

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

Form C-101
May 27, 2004

Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address Energen Resources Corporation 2198 Bloomfield Highway Farmington, New Mexico 87401		² OGRID Number 162928
		³ API Number 30-039-30337
⁴ Property Code 21996	⁵ Property Name San Juan 32-5 Unit	⁶ Well No. 116S
⁹ Proposed Pool 1 BASIN FRUITLAND COAL		¹⁰ Proposed Pool 2 RCVD AUG 22 '07

⁷ Surface Location

OIL CONS. DIV.

UL or lot no	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
H	27	32N	6W		2180	North	190	East	Rio Arriba

⁸ Proposed 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
E	27	32N	6W		1700	North	760	West	Rio Arriba

Additional Well Location

¹¹ Work Type Code New Well	¹² Well Type Code Gas	¹³ Cable/Rotary Rotary	¹⁴ Lease Type Code Private	¹⁵ Ground Level Elevation 6412'
¹⁶ Multiple N	¹⁷ Proposed Depth 6370' (MD)	¹⁸ Formation Fruitland Coal	¹⁹ Contractor	²⁰ Spud Date 10/1/07
Depth to ground water >100'		Distance from nearest fresh water well 1000'		Distance from nearest surface water 250'
Pit Liner Synthetic ☐ 12 mils thick Clay ☐ Pit Volume 2000 bbls Drilling Method: Closed-Loop System ☐ Fresh Water ☒ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐				

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.25	9.625	32.3	0-200	125	0
8.75	7	23	0-4810	900	0
6.25	4.5	11.6	4363-6351	0	NA
6.25	4.5	11.6	4587-6371	0	NA
					(505) 325-6800

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

A surface casing will be set to 200' and cemented to surface. An intermediate casing string will be set to 4810' (MD). The 8.75" wellbore will be directionally drilled. Two windows will be milled by setting a whipstock, one from 4585-4595 and one from 4361-4371. After the 1st window is milled (4585-4595), a curve will be directionally drilled and landed in the lower FC. A 4.5" pre-drilled liner will be ran into this lateral and dropped off 2-3' outside the 7" intermediate casing window. The same procedure will be followed for the upper window and FC.

NOTIFY AZTEC OCD 24 HRS.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒ a general permit ☐, or an (attached) alternative OCD approved plan ☐.
Signature: *Nathan Smith*

Printed name: **Nathan Smith**

Title: **Drilling Engineer**

E-mail Address: **nsmith@energen.com**

Date: **8/14/07** Phone: **505.325.6800** Conditions of Approval:

PRIOR TO CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

Attached ☐

Hold C-104 for Directional Surveys

P.A.

8-31-07-a1

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised October 12, 2005

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

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

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT

RCVD AUG 22 '07
OIL CONS. DIV.

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30337	² Pool Code 71629	³ Pool Name BASIN FRUITLAND COAL
⁴ Property Code 21996	⁵ Property Name SAN JUAN 32-5 UNIT	⁶ Well Number 116 S
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6412'

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
H	27	32N	6W		2180'	NORTH	190'	EAST	RIO ARRIBA

