



Energen Resources

SJ BR - S17, T30N, R4W

Cabresto Mesa

San Juan 30-4 Unit #48

OH

Handwritten: 9/9/07

Design: AWB

End of Well Report

RCVD AUG 31 '07

OIL CONS. DIV.

28 August, 2007

DIST. 3

Handwritten:
Surface 645/S 2425/E
Lateral Origin 673/S 1679/E md 4770 TVd 4353
Lateral BH 757/S 125/E md 6328 TVd 4382



Handwritten: 26



Project: SJ BR - S17, T30N, R4W
Site: Cabresto Mesa
Well: San Juan 30-4 Unit #48
Wellbore: OH
Sign: AWB (San Juan 30-4 Unit #48/OH)



Azimuths to True North
Magnetic North: 10.14°
Magnetic Field
Strength: 51229.1snT
Dip Angle: 63.71°
Date: 08/28/2007
Model: IGRF200510

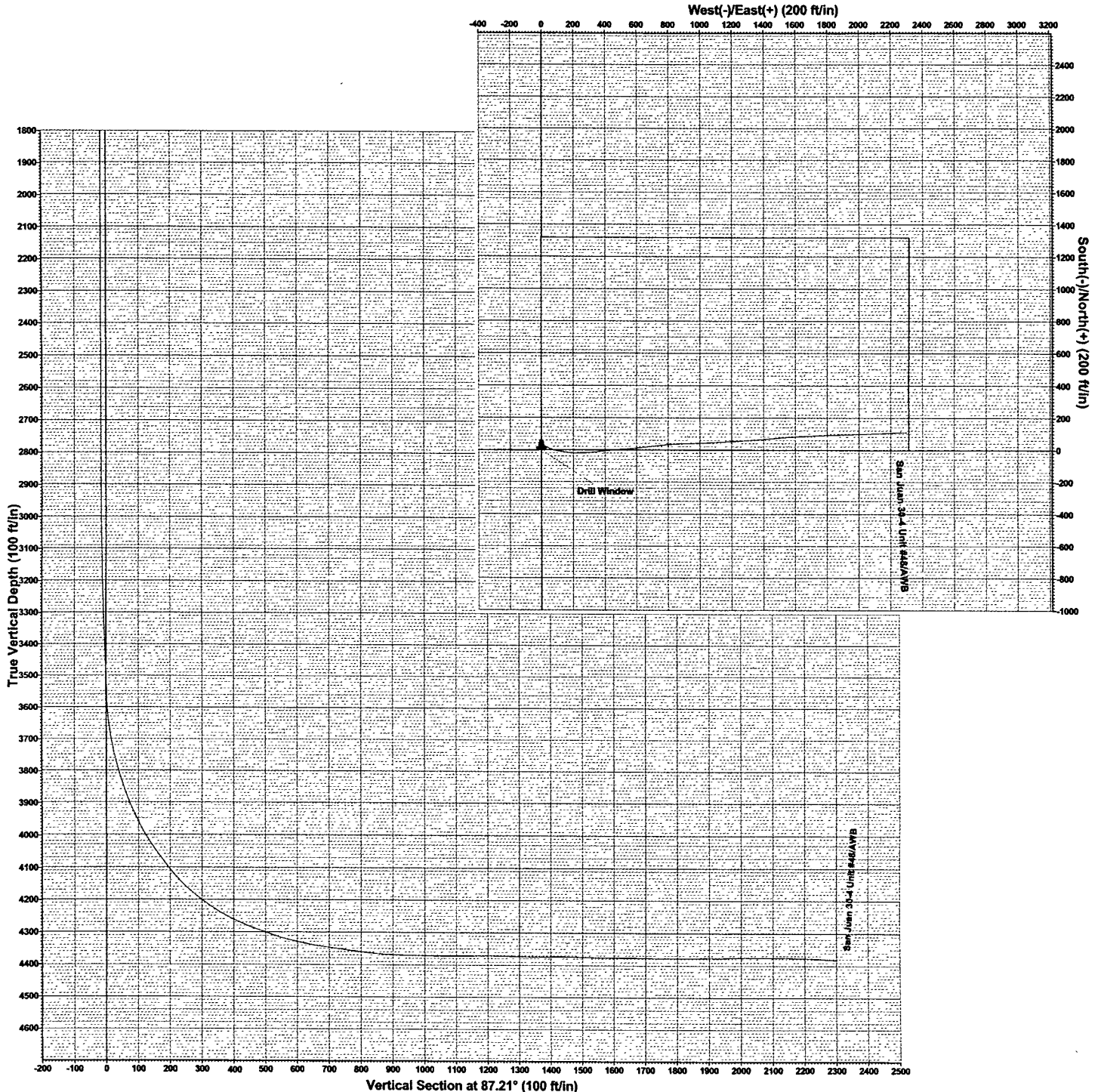
WELL DETAILS: San Juan 30-4 Unit #48

PROJECT DETAILS: SJ BR - S17, T30N, R4W
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone

