



US ROCKIES REGION PLANNING

COLORADO NOTHERN ZONE - 83

P_SALAZAR PAD

P_SALAZAR 22-20

P_SALAZAR 22-20

Plan: PLAN #1 12-11-09 RHS

Standard Planning Report

11 December, 2009





P. SALAZAR 22-20
COLORADO NORTHERN ZONE - 83
SECTION 20 T3N R67W
1752 FNL 1492 FWL
LAT: 40° 12' 49.752 N
LONG: 104° 55' 4.584 W



Azimuths to True North
Magnetic North: 9.10°
Magnetic Field
Strength: 53194.7nT
Dip Angle: 66.93°
Date: 12/11/2009
Model: IGRF200510

WELL DETAILS: P_SALAZAR 22-20

+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	1321270.36	3162553.76	4904.00	40° 12' 49.752 N	104° 55' 4.584 W	

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3674.00	3711.68	PARKMAN TOP
4078.00	4122.20	SUSSEX TOP
4633.00	4686.16	SHANNON TOP
6943.00	7011.81	NIO A TOP
7209.00	7277.81	CODELL TOP

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
1511.40	10.23	183.61	1508.69	-45.43	-2.86	2.00	183.61	45.53	
5500.41	10.23	183.61	5434.31	-752.35	-47.41	0.00	0.00	753.84	
6011.81	0.00	0.00	5943.00	-797.78	-50.27	2.00	180.00	799.37	
7437.81	0.00	0.00	7369.00	-797.78	-50.27	0.00	0.00	799.37	PBHL_SALAZAR 22-20(2550 FNL 1440 FWL)50'TGT RAD

CASING DETAILS

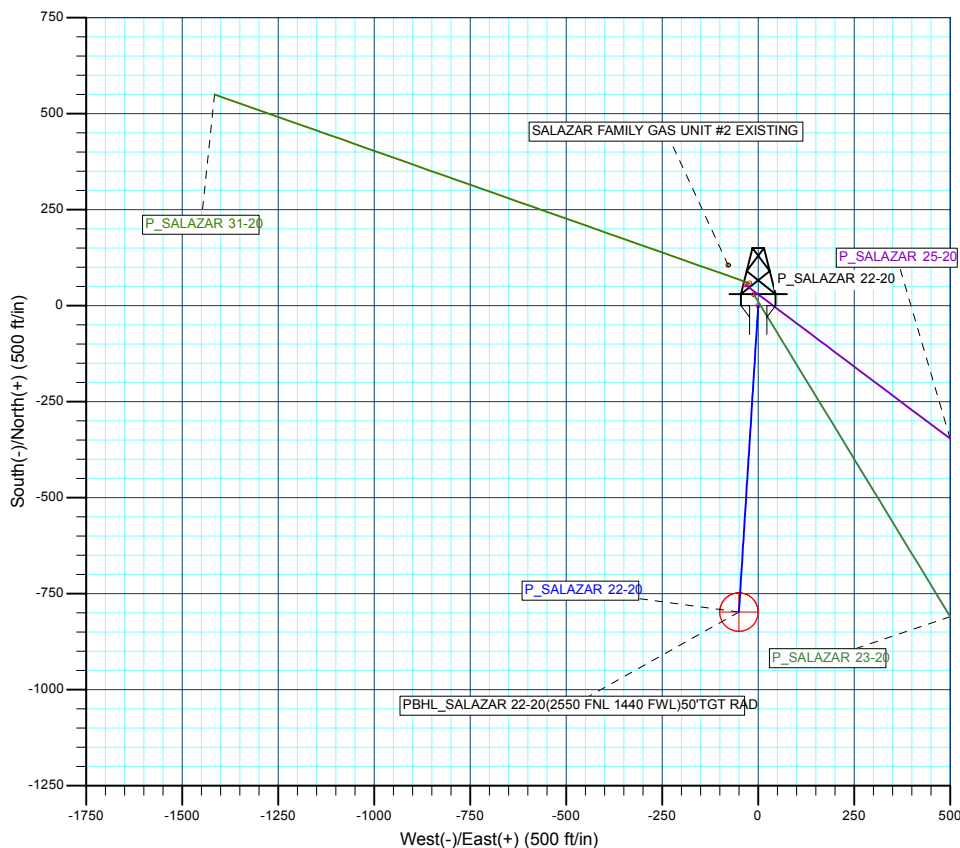
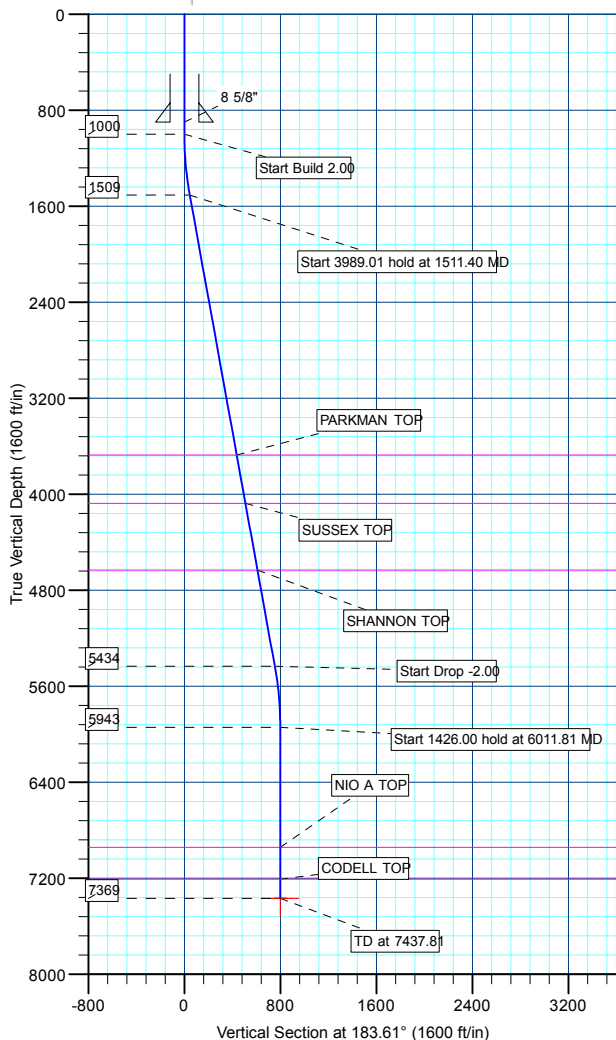
TVD	MD	Name	Size
900.00	900.00	8 5/8"	8.62

