

District I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S St Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

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 August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31038	² Pool Code 72319/71599	³ Pool Name Blanco Mesa Verde / Basin Dakota
⁴ Property Code 302938	⁵ Property Name Northwest	⁶ Well Number 4N
⁷ OGRID No. 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 7139' GL

¹⁰ Surface Location

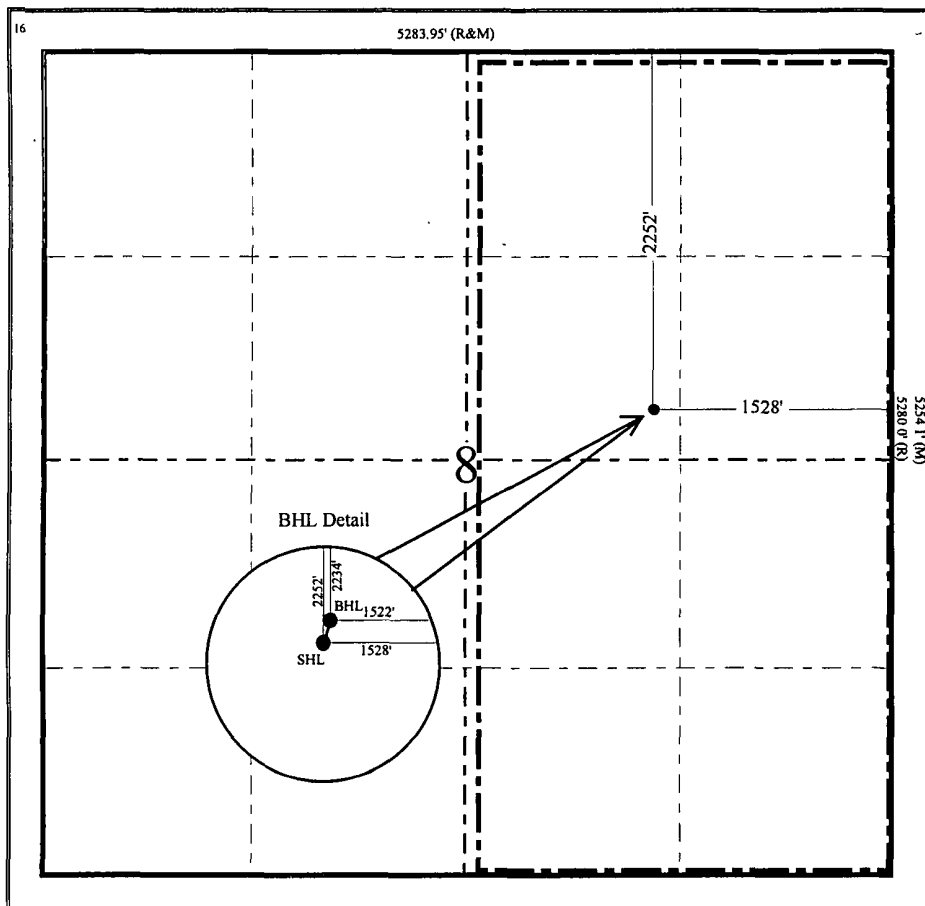
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	8	26N	4W		2252	North	1528	East	Rio Arriba

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
G	8	26N	4W		2234	North	1522	East	Rio Arriba

¹² Dedicated Acres 320.0 -- E/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.



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: *Nathan Smith* Date: 10/21/2011

Nathan Smith
Printed Name

nsmith@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.

