

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

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☒ AMENDED REPORT

"*As Drilled*"

WELL LOCATION AND ACREAGE DEDICATION PLAT SD-201110, 8/9/11

*API Number 30-039-29534		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 279A
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6317'

¹⁰ Surface Location

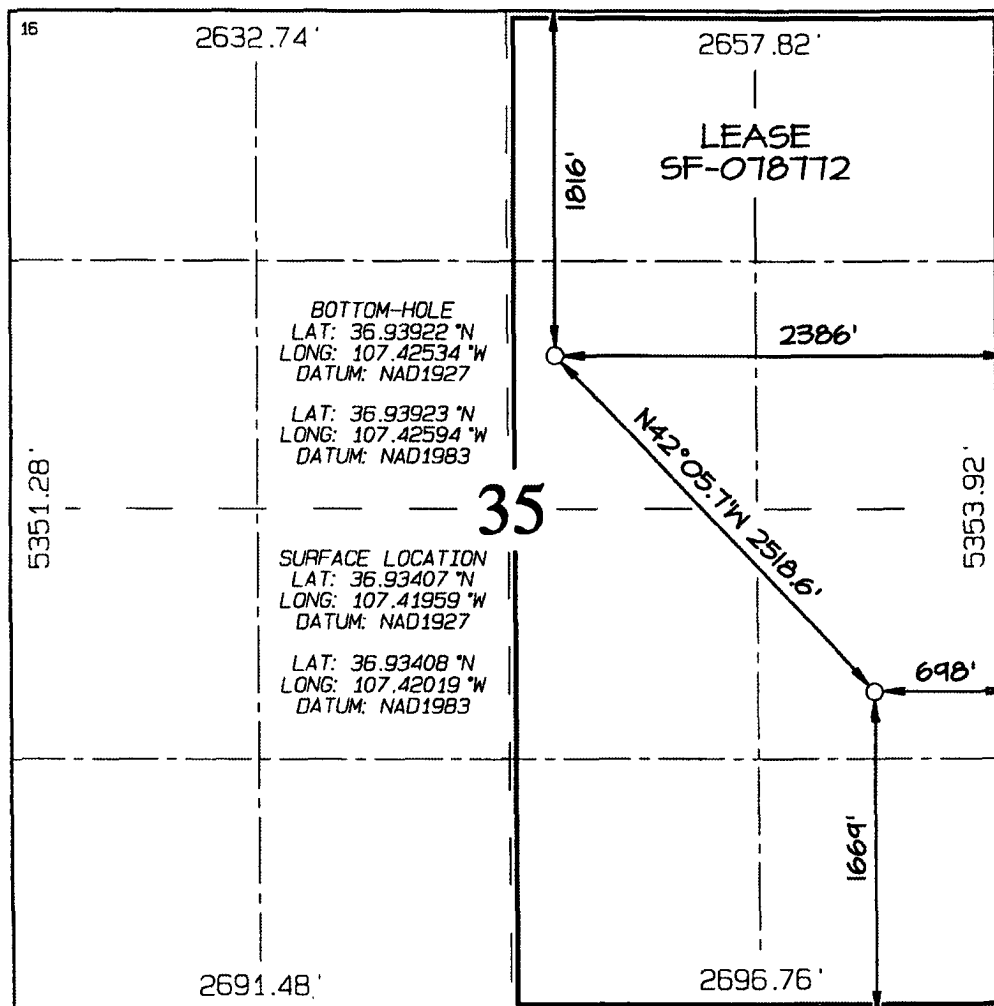
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	35	32N	6W		1669	SOUTH	698	EAST	RIO ARriba

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	35	32N	6W		1816	NORTH	2386	EAST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (E/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCVD AUG 26 '11 OIL CONS. DIV.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION DIST. 3



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.

Larry Higgins 8-25-11
Signature Date

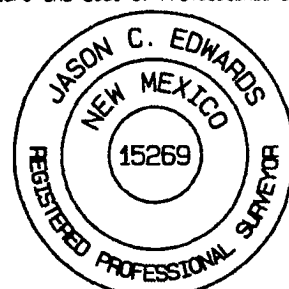
LARRY HIGGINS
Printed Name

¹⁸ SURVEYOR CERTIFICATION

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

Date Revised: AUGUST 23, 2011
Date of Survey: APRIL 23, 2011

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269



Williams Energy

30-039-29534

Rosa Unit #279A
Sec35 T32N-R6W - 279A

Rio Arriba Co. NM

GL: 6318' KB: 14'