Ground Elevation: 7415.0
RKB Elevation: KB @ 7430' (Drilling Rig) @ 7430.0ft (KB @ 7430' (Drilling Rig))
Rig Name: KB @ 7430' (Drilling Rig)

System Datum: Mean Sea Level
Local North: No north reference data is available

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	2114324.15	1339781.28	36° 48' 22.000 N	107° 16' 37.000 W	





PathFinder Energy Services
End of Well Report



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Local Co-ordinate Reference: Well San Juan 30-4 Unit #48
TVD Reference: KB @ 7430' (Drilling Rig) @ 7430.0ft (KB @ 7430'
MD Reference: KB @ 7430' (Drilling Rig) @ 7430.0ft (KB @ 7430'
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: 200316 NWDB

Project SJ BR - S17, T30N, R4W

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Central Zone

System Datum: Mean Sea Level

Site Cabresto Mesa

Site Position: Northing: 2,114,324.15ft Latitude: 36° 48' 22.000 N
From: Lat/Long Easting: 1,339,781.28ft Longitude: 107° 16' 37.000 W
Position Uncertainty: 0.0 ft Slot Radius: " Grid Convergence: -0.62 °

Well San Juan 30-4 Unit #48

Well Position +N/-S 0.0 ft Northing: 2,114,324.15ft Latitude: 36° 48' 22.000 N
+E/-W 0.0 ft Easting: 1,339,781.28ft Longitude: 107° 16' 37.000 W
Position Uncertainty 0.0 ft Wellhead Elevation: ft Ground Level: 7,415.0 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	08/28/2007	10.15	63.71	51,229

Design AWB

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	87.21

Survey Program Date 08/28/2007

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
323.0	6,328.0	Survey #1 MWD (OH)	Pathfinder	Pathfinder MWD

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
323.0	1.06	310.30	323.0	1.9	-2.3	0.33	-2.2
781.0	1.58	328.49	780.9	10.1	-8.8	0.14	-8.3
1,209.0	0.79	324.05	1,208.8	17.5	-13.6	0.19	-12.8
1,583.0	0.70	346.32	1,582.7	21.8	-15.7	0.08	-14.6
2,025.0	0.79	359.80	2,024.7	27.5	-16.3	0.04	-15.0
2,467.0	0.18	11.48	2,466.7	31.2	-16.2	0.14	-14.7
2,907.0	0.26	22.67	2,906.7	32.8	-15.7	0.02	-14.1
3,335.0	2.46	70.91	3,334.5	36.7	-6.6	0.54	-4.8
3,442.0	1.93	81.13	3,441.5	37.7	-2.7	0.61	-0.8
3,520.0	2.37	118.58	3,519.4	37.1	0.0	1.85	1.8
3,552.0	2.37	121.17	3,551.4	36.5	1.2	0.33	3.0



PathFinder Energy Services
End of Well Report



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MD Reference: KB @ 7430' (Drilling Rig) @ 7430.0ft (KB @ 7430
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: 200316 NWDB