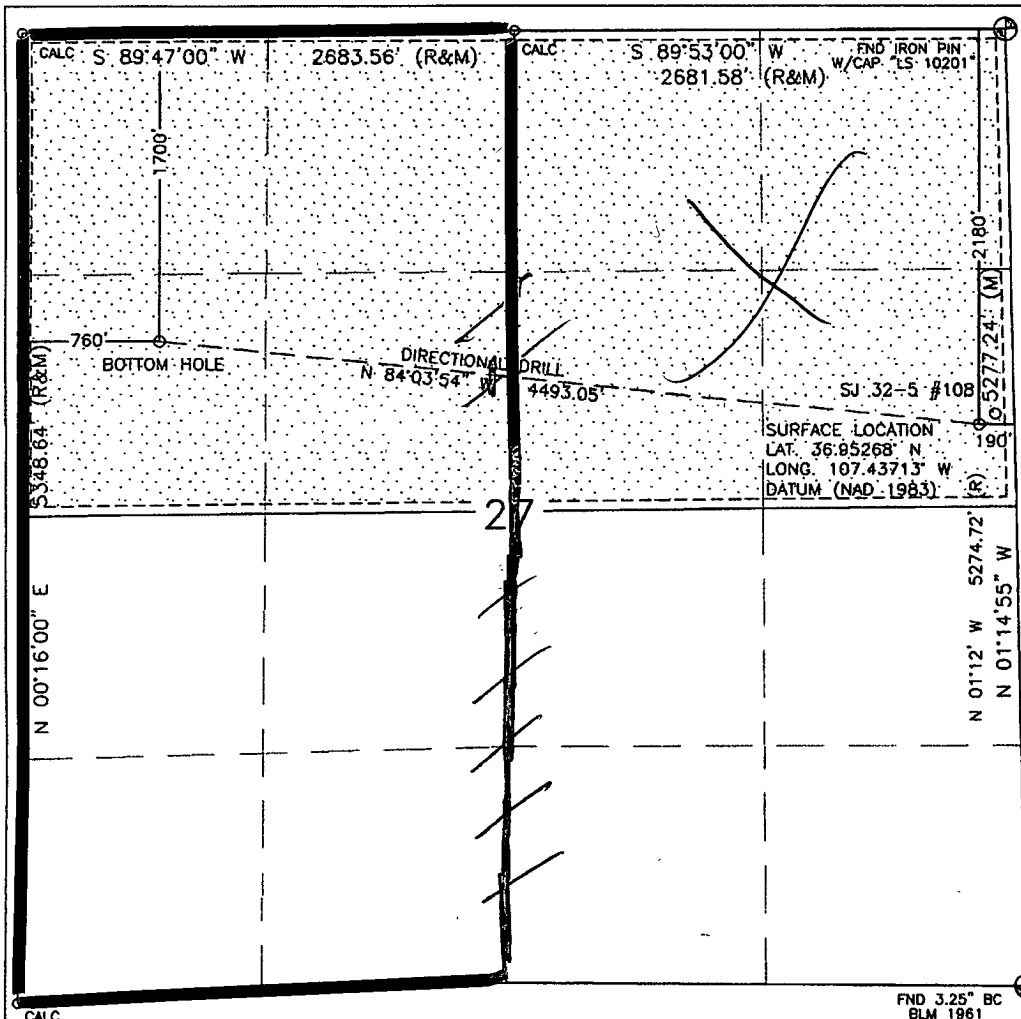
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	27	32N	6W		1700'	NORTH	760'	WEST	RIO ARRIBA

¹² Dedicated Acres W/2 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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

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 or a compulsory pooling order heretofore entered by the division.

Nathan Smith 8/14/07
Signature Date

Nathan Smith
Printed Name

18 SURVEYOR CERTIFICATION

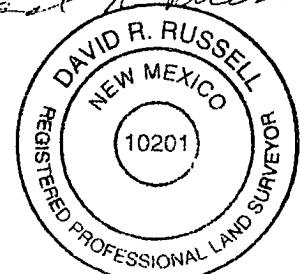
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MAY 2, 2007

Date of Survey

Signature and Seal of Professional Surveyor:

David R. Russell



DAVID RUSSELL

Certificate Number 10201

Project: SJ BR - NW S27, T32N, R6W
Site: Eul Canyon
Well: San Juan 32-5 Unit #116S
Wellbore: Motherbore
Plan: Preliminary Plan (San Juan 32-5 Unit #116S/Motherbore)

