

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

"AS DRILLED"

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 30-039-27263	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 101 S H
⁷ OGRID No. 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 6331'

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
P	23	32N	6W		710'	South	780'	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
J	23	32N	6W		1496'	South	2503'	East	Rio Arriba

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

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 Producing Interval: From the milled window in the original 7" casing @ 726' FSL, 786' FEL, to the BHL @ 1496' FSL, 2503' FEL. 23 BHL 2503' 1496' Entry Point 977' 780' SHL 710' 822'	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 5-2-11 Date Stephen Byers Printed Name sbyers@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 25, 2002 Date of Survey Signature and Seal of Professional Surveyor: Jason C. Edwards Certificate Number 15269	

A



RCVD APR 27 '11

OIL CONS. DIV.

DIST. 3

Energen Resources

**Rio Arriba County
Eul Canyon (True North)
San Juan 32-5 Unit #101S
Re-Entry Sidetrack OPE FTC**

Design: Re-Entry Sidetrack OPE FTC

Energen Planning Report

16 April, 2011

PATHFINDER
A Schlumberger Company

Company:	Energen Resources	Local Co-ordinate Reference:	Well San Juan 32-5 Unit #101S
Project:	Rio Arriba County	TVD Reference:	RKB-15' @ 6346.00usft (Original Well Elev)
Site:	Eul Canyon (True North)	MD Reference:	RKB-15' @ 6346.00usft (Original Well Elev)
Well:	San Juan 32-5 Unit #101S	North Reference:	True
Wellbore:	Re-Entry Sidetrack OPE FTC	Survey Calculation Method:	Minimum Curvature
Design:	Re-Entry Sidetrack OPE FTC	Database:	EDM 5000.1 Single User Db

Project	Rio Arriba County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Eul Canyon (True North)		
Site Position:		Northing:	2,171,070.210 usft
From:	Map	Easting:	1,298,517.200 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	36° 57' 38.340 N
		Longitude:	107° 25' 12.900 W
		Grid Convergence:	-0.70 °

Well	San Juan 32-5 Unit #101S		
Well Position	+N/-S	0.00 usft	Northing: 2,171,070.210 usft
	+E/-W	0.00 usft	Easting: 1,298,517.200 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	36° 57' 38.340 N
		Longitude:	107° 25' 12.900 W
		Ground Level:	6,331.00 usft

Wellbore	Re-Entry Sidetrack OPE FTC				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/05/11	9.80	63.72	50,927

Design	Re-Entry Sidetrack OPE FTC			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 2,600.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	294.52

Survey Program	Date 04/16/11				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.00	2,600.00	GYRO (OH)	CB-GYRO-MS	Camera based gyro multishot	
2,714.00	4,745.00	MWD (Re-Entry Sidetrack OPE FTC)	MWD	MWD - Standard	

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.12	145.41	200.00	-0.17	0.12	0.06	-0.18
400.00	0.35	136.57	400.00	-0.79	0.66	0.12	-0.93
600.00	0.34	106.81	599.99	-1.40	1.65	0.09	-2.08
800.00	0.34	75.00	799.99	-1.42	2.79	0.09	-3.13
1,000.00	0.52	348.00	999.99	-0.38	3.17	0.30	-3.04
1,200.00	0.64	336.48	1,199.98	1.53	2.54	0.08	-1.67
1,400.00	0.68	359.77	1,399.96	3.74	2.09	0.13	-0.34
1,600.00	0.43	11.25	1,599.95	5.67	2.23	0.14	0.32
1,800.00	0.78	346.94	1,799.94	7.73	2.07	0.21	1.33
2,000.00	1.11	350.77	1,999.92	10.97	1.45	0.17	3.23

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon (True North)
Well: San Juan 32-5 Unit #101S
Wellbore: Re-Entry Sidetrack OPE FTC
Design: Re-Entry Sidetrack OPE FTC