October 13, 2010

Date of Survey

Signature and Seal of Professional Surveyor:

Original survey conducted and recorded by:

David R. Russell

10201

Certificate Number

AV

WELL NAME AND NUMBER: JICARILLA NORTHWEST # 4N

LOCATION: SEC. 8, TOWNSHIP 26N, RANGE 4W NMPM; RIO ARriba COUNTY, NEW MEXICO
(New Mexico give U, S, T, & R)

OPERATOR: **ENERGEN**

DRILLING CONTRACTOR: **AZTEC WELL SERVICING COMPANY INC.**

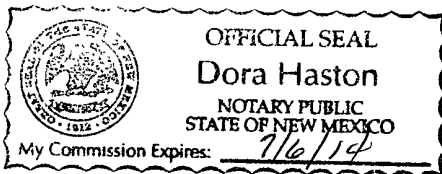
The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that the deviation tests obtained the following results:

Degrees @ Depth

1.25 ° @	142
1.25 ° @	303
1.75 ° @	395
1 ° @	5049
1 ° @	6003
1 ° @	6981
.3 ° @	7437
.8 ° @	8273
.7 ° @	8276
° @	
° @	
° @	
° @	
° @	
° @	
° @	
° @	

Degrees @ Depth

° @
° @
° @
° @
° @
° @
° @
° @
° @
° @
° @
° @
° @
° @
° @
° @



DRILLING CONTRACTOR **AZTEC WELL SERVICING CO. INC.**

BY *Terri Thompson*

Subscribed and sworn to before me this 3 day of November, 2011.

My Commission Expires: 7/6/14

Dora Haston
Notary Public
San Juan County, New Mexico

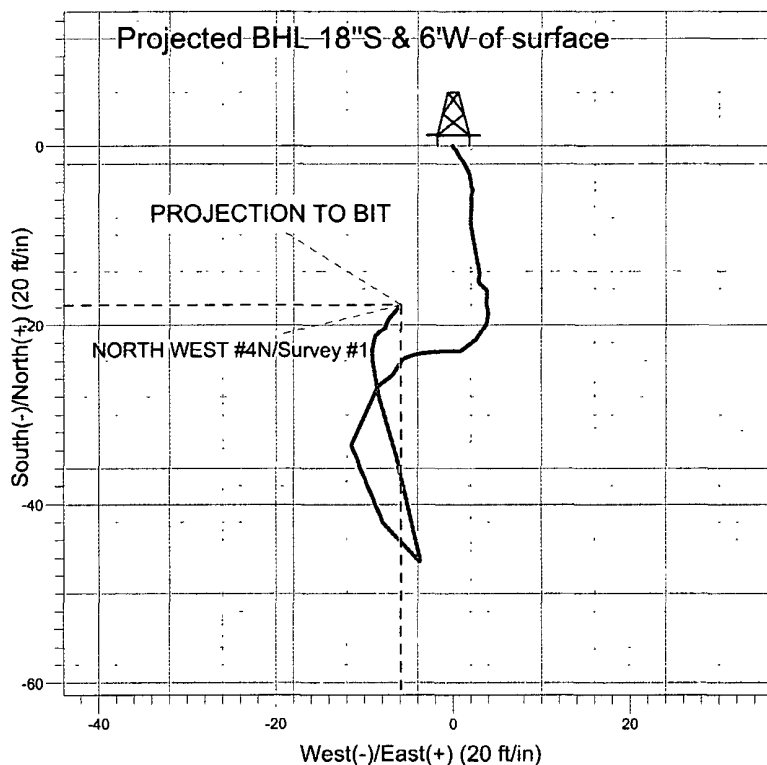
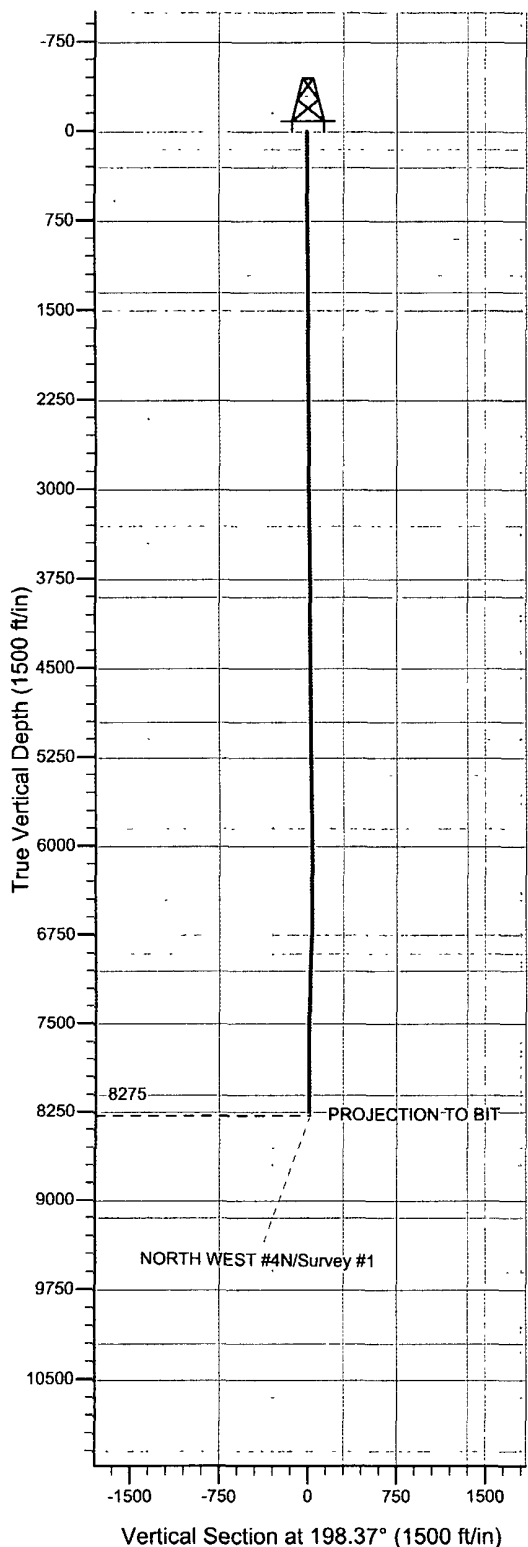