PROJECT DETAILS: SJ BR - NW S27, T32N, R6W

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone

System Datum: Mean Sea Level

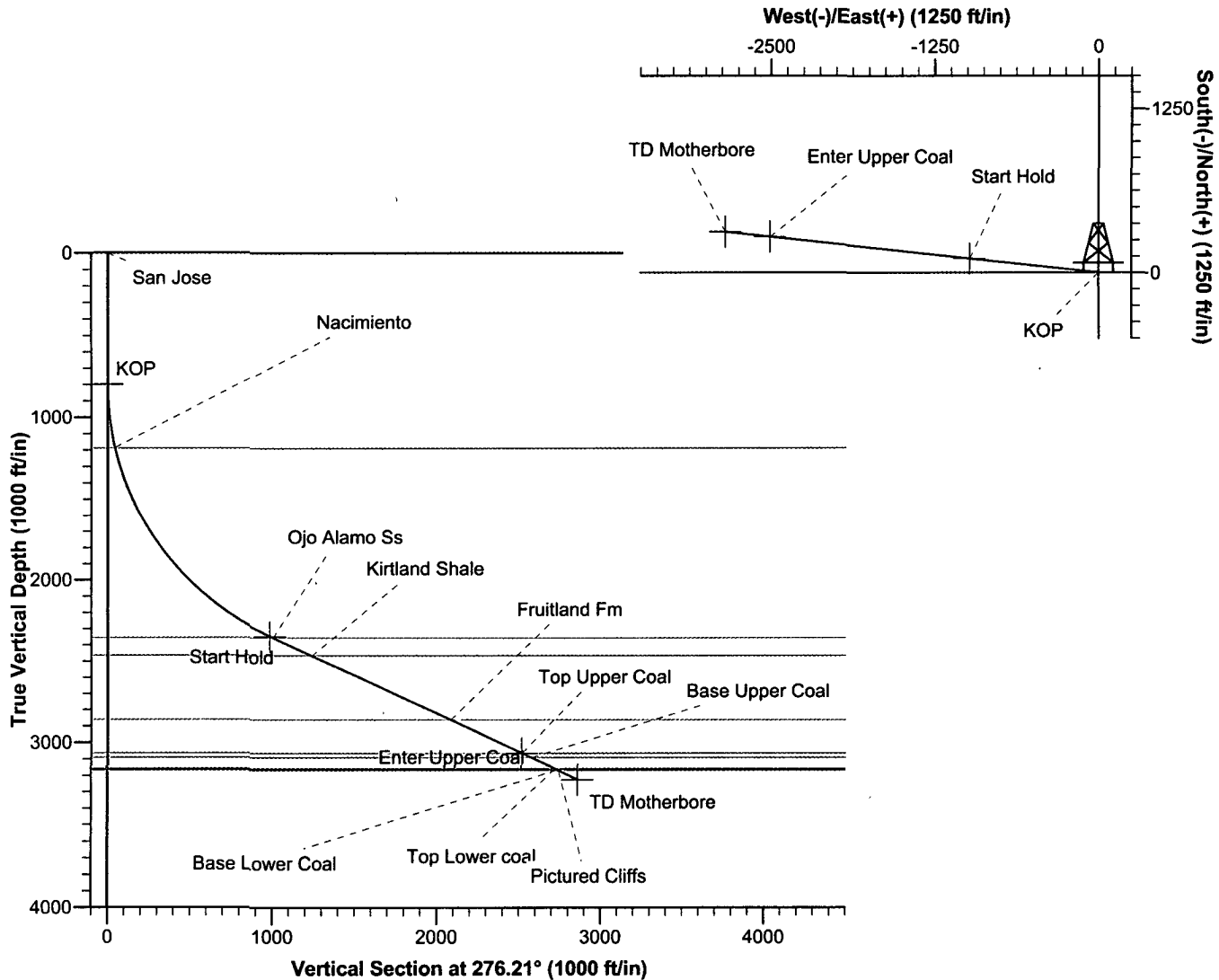


Azimuths to True North
Magnetic North: 10.24°

Magnetic Field
Strength: 51302.4snT
Dip Angle: 63.81°
Date: 8/16/2007
Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	KOP
3	2740.2	65.00	276.21	2350.0	106.8	-981.7	3.35	276.21	987.5	Start Hold
4	4432.0	65.00	276.21	3065.0	272.7	-2506.0	0.00	0.00	2520.8	Enter Upper Coal
5	4810.4	64.73	276.19	3225.7	309.7	-2846.5	0.07	-175.18	2863.3	TD Motherbore