PATHFINDER®

A Schlumberger Company

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
44B	1.0	3042.9	-2152.0	2164396.66	156051.50	Circle (Radius 50.0)
91B	1.0	-602.9	415.4	2160719.63	158573.94	Circle (Radius 50.0)
91C	1.0	1175.0	-1867.4	2162525.46	156313.11	Circle (Radius 50.0)
LAND	3040.0	325.9	-305.8	2161657.24	157864.22	Point
TD	3040.0	2152.6	-1879.6	2163503.14	156312.90	Point

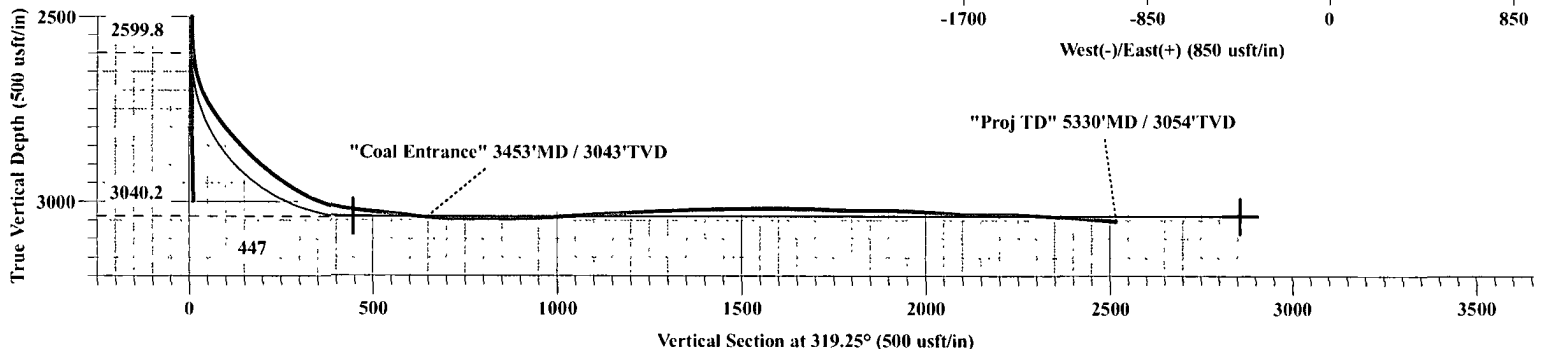
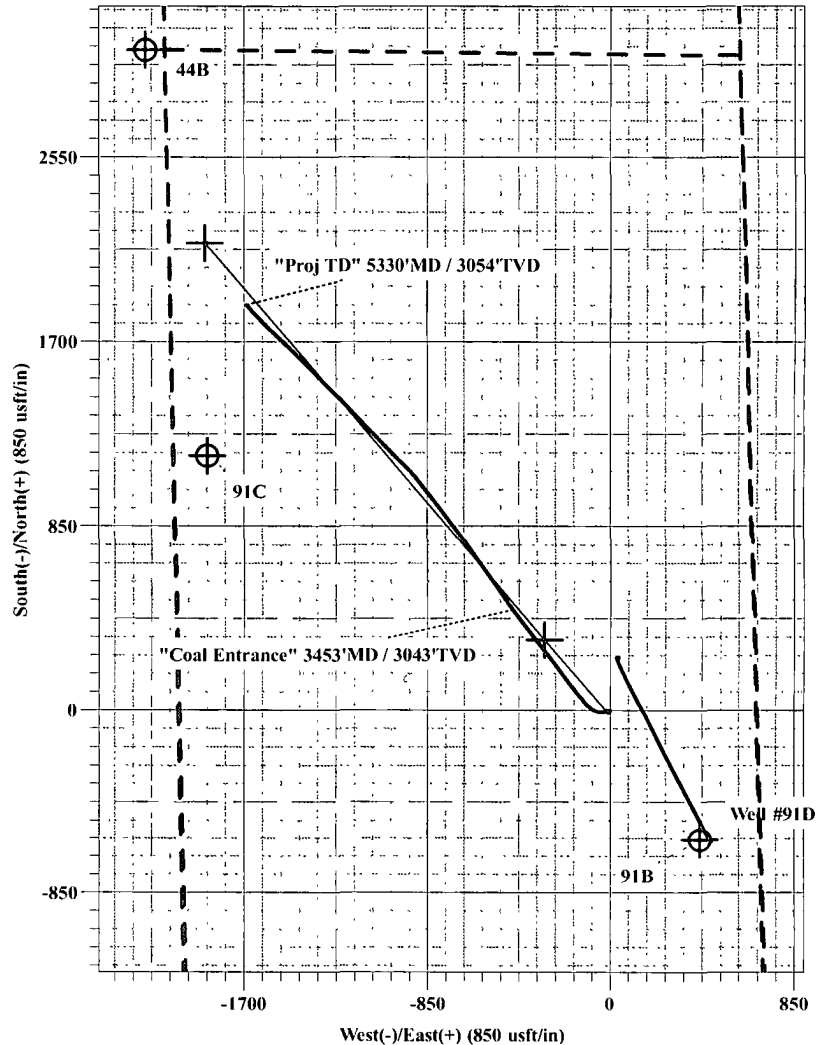
**EOW
No Hardlines
Crossed**