Local Co-ordinate Reference: Well San Juan 32-5 Unit #101S
TVD Reference: RKB-15' @ 6346.00usft (Original Well Elev)
MD Reference: RKB-15' @ 6346.00usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)
2,200.00	0.74	311.79	2,199.89	13.74	0.17	0.35	5.54
2,400.00	0.83	268.74	2,399.87	14.57	-2.24	0.29	8.08
2,600.00	0.68	296.54	2,599.86	15.07	-4.75	0.20	10.57
2,714.00	0.74	330.80	2,713.85	16.01	-5.71	0.37	11.84
2,743.77	5.63	292.00	2,743.57	16.73	-7.16	17.05	13.46
2,774.56	12.66	290.17	2,773.95	18.46	-11.73	22.85	18.34
2,805.31	19.79	297.50	2,803.45	22.03	-19.52	24.08	26.91
2,835.56	27.00	297.82	2,831.20	27.60	-30.15	23.84	38.89
2,865.82	34.29	299.12	2,857.22	34.97	-43.69	24.19	54.27
2,896.14	41.42	299.74	2,881.14	44.11	-59.88	23.55	72.79
2,926.94	48.63	298.97	2,902.90	54.78	-78.87	23.48	94.49
2,957.27	55.93	298.65	2,921.44	66.33	-99.88	24.08	118.40
2,988.07	62.26	296.94	2,937.25	78.63	-123.25	21.10	144.77
3,018.82	66.65	292.45	2,950.51	90.20	-148.45	19.42	172.49
3,049.00	72.63	294.24	2,961.01	101.41	-174.41	20.58	200.77
3,074.67	75.76	293.86	2,968.00	111.48	-196.96	12.27	225.46
Top of Coal-3074.67°MD,75.76°INC,293.86°AZI,2968.00°TVD							
3,076.00	75.92	293.84	2,968.33	112.00	-198.14	12.27	226.75
3,080.00	76.41	293.78	2,969.28	113.57	-201.69	12.34	230.64
3,110.00	80.11	294.74	2,975.39	125.63	-228.47	12.72	260.00
3,140.00	84.15	293.92	2,979.49	137.87	-255.54	13.74	289.71
3,171.00	88.90	293.77	2,981.37	150.38	-283.83	15.33	320.65
3,201.00	91.19	291.70	2,981.35	161.97	-311.50	10.29	350.63
3,232.00	90.48	289.73	2,980.90	172.94	-340.49	6.75	381.55
3,263.00	91.01	290.48	2,980.49	183.59	-369.60	2.96	412.46
3,293.00	90.48	292.35	2,980.10	194.54	-397.52	6.48	442.41
3,324.00	90.92	293.81	2,979.72	206.69	-426.04	4.92	473.40
3,354.00	90.40	293.92	2,979.38	218.83	-453.47	1.77	503.39
3,385.00	91.10	294.13	2,978.97	231.45	-481.78	2.36	534.39
3,416.00	90.75	294.09	2,978.47	244.11	-510.08	1.14	565.39
3,446.00	90.84	295.08	2,978.06	256.59	-537.35	3.31	595.38
3,477.00	91.10	295.67	2,977.53	269.88	-565.36	2.08	626.37
3,508.00	91.54	295.92	2,976.82	283.36	-593.26	1.63	657.36
3,538.00	91.19	294.76	2,976.10	296.20	-620.37	4.04	687.35
3,569.00	89.34	294.66	2,975.96	309.16	-648.53	5.98	718.34
3,599.00	87.93	293.73	2,976.67	321.45	-675.88	5.63	748.33
3,630.00	88.55	294.09	2,977.63	334.00	-704.21	2.31	779.32
3,661.00	88.37	294.17	2,978.46	346.67	-732.49	0.64	810.31
3,690.00	87.85	293.80	2,979.42	358.46	-758.97	2.20	839.29
3,721.00	88.11	294.50	2,980.51	371.13	-787.24	2.41	870.27
3,751.00	88.29	293.32	2,981.45	383.28	-814.65	3.98	900.25
3,782.00	88.20	292.18	2,982.40	395.27	-843.23	3.69	931.22
3,812.00	88.46	291.65	2,983.27	406.46	-871.05	1.97	961.18
3,843.00	88.20	291.08	2,984.18	417.75	-899.90	2.02	992.12
3,874.00	87.67	291.14	2,985.29	428.90	-928.80	1.72	1,023.04

Company: Energen Resources
Project: Rio Arriba County
Site: Eul Canyon (True North)
Well: San Juan 32-5 Unit #101S
Wellbore: Re-Entry Sidetrack OPE FTC
Design: Re-Entry Sidetrack OPE FTC