Well Name: **NORTH WEST #4N**
 Surface Location: NORTH WEST #4N PAD
 North American Datum 1983 , US State Plane 1983 , New Mexico Western Zone
 Ground Elevation: 7139.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	0.00	0.00			

 AZTEC 545 KB 12' RKB @ 7151.0ft (AZTEC 545 KB 12')

ENERGEN RESOURCES CORP



LEGEND

- Wellbore #1
- Survey #1

Final Survey Plot

RCVD NOV 18'11

OIL CONS. DIV.

DIST. 3

Projected Final Survey -
 8276'MD & 8275.1'TVD
 @ 17.79' VS 0.8 deg Inc 35.7 deg AZ

Project. SEC.8-T26N-R4W
 Site: NORTH WEST #4N PAD
 Well: NORTH WEST #4N
 Plan: Wellbore #1



MESA WEST
DIRECTIONAL
TECHNOLOGIES USA I LLC

ENERGEN RESOURCES CORP

SEC.8-T26N-R4W
NORTH WEST #4N PAD
NORTH WEST #4N

Wellbore #1

Survey: Survey #1

Standard Survey Report

18 November, 2011

RCVD NOV 18 '11

OIL CONS. DIV.

DIST. 3



Survey Report

Company: ENERGEN RESOURCES CORP
Project: SEC.8-T26N-R4W
Site: NORTH WEST #4N PAD
Well: NORTH WEST #4N
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well NORTH WEST #4N
TVD Reference: RKB @ 7151.0ft (AZTEC 545 KB 12')
MD Reference: RKB @ 7151.0ft (AZTEC 545 KB 12')
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project	SEC.8-T26N-R4W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	New Mexico Western Zone		Using geodetic scale factor

Site	NORTH WEST #4N PAD		
Site Position:		Northing:	ft
From:	None	Easting:	ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	
		Longitude:	
		Grid Convergence:	0.00 °

Well	NORTH WEST #4N		
Well Position	+N/-S	0.0 ft	Northing: 0.00 ft
	+E/-W	0.0 ft	Easting: 0.00 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	30.710010
		Longitude:	-116.482851
		Ground Level:	7,139.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	User Defined	11/18/2011	(°)
			0.00
			(°)
			0.00
			(nT)
			0