LEGEND

- Rosa Unit #279A, STK, STK V0
- ✕ Rosa Unit #279A, OH, OH V0
- △ Well #91D, Wellbore #1, Wellbore #1 V0
- Design #3

WELL DETAILS Rosa Unit #279A

Northing	Easting	6318.0	Latitude	Longitude
2161327.62	158165.99	36° 56' 2.648 N	107° 25' 10.528 W	



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
2600.0	0.61	207.36	2599.8	-3.6	-16.2	0.00	0.00	7.8	
3290.9	90.00	319.25	3040.2	325.9	-305.8	13.06	111.89	446.6	
5702.1	90.00	319.25	3040.0	2152.6	-1879.6	0.00	0.00	2857.7	TD

Plan: Design #3 (Rosa Unit #279A/STK)

Created By: Frank C. Scardino

Date: 8/7/2011

Williams Energy

Rio Arriba Co. NM

Sec35 T32N-R6W - 279A

Rosa Unit #279A

STK

Design: STK

Standard Survey Report

19 August, 2011

Survey Report

Company:	Williams Energy	Local Co-ordinate Reference:	Site Sec35 T32N-R6W - 279A
Project:	Rio Arriba Co. NM	TVD Reference:	WELL @ 6332 0usft (Original Well Elev)
Site:	Sec35 T32N-R6W - 279A	MD Reference:	WELL @ 6332 0usft (Original Well Elev)
Well:	Rosa Unit #279A	North Reference:	True
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	Database:	EDM 5000 1' Single User Db

Project	Rio Arriba Co. NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico Central 3002		

Site	Sec35 T32N-R6W - 279A		
Site Position:		Northing:	2,161,327.61 usft
From:	Lat/Long	Easting:	158,166.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 56' 2.648 N
		Longitude:	107° 25' 10.528 W
		Grid Convergence:	-0.70 °

Well	Rosa Unit #279A		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36° 56' 2.648 N
		Longitude:	107° 25' 10.528 W
		Ground Level:	6,318.0 usft

Wellbore	STK		
Magnetics:	Model Name	Sample Date	Declination
	IGRF2010	06/03/11	(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
			9.78
			63.69
			50,896

Design	STK		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			319.25

Survey Program	Date 08/19/11		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
200.0	5,330.0	Survey #1 (STK)	MWD
			Description
			MWD - Standard

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
200.0	0.41	161.55	200.0	-0.7	0.2	-0.7	0.21	0.21	0.00
400.0	1.04	213.44	400.0	-2.9	-0.5	-1.8	0.43	0.32	25.95
600.0	1.19	213.49	599.9	-6.1	-2.7	-2.9	0.08	0.08	0.03
800.0	1.09	223.54	799.9	-9.2	-5.1	-3.6	0.11	-0.05	5.03
1,000.0	0.78	229.06	999.9	-11.5	-7.5	-3.8	0.16	-0.16	2.76
1,200.0	0.42	304.59	1,199.9	-12.0	-9.1	-3.1	0.39	-0.18	37.77
1,400.0	0.40	304.59	1,399.9	-11.2	-10.3	-1.7	0.01	-0.01	0.00
1,600.0	0.91	328.17	1,599.9	-9.4	-11.7	0.5	0.28	0.26	11.79
1,800.0	1.33	333.34	1,799.8	-6.0	-13.6	4.3	0.22	0.21	2.59

Survey Report

Company:	Williams Energy	Local Co-ordinate Reference:	Site Sec35 T32N-R6W - 279A
Project:	Rio Arriba Co. NM	TVD Reference:	WELL @ 6332 0usft (Original Well Elev)
Site:	Sec35 T32N-R6W - 279A	MD Reference:	WELL @ 6332 0usft (Original Well Elev)
Well:	Rosa Unit #279A	North Reference:	True
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	Database:	EDM 5000 1 Single User Db