Local Co-ordinate Reference: Well San Juan 32-5 Unit #101S
TVD Reference: RKB-15' @ 6346.00usft (Original Well Elev)
MD Reference: RKB-15' @ 6346.00usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)
3,904.00	88.29	291.95	2,986.35	439.91	-956.69	3.40	1,052.98
3,935.00	89.34	293.37	2,986.99	451.85	-985.29	5.70	1,083.96
3,965.00	91.28	294.46	2,986.83	464.01	-1,012.71	7.42	1,113.95
3,997.00	91.10	295.14	2,986.17	477.43	-1,041.75	2.20	1,145.95
4,029.00	90.84	294.86	2,985.62	490.96	-1,070.75	1.19	1,177.94
4,061.00	89.87	294.11	2,985.43	504.22	-1,099.87	3.83	1,209.94
4,092.00	91.28	295.15	2,985.12	517.14	-1,128.05	5.65	1,240.94
4,124.00	91.28	294.14	2,984.40	530.48	-1,157.13	3.16	1,272.93
4,156.00	89.96	293.60	2,984.05	543.42	-1,186.39	4.46	1,304.92
4,188.00	90.66	294.47	2,983.88	556.46	-1,215.61	3.49	1,336.92
4,219.00	91.45	295.75	2,983.31	569.61	-1,243.68	4.85	1,367.91
4,251.00	91.89	295.81	2,982.38	583.52	-1,272.48	1.39	1,399.89
4,283.00	92.24	295.56	2,981.22	597.38	-1,301.30	1.34	1,431.86
4,315.00	90.22	292.56	2,980.54	610.42	-1,330.51	11.30	1,463.85
4,347.00	89.25	288.88	2,980.69	621.74	-1,360.43	11.89	1,495.77
4,378.00	89.60	289.27	2,981.00	631.87	-1,389.73	1.69	1,526.63
4,410.00	88.81	289.14	2,981.44	642.40	-1,419.94	2.50	1,558.49
4,442.00	89.87	291.35	2,981.81	653.47	-1,449.96	7.66	1,590.40
4,474.00	90.40	292.98	2,981.73	665.54	-1,479.60	5.36	1,622.37
4,506.00	90.22	293.18	2,981.56	678.09	-1,509.04	0.84	1,654.36
4,537.00	90.57	294.69	2,981.35	690.66	-1,537.37	5.00	1,685.35
4,568.00	90.13	295.87	2,981.16	703.90	-1,565.40	4.06	1,716.35
4,600.00	90.84	298.83	2,980.89	718.60	-1,593.82	9.51	1,748.31
4,632.00	89.60	297.94	2,980.76	733.81	-1,621.97	4.77	1,780.23
4,663.00	88.29	297.49	2,981.33	748.23	-1,649.41	4.47	1,811.18
4,686.00	88.20	297.21	2,982.04	758.79	-1,669.83	1.28	1,834.14
4,745.00	88.20	297.21	2,983.89	785.75	-1,722.27	0.00	1,893.05

Projection to Bit-4745.00'MD,88.20°INC,297.21°AZI,2983.89'TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,074.67	2,968.00	111.48	-196.96	Top of Coal-3074.67'MD,75.76°INC,293.86°AZI,2968.00'TVD
4,745.00	2,983.89	785.75	-1,722.27	Projection to Bit-4745.00'MD,88.20°INC,297.21°AZI,2983.89'TVD