Energen
Planned Wellpath



Company:	Energen Resources	Local Co-ordinate Reference:	Well San Juan 32-5 Unit #116S
Project:	SJ BR - NW S27, T32N, R6W	TVD Reference:	KB @ 6424.0ft (Drilling Rig)
Site:	Eul Canyon	MD Reference:	KB @ 6424.0ft (Drilling Rig)
Well:	San Juan 32-5 Unit #116S	North Reference:	True
Wellbore:	Motherbore	Survey Calculation Method:	Minimum Curvature
Design:	Preliminary Plan	Database:	EDM 2003.16 Single User Db

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Enter Upper Coal - plan hits target - Point	0.00	0.00	3,065.0	272.7	-2,506.0	2,168,533.38	1,291,046.79	36° 57' 12.343 N	107° 26' 44.540 W
KOP - plan hits target - Point	0.00	0.00	800.0	0.0	0.0	2,168,229.49	1,293,549.20	36° 57' 9.648 N	107° 26' 13.668 W
TD Motherbore - plan hits target - Point	0.00	0.00	3,225.7	309.7	-2,846.5	2,168,574.62	1,290,706.78	36° 57' 12.709 N	107° 26' 48.735 W
Start Hold - plan hits target - Point	0.00	0.00	2,350.0	106.8	-981.7	2,168,348.51	1,292,568.91	36° 57' 10.704 N	107° 26' 25.762 W

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,679.7	3,170.0	Pictured Cliffs		0.00		
4,656.1	3,160.0	Top Lower coal		0.00		
4,670.3	3,166.0	Base Lower Coal		0.00		
4,493.5	3,091.0	Base Upper Coal		0.00		
1.0	1.0	San Jose		0.00		
3,017.1	2,467.0	Kirtland Shale		0.00		
3,951.9	2,862.0	Fruitland Fm		0.00		
1,190.4	1,187.0	Nacimiento		0.00		
4,432.0	3,065.0	Top Upper Coal		0.00		
2,756.8	2,357.0	Ojo Alamo Ss		0.00		

Checked By: _____	Approved By: _____	Date: _____
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Project: SJ BR - NW S27, T32N, R6W
Site: Eul Canyon
Well: San Juan 32-5 Unit #116S
Wellbore: Lower Lateral
Plan: Preliminary Plan (San Juan 32-5 Unit #116S/Lower Lateral)