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			198.37

Survey Program	Date 11/18/2011		
From	To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
435.0	8,276.0	Survey #1 (Wellbore #1)	
			Description

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
435.0	0.00	0.00	435.0	0.0	0.0	0.0	0.00	0.00	0.00
472.0	2.10	143.70	472.0	-0.5	0.4	0.4	5.68	5.68	0.00
536.0	1.80	153.30	536.0	-2.4	1.5	1.8	0.69	-0.47	15.00
600.0	0.70	179.20	599.9	-3.7	2.0	2.9	1.89	-1.72	40.47
760.0	0.10	39.80	759.9	-4.5	2.1	3.7	0.49	-0.38	-87.13
919.0	0.30	169.40	918.9	-4.9	2.3	3.9	0.23	0.13	81.51
1,078.0	0.30	201.80	1,077.9	-5.6	2.2	4.7	0.11	0.00	20.38
1,236.0	0.50	166.40	1,235.9	-6.7	2.2	5.7	0.20	0.13	-22.41
1,395.0	1.00	191.20	1,394.9	-8.7	2.1	7.6	0.37	0.31	15.60
1,554.0	1.10	150.80	1,553.9	-11.4	2.6	10.0	0.46	0.06	-25.41
1,713.0	1.10	188.30	1,712.9	-14.3	3.1	12.6	0.44	0.00	23.58
1,808.0	0.10	179.50	1,807.9	-15.3	3.0	13.5	1.05	-1.05	-9.26



Survey Report

Company: ENERGEN RESOURCES CORP
 Project: SEC.8-T26N-R4W
 Site: NORTH WEST #4N PAD
 Well: NORTH WEST #4N
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well NORTH WEST #4N
 TVD Reference: RKB @ 7151.0ft (AZTEC 545 KB 12")
 MD Reference: RKB @ 7151.0ft (AZTEC 545 KB 12")
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,967.0	0.30	118.90	1,966.9	-15.6	3.3	13.8	0.17	0.13	-38.11
2,126.0	0.30	148.10	2,125.9	-16.2	3.9	14.1	0.10	0.00	18.36
2,286.0	0.30	210.90	2,285.9	-16.9	3.9	14.8	0.20	0.00	39.25
2,445.0	0.30	158.20	2,444.9	-17.6	3.9	15.5	0.17	0.00	-33.14
2,603.0	0.50	177.40	2,602.8	-18.7	4.0	16.5	0.15	0.13	12.15
2,762.0	0.40	202.70	2,761.8	-19.9	3.9	17.7	0.14	-0.06	15.91
2,921.0	1.10	217.80	2,920.8	-21.6	2.7	19.6	0.45	0.44	9.50
3,080.0	0.60	262.30	3,079.8	-22.9	1.0	21.5	0.50	-0.31	27.99
3,239.0	0.80	277.90	3,238.8	-22.9	-1.0	22.0	0.17	0.13	9.81
3,396.0	1.10	252.50	3,395.8	-23.2	-3.5	23.1	0.32	0.19	-16.18
3,460.0	0.70	267.50	3,459.8	-23.4	-4.5	23.6	0.72	-0.63	23.44
3,618.0	0.30	194.90	3,617.8	-23.8	-5.5	24.4	0.43	-0.25	-45.95
3,850.0	0.80	220.30	3,849.8	-25.7	-6.7	26.5	0.23	0.22	10.95
3,967.0	0.50	258.20	3,966.7	-26.4	-7.8	27.5	0.43	-0.26	32.39
4,062.0	0.50	209.50	4,061.7	-26.8	-8.4	28.1	0.43	0.00	-51.26
4,992.0	0.40	198.30	4,991.7	-33.4	-11.4	35.3	0.01	-0.01	-1.20
6,009.0	0.80	138.30	6,008.7	-42.1	-7.8	42.4	0.07	0.04	-5.90
6,628.0	0.30	131.80	6,627.6	-46.4	-3.7	45.2	0.08	-0.08	-1.05
6,677.0	1.10	351.90	6,676.6	-46.0	-3.7	44.8	2.74	1.63	-285.51
6,709.0	3.20	346.70	6,708.6	-44.9	-3.9	43.8	6.58	6.56	-16.25
6,740.0	3.00	346.80	6,739.6	-43.2	-4.3	42.4	0.65	-0.65	0.32
6,772.0	2.70	346.70	6,771.5	-41.7	-4.7	41.0	0.94	-0.94	-0.31
6,804.0	2.70	347.00	6,803.5	-40.2	-5.0	39.7	0.04	0.00	0.94
6,836.0	3.20	347.30	6,835.4	-38.6	-5.4	38.3	1.56	1.56	0.94
6,868.0	3.10	346.60	6,867.4	-36.9	-5.8	36.8	0.33	-0.31	-2.19
6,900.0	2.70	346.00	6,899.4	-35.3	-6.2	35.5	1.25	-1.25	-1.88
6,931.0	2.50	343.90	6,930.3	-34.0	-6.5	34.3	0.71	-0.65	-6.77
6,963.0	2.50	341.60	6,962.3	-32.6	-6.9	33.2	0.31	0.00	-7.19
7,217.0	1.50	355.30	7,216.1	-24.1	-9.0	25.7	0.43	-0.39	5.39
7,280.0	0.90	3.30	7,279.1	-22.7	-9.0	24.4	0.99	-0.95	12.70
7,437.0	0.30	43.80	7,436.1	-21.2	-8.6	22.9	0.45	-0.38	25.80
7,593.0	0.30	51.00	7,592.1	-20.7	-8.0	22.1	0.02	0.00	4.62
7,751.0	0.10	72.30	7,750.1	-20.4	-7.6	21.7	0.13	-0.13	13.48
7,910.0	0.30	1.20	7,909.1	-19.9	-7.5	21.2	0.18	0.13	-44.72
8,069.0	0.20	63.30	8,068.1	-19.4	-7.2	20.6	0.17	-0.06	39.06
8,228.0	0.80	35.70	8,227.1	-18.3	-6.3	19.4	0.40	0.38	-17.36
8,276.0	0.80	35.70	8,275.1	-17.8	-5.9	18.8	0.00	0.00	0.00