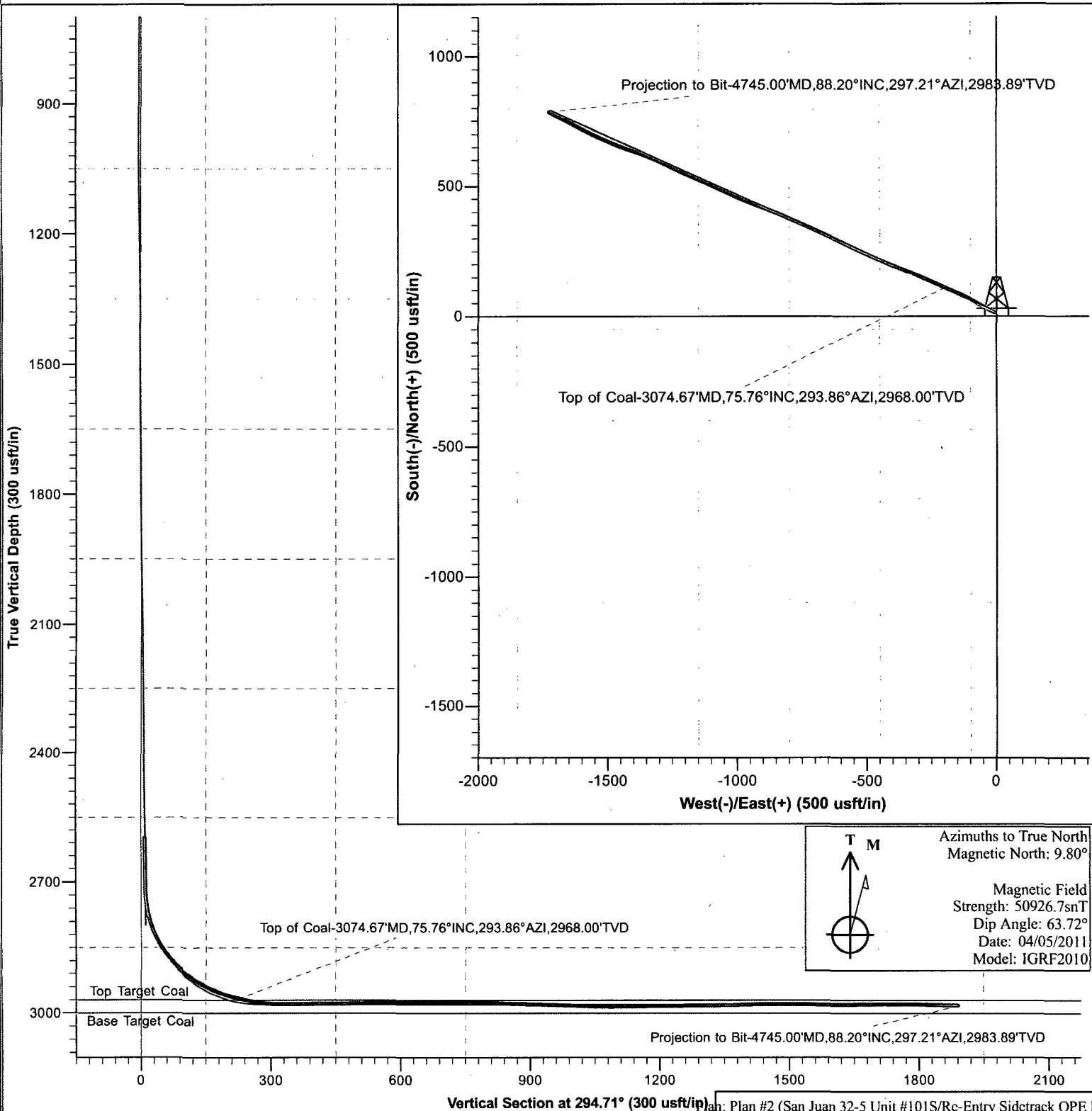
Checked By: _____ Approved By: _____ Date: _____

EOW

WELL DETAILS: San Juan 32-5 Unit #101S

Ground Elevation: 6331.00
 RKB Elevation: RKB-15' @ 6346.00usft (Original Well Elev)
 Rig Name: Original Well Elev

+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	2171070.210	1298517.200	36° 57' 38.340 N	107° 25' 12.900 W



Re-Entry Sidetrack OPE FTC.txt

H HEADER INFORMATION

H COMPANY : Energen Resources
 H FIELD : Rio Arriba County
 H SITE : Eu1 Canyon (True North)
 H WELL : San Juan 32-5 Unit #101S
 H WELLPATH: Re-Entry Sidetrack OPE FTC
 H DEPTHUNT: usft
 H SURVDATE: 04/16/2011

H WELL INFORMATION

H WELL EW MAP : 1298517.20
 H WELL NS MAP : 2171070.21
 H DATUM ELEV : 6346.00
 H VSECT ANGLE : 294.52
 H VSECT NORTH : 0.00
 H VSECT EAST : 0.00