Survey								
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	
3,584.0	3.25	123.21	3,583.3	35.6	2.5	2.77	4.2	
3,616.0	5.28	120.51	3,615.2	34.4	4.5	6.37	6.2	
3,647.0	7.56	117.81	3,646.1	32.7	7.6	7.42	9.2	
3,679.0	9.76	117.87	3,677.7	30.5	11.8	6.88	13.3	
3,711.0	12.49	119.48	3,709.1	27.5	17.2	8.59	18.6	
3,740.0	14.07	118.71	3,737.3	24.3	23.1	5.48	24.2	
3,772.0	16.71	118.34	3,768.2	20.2	30.5	8.26	31.5	
3,803.0	18.38	116.67	3,797.7	15.9	38.8	5.63	39.5	
3,836.0	19.96	114.40	3,828.9	11.2	48.6	5.29	49.1	
3,868.0	21.72	111.43	3,858.8	6.8	59.1	6.41	59.3	
3,900.0	23.30	108.60	3,888.3	2.6	70.6	5.99	70.6	
3,931.0	25.24	105.84	3,916.6	-1.1	82.8	7.25	82.6	
3,963.0	27.00	102.48	3,945.3	-4.6	96.4	7.18	96.1	
3,995.0	29.20	99.40	3,973.6	-7.4	111.2	8.23	110.7	
4,026.0	31.74	97.75	4,000.3	-9.7	126.8	8.63	126.1	
4,057.0	34.73	97.75	4,026.2	-12.0	143.6	9.65	142.8	
4,089.0	37.02	98.61	4,052.1	-14.7	162.2	7.33	161.2	
4,121.0	37.64	94.73	4,077.6	-16.9	181.4	7.60	180.4	
4,152.0	39.31	92.37	4,101.9	-18.1	200.7	7.17	199.6	
4,184.0	42.12	89.90	4,126.1	-18.5	221.5	10.12	220.4	
4,215.0	45.90	89.11	4,148.4	-18.3	243.1	12.32	241.9	
4,248.0	49.15	88.79	4,170.7	-17.9	267.4	9.87	266.2	
4,279.0	52.50	87.18	4,190.3	-17.0	291.4	11.53	290.2	
4,311.0	54.52	85.02	4,209.3	-15.3	317.1	8.32	316.0	
4,343.0	57.42	83.19	4,227.2	-12.6	343.4	10.23	342.4	
4,375.0	60.94	82.90	4,243.6	-9.2	370.7	11.03	369.8	
4,407.0	64.37	83.84	4,258.3	-6.0	399.0	11.03	398.2	
4,438.0	67.18	84.42	4,271.0	-3.1	427.1	9.22	426.4	
4,471.0	69.03	86.04	4,283.3	-0.5	457.6	7.22	457.0	
4,503.0	70.00	85.83	4,294.5	1.6	487.5	3.09	487.0	
4,534.0	71.05	86.02	4,304.9	3.7	516.6	3.44	516.2	
4,566.0	72.81	85.09	4,314.8	6.0	547.0	6.15	546.6	
4,598.0	76.06	83.34	4,323.4	9.2	577.6	11.44	577.4	
4,629.0	79.05	83.98	4,330.0	12.5	607.7	9.85	607.6	
4,662.0	79.58	83.53	4,336.2	16.0	639.9	2.09	640.0	
4,704.0	80.41	82.85	4,343.5	20.9	681.0	2.54	681.2	
4,770.0	82.20	84.23	4,353.4	28.3	745.8	3.40	746.3	
Interpolated Csg Point								
4,831.0	83.85	85.49	4,360.8	33.7	806.1	3.40	806.8	
4,863.0	84.46	85.05	4,364.1	36.3	837.9	2.35	838.6	
4,894.0	86.14	86.67	4,366.6	38.5	868.7	7.52	869.5	
4,926.0	87.55	88.53	4,368.4	39.9	900.6	7.29	901.5	
4,957.0	87.99	88.51	4,369.6	40.7	931.6	1.42	932.4	
4,989.0	88.61	87.83	4,370.6	41.7	963.5	2.87	964.4	