PROJECTION TO BIT

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
8,276.0	8,275.1	-17.8	-5.9	PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____

Job Number: 1108
 Company: Energen Resources
 Lease/Well: North West #4N
 Location: Sec. 08, T26N, R04W
 Rig Name: Aztec 545
 RKB: 7151
 G.L. or M.S.L.: 7139

State/Country: New Mexico, USA
 Declination: 9.86
 Grid: ☐
 File name: C:\WINSERVE\1108.SVY
 Date/Time: 31-Aug-11 / 15:59
 Curve Name: Surveys



WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
435.00	.00	.00	435.00	.00	.00	.00	.00	.00	.00
472.00	2.10	143.70	471.99	-5.55	.40	-5.55	.68	143.70	5.68
536.00	1.80	153.30	535.95	-2.39	1.55	-2.39	2.85	147.08	.69
600.00	.70	179.20	599.94	-3.68	2.00	-3.68	4.19	151.41	1.89
760.00	.10	39.80	759.94	-4.55	2.11	-4.55	5.01	155.14	.49
919.00	.30	169.40	918.93	-4.85	2.27	-4.85	5.36	154.90	.23
1078.00	.30	201.80	1077.93	-5.65	2.19	-5.65	6.06	158.76	.11
1236.00	.50	166.40	1235.93	-6.70	2.20	-6.70	7.05	161.80	.20
1395.00	1.00	191.20	1394.92	-8.74	2.10	-8.74	8.98	166.50	.37
1554.00	1.10	150.80	1553.89	-11.43	2.57	-11.43	11.72	167.32	.46
1713.00	1.10	188.30	1712.86	-14.27	3.10	-14.27	14.60	167.76	.44
1808.00	.10	179.50	1807.86	-15.26	2.97	-15.26	15.54	169.00	1.05
1967.00	.30	118.90	1966.86	-15.60	3.33	-15.60	15.95	167.94	.17
2126.00	.30	148.10	2125.85	-16.15	3.92	-16.15	16.62	166.37	.10