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)
2,000 0	0 80	323 77	1,999 8	-2 8	-15 5	8 0	0 28	-0 27	-4 79
2,200 0	0 38	8 30	2,199 8	-1 0	-16 2	9 8	0 30	-0 21	22 27
2,400 0	0 37	151 05	2,399 8	-0 9	-15 8	9 6	0 36	-0 01	71 38
2,430 0	0 67	152 50	2,429 8	-1 2	-15 6	9 3	1 00	1 00	4 83
2,459 0	0 45	168 57	2,458 8	-1 4	-15 5	9 1	0 93	-0 76	55 41
2,490 0	0 60	166 74	2,489 8	-1 7	-15 5	8 8	0 49	0 48	-5 90
2,525 0	2 96	232 21	2,524 7	-2 4	-16 2	8 7	7 90	6 74	187 06
2,573 0	11 70	246 52	2,572 3	-5 1	-21 6	10 2	18 46	18 21	29 81
2,600 0	13 89	254 56	2,598 6	-7 1	-27 3	12 4	10 44	8 11	29 78
2,633 0	17 41	264 40	2,630 4	-8 6	-36 0	17 0	13 32	10 67	29 82
2,662 0	20 31	270 32	2,657 9	-9 0	-45 3	22 8	11 97	10 00	20 41
2,694 0	24 36	282 94	2,687 5	-7 5	-57 3	31 7	19 55	12 66	39 44
2,726 0	29 02	293 86	2,716 1	-2 9	-70 9	44 1	21 09	14 56	34 13
2,758 0	32 45	301 93	2,743 6	4 8	-85 3	59 3	16 74	10 72	25 22
2,790 0	35 70	310 66	2,770 1	15 4	-99 7	76 7	18 33	10 16	27 28
2,822 0	39 22	318 81	2,795 5	29 1	-113 4	96 1	18 98	11 00	25 47
2,853 0	41 15	320 04	2,819 2	44 3	-126 4	116 1	6 73	6 23	3 97
2,886 0	42 47	319 07	2,843 8	61 1	-140 7	138 1	4 45	4 00	-2 94
2,917 0	44 23	319 16	2,866 3	77 2	-154 6	159 4	5 68	5 68	0 29
2,948 0	47 40	320 97	2,887 9	94 2	-168 9	181 6	11 05	10 23	5 84
2,980 0	50 83	322 47	2,908 9	113 2	-183 9	205 8	11 29	10 72	4 69
3,012 0	53 38	323 11	2,928 5	133 3	-199 1	231 0	8 12	7 97	2 00
3,043 0	55 49	323 44	2,946 6	153 5	-214 2	256 1	6 86	6 81	1 06
3,075 0	58 39	323 90	2,964 0	175 1	-230 1	282 9	9 14	9 06	1 44
3,106 0	62 17	323 66	2,979 4	196 8	-246 0	309 7	12 21	12 19	-0 77
3,139 0	66 13	323 10	2,993 8	220 7	-263 7	339 3	12 10	12 00	-1 70
3,170 0	70 70	322 31	3,005 2	243 6	-281 2	368 1	14 93	14 74	-2 55
3,202 0	77 03	322 23	3,014 1	267 9	-300 0	398 8	19 78	19 78	-0 25
3,234 0	81 87	322 25	3,019 9	292 8	-319 2	430 2	15 13	15 13	0 06
3,266 0	84 42	322 08	3,023 7	317 9	-338 7	461 9	7 99	7 97	-0 53
3,297 0	84 33	321 99	3,026 8	342 2	-357 7	492 7	0 41	-0 29	-0 29
3,329 0	84 15	321 53	3,030 0	367 2	-377 4	524 5	1 54	-0 56	-1 44
3,361 0	83 89	322 20	3,033 3	392 2	-397 1	556 3	2 24	-0 81	2 09
3,425 0	83 36	322 24	3,040 4	442 5	-436 0	619 8	0 83	-0 83	0 06
3,453 0	84 92	323 02	3,043 3	464 6	-452 9	647 6	6 24	5 59	2 79
"Coal Entrance" 3453' MD / 3043' TVD									
3,488 0	86 88	323 99	3,045 8	492 7	-473 7	682 4	6 24	5 59	2 77
3,552 0	90 92	325 75	3,047 0	545 0	-510 5	746 1	6 89	6 31	2 75
3,616 0	90 13	324 83	3,046 4	597 6	-546 9	809 8	1 89	-1 23	-1 44
3,680 0	89 43	323 80	3,046 7	649 6	-584 3	873 5	1 95	-1 09	-1 61
3,743 0	92 68	325 02	3,045 5	700 8	-620 9	936 2	5 51	5 16	1 94
3,807 0	93 74	324 19	3,041 9	752 9	-657 9	999 8	2 10	1 66	-1 30
3,871 0	93 12	322 66	3,038 1	804 2	-696 0	1,063 6	2 58	-0 97	-2 39
3,934 0	93 83	323 36	3,034 3	854 4	-733 8	1,126 3	1 58	1 13	1 11