H SURVEY TYPE INFORMATION

H 200.00 - 2600.00 GYRO : CB-GYRO-MS
 H 2714.00 - 4745.00 MWD : MWD

H SURVEY LIST

H MD	INC	AZI	TVD	NS	EW
0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.12	145.41	200.00	-0.17	0.12
400.00	0.35	136.57	400.00	-0.79	0.66
600.00	0.34	106.81	599.99	-1.40	1.65
800.00	0.34	75.00	799.99	-1.42	2.79
1000.00	0.52	348.00	999.99	-0.38	3.17
1200.00	0.64	336.48	1199.98	1.53	2.54
1400.00	0.68	359.77	1399.96	3.74	2.09
1600.00	0.43	11.25	1599.95	5.67	2.23
1800.00	0.78	346.94	1799.94	7.73	2.07
2000.00	1.11	350.77	1999.92	10.97	1.45
2200.00	0.74	311.79	2199.89	13.74	0.17
2400.00	0.83	268.74	2399.87	14.57	-2.24
2600.00	0.68	296.54	2599.86	15.07	-4.75
2714.00	0.74	330.80	2713.85	16.01	-5.71
2743.77	5.63	292.00	2743.57	16.73	-7.16
2774.56	12.66	290.17	2773.95	18.46	-11.73
2805.31	19.79	297.50	2803.45	22.03	-19.52
2835.56	27.00	297.82	2831.20	27.60	-30.15
2865.82	34.29	299.12	2857.22	34.97	-43.69
2896.14	41.42	299.74	2881.14	44.11	-59.88
2926.94	48.63	298.97	2902.90	54.78	-78.87
2957.27	55.93	298.65	2921.44	66.33	-99.88
2988.07	62.26	296.94	2937.25	78.63	-123.25
3018.82	66.65	292.45	2950.51	90.20	-148.45
3049.00	72.63	294.24	2961.01	101.41	-174.41
3076.00	75.92	293.84	2968.33	112.00	-198.14
3080.00	76.41	293.78	2969.28	113.57	-201.69
3110.00	80.11	294.74	2975.39	125.63	-228.47
3140.00	84.15	293.92	2979.49	137.87	-255.54
3171.00	88.90	293.77	2981.37	150.38	-283.83
3201.00	91.19	291.70	2981.35	161.97	-311.50
3232.00	90.48	289.73	2980.90	172.94	-340.49
3263.00	91.01	290.48	2980.49	183.59	-369.60
3293.00	90.48	292.35	2980.10	194.54	-397.52
3324.00	90.92	293.81	2979.72	206.69	-426.04
3354.00	90.40	293.92	2979.38	218.83	-453.47
3385.00	91.10	294.13	2978.97	231.45	-481.78
3416.00	90.75	294.09	2978.47	244.11	-510.08
3446.00	90.84	295.08	2978.06	256.59	-537.35

Re-Entry Sidetrack OPE FTC.txt

3477.00	91.10	295.67	2977.53	269.88	-565.36
3508.00	91.54	295.92	2976.82	283.36	-593.26
3538.00	91.19	294.76	2976.10	296.20	-620.37
3569.00	89.34	294.66	2975.96	309.16	-648.53
3599.00	87.93	293.73	2976.67	321.45	-675.88
3630.00	88.55	294.09	2977.63	334.00	-704.21
3661.00	88.37	294.17	2978.46	346.67	-732.49
3690.00	87.85	293.80	2979.42	358.46	-758.97
3721.00	88.11	294.50	2980.51	371.13	-787.24
3751.00	88.29	293.32	2981.45	383.28	-814.65
3782.00	88.20	292.18	2982.40	395.27	-843.23
3812.00	88.46	291.65	2983.27	406.46	-871.05
3843.00	88.20	291.08	2984.18	417.75	-899.90
3874.00	87.67	291.14	2985.29	428.90	-928.80
3904.00	88.29	291.95	2986.35	439.91	-956.69
3935.00	89.34	293.37	2986.99	451.85	-985.29
3965.00	91.28	294.46	2986.83	464.01	-1012.71
3997.00	91.10	295.14	2986.17	477.43	-1041.75
4029.00	90.84	294.86	2985.62	490.96	-1070.75
4061.00	89.87	294.11	2985.43	504.22	-1099.87
4092.00	91.28	295.15	2985.12	517.14	-1128.05
4124.00	91.28	294.14	2984.40	530.48	-1157.13
4156.00	89.96	293.60	2984.05	543.42	-1186.39
4188.00	90.66	294.47	2983.88	556.46	-1215.61
4219.00	91.45	295.75	2983.31	569.61	-1243.68
4251.00	91.89	295.81	2982.38	583.52	-1272.48
4283.00	92.24	295.56	2981.22	597.38	-1301.30
4315.00	90.22	292.56	2980.54	610.42	-1330.51
4347.00	89.25	288.88	2980.69	621.74	-1360.43
4378.00	89.60	289.27	2981.00	631.87	-1389.73
4410.00	88.81	289.14	2981.44	642.40	-1419.94
4442.00	89.87	291.35	2981.81	653.47	-1449.96
4474.00	90.40	292.98	2981.73	665.54	-1479.60
4506.00	90.22	293.18	2981.56	678.09	-1509.04
4537.00	90.57	294.69	2981.35	690.66	-1537.37
4568.00	90.13	295.87	2981.16	703.90	-1565.40
4600.00	90.84	298.83	2980.89	718.60	-1593.82
4632.00	89.60	297.94	2980.76	733.81	-1621.97
4663.00	88.29	297.49	2981.33	748.23	-1649.41
4686.00	88.20	297.21	2982.04	758.79	-1669.83
4745.00	88.20	297.21	2983.89	785.75	-1722.27