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2286.00	.30	210.90	2285.85	-16.87	3.92	-16.87	17.32	166.91	.20
2445.00	.30	158.20	2444.85	-17.61	3.86	-17.61	18.03	167.63	.17
2603.00	.50	177.40	2602.85	-18.68	4.05	-18.68	19.12	167.78	.15
2762.00	.40	202.70	2761.84	-19.89	3.86	-19.89	20.26	169.00	.14
2921.00	1.10	217.80	2920.83	-21.61	2.71	-21.61	21.78	172.84	.45
3080.00	.60	262.30	3079.81	-22.92	.95	-22.92	22.94	177.62	.50
3239.00	.80	277.90	3238.80	-22.88	-.97	-22.88	22.90	182.43	.17
3396.00	1.10	252.50	3395.78	-23.19	-3.49	-23.19	23.45	188.57	.32
3460.00	.70	267.50	3459.77	-23.39	-4.47	-23.39	23.81	190.82	.72
3618.00	.30	194.90	3617.76	-23.83	-5.54	-23.83	24.46	193.09	.43
3850.00	.80	220.30	3849.75	-25.65	-6.74	-25.65	26.52	194.73	.23
3967.00	.50	258.20	3966.75	-26.38	-7.77	-26.38	27.50	196.42	.43
4062.00	.50	209.50	4061.74	-26.82	-8.38	-26.82	28.10	197.35	.43
4992.00	.40	198.30	4991.71	-33.44	-11.40	-33.44	35.33	198.82	.01
6009.00	.80	138.30	6008.66	-42.11	-7.79	-42.11	42.82	190.48	.07
6628.00	.30	131.80	6627.63	-46.42	-3.71	-46.42	46.56	184.57	.08
6677.00	1.10	351.90	6676.63	-46.04	-3.68	-46.04	46.18	184.57	2.74
6709.00	3.20	346.70	6708.61	-44.86	-3.93	-44.86	45.03	185.00	6.58
6740.00	3.00	346.80	6739.56	-43.23	-4.31	-43.23	43.44	185.70	.65
6772.00	2.70	346.70	6771.52	-41.68	-4.68	-41.68	41.94	186.40	.94
6804.00	2.70	347.00	6803.49	-40.21	-5.02	-40.21	40.53	187.11	.04
6836.00	3.20	347.30	6835.44	-38.61	-5.39	-38.61	38.98	187.94	1.56
6868.00	3.10	346.60	6867.40	-36.90	-5.78	-36.90	37.35	188.91	.33
6900.00	2.70	346.00	6899.36	-35.32	-6.16	-35.32	35.86	189.90	1.25
6931.00	2.50	343.90	6930.32	-33.96	-6.53	-33.96	34.59	190.88	.71
6963.00	2.50	341.60	6962.29	-32.63	-6.94	-32.63	33.36	192.01	.31
7217.00	1.50	355.30	7216.14	-24.06	-8.96	-24.06	25.68	200.43	.43
7280.00	.90	3.30	7279.12	-22.75	-9.00	-22.75	24.46	201.59	.99
7437.00	.30	43.80	7436.11	-21.22	-8.65	-21.22	22.91	202.17	.45
7593.00	.30	51.00	7592.11	-20.67	-8.05	-20.67	22.18	201.28	.02
7751.00	.10	72.30	7750.11	-20.36	-7.59	-20.36	21.73	200.45	.13
7910.00	.30	1.20	7909.11	-19.91	-7.45	-19.91	21.26	200.53	.18
8069.00	.20	63.30	8068.11	-19.36	-7.20	-19.36	20.66	200.39	.17
8228.00	.80	35.70	8227.10	-18.34	-6.30	-18.34	19.39	198.96	.40

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
Projection to Bit 8276.00	.80	35.70	8275.10	-17.79	-5.91	-17.79	18.75	198.37	.00