Survey Report

Company:	Williams Energy	Local Co-ordinate Reference:	Site Sec35-T32N-R6W - 279A
Project:	Rio Arriba Co NM	TVD Reference:	WELL @ 6332 0usft (Original Well Elev)
Site:	Sec35-T32N-R6W - 279A	MD Reference:	WELL @ 6332 0usft (Original Well Elev)
Well:	Rosa Unit #279A	North Reference:	True
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	Database:	EDM 5000-1 Single User.Db

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)	
3,999 0	92 51	322 69	3,030 7	906 3	-772 9	1,191 1	2 28	-2 03	-1 03	
4,063 0	92 24	322 47	3,028 0	957 1	-811 7	1,254 9	0 54	-0 42	-0 34	
4,127 0	92 24	322 48	3,025 5	1,007 8	-850 7	1,318 8	0 02	0 00	0 02	
4,191 0	91 71	320 51	3,023 3	1,057 8	-890 5	1,382 7	3 19	-0 83	-3 08	
4,255 0	92 24	316 75	3,021 1	1,105 8	-932 8	1,446 6	5 93	0 83	-5 88	
4,320 0	90 75	314 57	3,019 4	1,152 3	-978 2	1,511 5	4 06	-2 29	-3 35	
4,384 0	89 16	314 93	3,019 5	1,197 3	-1,023 6	1,575 3	2 55	-2 48	0 56	
4,446 0	89 69	315 38	3,020 1	1,241 3	-1,067 4	1,637 1	1 12	0 85	0 73	
4,509 0	87 67	315 51	3,021 5	1,286 2	-1,111 5	1,699 9	3 21	-3 21	0 21	
4,571 0	88 20	314 98	3,023 8	1,330 2	-1,155 2	1,761 7	1 21	0 85	-0 85	
4,635 0	89 69	316 04	3,025 0	1,375 8	-1,200 0	1,825 6	2 86	2 33	1 66	
4,699 0	90 31	317 54	3,025 0	1,422 5	-1,243 8	1,889 5	2 54	0 97	2 34	
4,762 0	87 32	314 47	3,026 3	1,467 8	-1,287 6	1,952 4	6 80	-4 75	-4 87	
4,826 0	86 79	315 15	3,029 6	1,512 8	-1,332 9	2,016 1	1 35	-0 83	1 06	
4,889 0	86 35	314 55	3,033 3	1,557 2	-1,377 5	2,078 8	1 18	-0 70	-0 95	
4,954 0	89 25	315 07	3,035 8	1,602 9	-1,423 6	2,143 6	4 53	4 46	0 80	
5,018 0	91 28	315 00	3,035 5	1,648 2	-1,468 8	2,207 4	3 17	3 17	-0 11	
5,082 0	86 53	313 29	3,036 7	1,692 8	-1,514 7	2,271 1	7 89	-7 42	-2 67	
5,145 0	86 53	313 58	3,040 6	1,736 0	-1,560 4	2,333 7	0 46	0 00	0 46	
5,209 0	85 91	315 39	3,044 8	1,780 7	-1,605 9	2,397 3	2 98	-0 97	2 83	
5,267 0	85 74	317 39	3,049 0	1,822 6	-1,645 8	2,455 1	3 45	-0 29	3 45	
5,330 0	85 74	317 39	3,053 7	1,868 9	-1,688 3	2,517 9	0 00	0 00	0 00	
"Proj TD" 5330'MD / 3054'TVD										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,453 0	3,043 3	464 6	-452 9	"Coal Entrance" 3453'MD / 3043'TVD
5,330 0	3,053 7	1,868.9	-1,688 3	"Proj TD" 5330'MD / 3054'TVD

Checked By: _____ Approved By: _____ Date: _____