PROJECT DETAILS: SJ BR - NW S27, T32N, R6W

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone

System Datum: Mean Sea Level

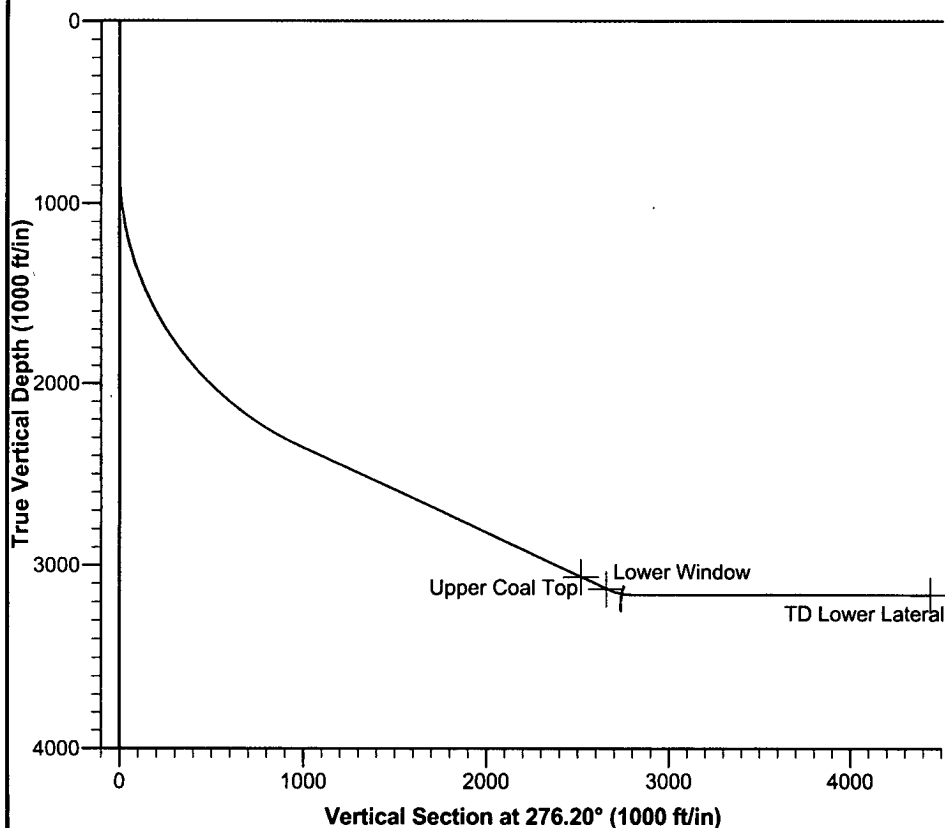
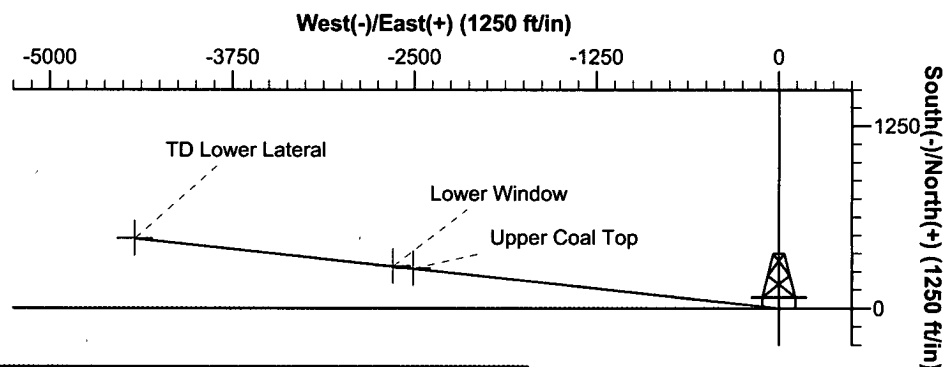


Azimuths to True North
Magnetic North: 10.24°

Magnetic Field
Strength: 51302.4snT
Dip Angle: 63.81°
Date: 8/16/2007
Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	4585.5	64.89	276.20	3130.0	287.7	-2644.2	0.00	0.00	2659.8	
2	4738.6	90.00	276.20	3163.0	303.7	-2791.6	16.40	-0.01	2808.0	
3	6371.6	90.00	276.19	3163.0	480.0	-4415.0	0.00	0.00	4441.0	TD Lower Lateral



Project: SJ BR - NW S27, T32N, R6W
Site: Eul Canyon
Well: San Juan 32-5 Unit #116S
Wellbore: Upper Lateral
Plan: Preliminary Plan (San Juan 32-5 Unit #116S/Upper Lateral)

PROJECT DETAILS: SJ BR - NW S27, T32N, R6W

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone

System Datum: Mean Sea Level



Azimuths to True North
Magnetic North: 10.24°

Magnetic Field
Strength: 51302.4snT
Dip Angle: 63.81°
Date: 8/16/2007
Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	4361.4	65.01	276.21	3035.0	265.7	-2442.4	0.00	0.00	2456.8	
2	4547.7	90.00	276.21	3075.0	285.2	-2621.8	13.42	0.00	2637.2	
3	6351.4	90.00	276.19	3075.0	480.0	-4415.0	0.00	-90.00	4441.0	TD Upper Lateral

