD)
Kirtland Sh	2,877' (TVD)
Fruitland Fm	3,182' (TVD)
Top Target Coal	3,363' (TVD)
Base Target Coal	3,371' (TVD)
Total Depth	**3,364' (TVD), 9,061' (MD)**

DRILLING

Production: 6-1/4" wellbore will be drilled with a fresh water system. Depending on reservoir characteristics, Mud density is expected to range from 9.0 ppg to 10.5 ppg. Anticipated BHP can be as high as 1500 psi.

Blowout Control Specifications:
A 3,000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. A 2" nominal, 2000 psi minimum choke manifold will also be used. 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. **Pressure test BOP to 250 psi for 15 min and 2000 psi for 15 min.**

Logging Program:
Open hole logs: None
Mudlogs: MD to TD
Surveys: Every 200' for directional.

3/19/2012

ENERGEN RESOURCES

CASING, TUBING & CASING EQUIPMENT

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0	232'	12-1/4"	9-5/8"	32.3 lb/ft	H-40 ST&C
Intermediate TVD	0 0	4,124' 3,364'	8-3/4"	7"	23 lb/ft	J-55 LT&C
Prod. Liner TVD	3,962' 3,356'	9,061' 3,364'	6-1/4"	4-1/2"	11.6 lb/ft	J-55 Ultra FJ and LT&C
Tubing	0	3,835'	none	2-3/8"	4.7 lb/ft	J-55

Production Liner: Bull nose guide shoe on bottom of first joint, H-Latch liner drop off tool on top of last joint.

WELLHEAD

11" 3000 x 9 5/8" weld/slip on casing head. 9 5/8" x 7"x 2 3/8" 3000 psi Flanged Wellhead .

CEMENTING

Production Liner: NO CEMENT, Open Hole Completion

OTHER INFORMATION

1) This well will be an open hole completion lined with an uncemented pre-drilled liner.
2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The intermediate string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
3) If high reservoir pressures or water flows are encountered slurry design may need to be deviated to from those listed above to satisfy wellbore and formation conditions.
4) No abnormal temperatures or pressures are anticipated.
5) This gas is dedicated.