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MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	
5,021.0	89.11	87.49	4,371.2	43.0	995.5	1.89	996.4	
5,052.0	89.16	87.97	4,371.7	44.2	1,026.5	1.56	1,027.4	
5,083.0	89.72	87.03	4,372.0	45.6	1,057.4	3.53	1,058.4	
5,115.0	90.22	86.97	4,372.0	47.3	1,089.4	1.57	1,090.4	
5,147.0	90.04	86.82	4,371.9	49.0	1,121.3	0.73	1,122.4	
5,179.0	90.67	86.62	4,371.7	50.8	1,153.3	2.07	1,154.4	
5,211.0	90.35	86.75	4,371.4	52.7	1,185.2	1.08	1,186.4	
5,242.0	89.44	86.90	4,371.5	54.4	1,216.2	2.98	1,217.4	
5,274.0	88.61	85.83	4,372.0	56.4	1,248.1	4.23	1,249.4	
5,306.0	88.66	85.85	4,372.8	58.7	1,280.0	0.17	1,281.4	
5,338.0	89.34	85.54	4,373.4	61.1	1,311.9	2.34	1,313.4	
5,370.0	89.78	86.10	4,373.6	63.5	1,343.8	2.23	1,345.3	
5,402.0	90.04	85.92	4,373.7	65.7	1,375.8	0.99	1,377.3	
5,433.0	90.57	85.61	4,373.5	68.0	1,406.7	1.98	1,408.3	
5,466.0	89.60	85.41	4,373.4	70.6	1,439.6	3.00	1,441.3	
5,498.0	88.46	84.95	4,374.0	73.3	1,471.5	3.84	1,473.3	
5,529.0	88.37	84.92	4,374.8	76.0	1,502.3	0.31	1,504.3	
5,561.0	88.81	85.38	4,375.6	78.7	1,534.2	1.99	1,536.2	
5,593.0	89.43	85.69	4,376.1	81.2	1,566.1	2.17	1,568.2	
5,625.0	89.87	86.74	4,376.3	83.3	1,598.0	3.56	1,600.2	
5,656.0	90.04	87.58	4,376.3	84.8	1,629.0	2.76	1,631.2	
5,688.0	89.60	87.24	4,376.4	86.3	1,661.0	1.74	1,663.2	
5,720.0	88.90	86.80	4,376.9	88.0	1,692.9	2.58	1,695.2	
5,753.0	88.81	87.04	4,377.5	89.7	1,725.9	0.78	1,728.2	
5,784.0	89.78	87.02	4,377.9	91.3	1,756.8	3.13	1,759.2	
5,816.0	90.22	87.98	4,377.9	92.7	1,788.8	3.30	1,791.2	
5,848.0	90.57	88.30	4,377.7	93.8	1,820.8	1.48	1,823.2	
5,880.0	90.40	88.47	4,377.4	94.7	1,852.8	0.75	1,855.2	
5,911.0	90.31	88.14	4,377.2	95.6	1,883.7	1.10	1,886.2	
5,943.0	90.48	87.75	4,377.0	96.7	1,915.7	1.33	1,918.2	
5,976.0	91.19	87.96	4,376.5	98.0	1,948.7	2.24	1,951.2	
6,006.0	91.45	88.84	4,375.8	98.8	1,978.7	3.06	1,981.1	
6,038.0	90.48	88.09	4,375.3	99.7	2,010.7	3.83	2,013.1	
6,070.0	89.78	87.80	4,375.2	100.8	2,042.6	2.37	2,045.1	
6,101.0	89.25	87.42	4,375.5	102.1	2,073.6	2.10	2,076.1	
6,132.0	89.43	87.30	4,375.8	103.5	2,104.6	0.70	2,107.1	
6,162.0	89.60	86.65	4,376.1	105.1	2,134.5	2.24	2,137.1	
6,194.0	88.90	87.50	4,376.5	106.7	2,166.5	3.44	2,169.1	
6,224.0	88.46	87.36	4,377.2	108.1	2,196.4	1.54	2,199.1	
6,255.0	87.49	87.90	4,378.3	109.4	2,227.4	3.58	2,230.1	
6,266.0	86.79	87.99	4,378.8	109.8	2,238.4	6.42	2,241.1	
6,328.0	86.79	87.99	4,382.3	111.9	2,300.2	0.00	2,303.0	

Straightline Proj to Bit TD @ 6328'



PathFinder Energy Services
End of Well Report



Company: Energen Resources
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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: 200316 NWDB

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,770.0	4,353.4	28.3	745.8	Interpolated Csg Point
6,328.0	4,382.3	111.9	2,300.2	Straightline Proj to Bit TD @ 6328'

Checked By: _____ Approved By: _____ Date: _____

AS DRILLED

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

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Federal Lease - 5 Copies
OIL CONS. DIV.
☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number 30-039-27698	'Pool Code 72400	'Pool Name East Blanco Pictured Cliffs	DIST. 3
'Property Code	'Property Name San Juan 30-4 Unit		'Well Number #48
'OGRID No. 162928	'Operator Name Energen Resources Corporation		'Elevation 7415'

¹⁰ Surface Location

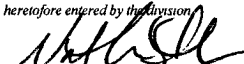
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	17	30N	4W		645	South	2425	East	Rio Arriba

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
P	17	30N	4W		757	South	125	East	Rio Arriba
"Dedicated Acres 160.0 SE/4		"Joint or Infill		"Consolidation Code		"Order No.			

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.

5277.36'

5280.00' 16				¹⁷ OPERATOR CERTIFICATION <i>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.</i>  Signature _____ Date 8/16/2007 Printed Name Nathan Smith	
				¹⁸ SURVEYOR CERTIFICATION <i>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.</i> April 28, 2003 Date of Survey _____ Signature and Seal of Professional Surveyor _____ Original survey conducted and recorded by Jason C. Edwards Certificate #15269 Certificate Number _____	
				Datum: NAD1927 N36.80611 W107.27694 SHL	
				BHL 125' 2425' 645' 757'	