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7369.00	-797.78	-50.27	1320472.27	3162508.73	40° 12' 41.868 N	104° 55' 5.232 W	Circle (Radius: 50.00)



KB ELEV: WELL @ 4919.00ft (Original Well Elev)
GRD ELEV: 4904.00



Plan: PLAN #12-11-09 RHS (P_SALAZAR 22-20/P_SALAZAR 22-20)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Project:	COLORADO NOTHERN ZONE - 83	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site:	P_SALAZAR PAD	North Reference:	True
Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_SALAZAR 22-20		
Design:	PLAN #1 12-11-09 RHS		

Project	COLORADO NOTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site						P_SALAZAR PAD, SECTION 20 T3N R67W											
Site Position:						Northing:			1,321,270.36 ft			Latitude:			40° 12' 49.752 N		
From:			Lat/Long			Easting:			3,162,553.76 ft			Longitude:			104° 55' 4.584 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.38 °		

Well	P_SALAZAR 22-20					
Well Position	+N/-S	0.00 ft	Northing:	1,321,270.36 ft	Latitude:	40° 12' 49.752 N
	+E/-W	0.00 ft	Easting:	3,162,553.76 ft	Longitude:	104° 55' 4.584 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,904.00 ft

Wellbore	P_SALAZAR 22-20				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/11/2009	9.10	66.93	53,195

Design	PLAN #1 12-11-09 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	183.61

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,511.40	10.23	183.61	1,508.69	-45.43	-2.86	2.00	2.00	0.00	183.61	
5,500.41	10.23	183.61	5,434.31	-752.35	-47.41	0.00	0.00	0.00	0.00	
6,011.81	0.00	0.00	5,943.00	-797.78	-50.27	2.00	-2.00	0.00	180.00	
7,437.81	0.00	0.00	7,369.00	-797.78	-50.27	0.00	0.00	0.00	0.00	PBHL_SALAZAR 2

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Project:	COLORADO NOTHERN ZONE - 83	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site:	P_SALAZAR PAD	North Reference:	True
Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_SALAZAR 22-20		
Design:	PLAN #1 12-11-09 RHS		

Planned 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)
Start Build 2.00									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	2.00	183.61	1,099.98	-1.74	-0.11	1.75	2.00	2.00	0.00
1,200.00	4.00	183.61	1,199.84	-6.96	-0.44	6.98	2.00	2.00	0.00
1,300.00	6.00	183.61	1,299.45	-15.66	-0.99	15.69	2.00	2.00	0.00
1,400.00	8.00	183.61	1,398.70	-27.82	-1.75	27.88	2.00	2.00	0.00
1,500.00	10.00	183.61	1,497.47	-43.44	-2.74	43.52	2.00	2.00	0.00
Start 3989.01 hold at 1511.40 MD									
1,511.40	10.23	183.61	1,508.69	-45.43	-2.86	45.53	2.00	2.00	0.00
1,600.00	10.23	183.61	1,595.88	-61.14	-3.85	61.26	0.00	0.00	0.00
1,700.00	10.23	183.61	1,694.29	-78.86	-4.97	79.01	0.00	0.00	0.00
1,800.00	10.23	183.61	1,792.70	-96.58	-6.09	96.77	0.00	0.00	0.00
1,900.00	10.23	183.61	1,891.11	-114.30	-7.20	114.53	0.00	0.00	0.00
2,000.00	10.23	183.61	1,989.52	-132.02	-8.32	132.28	0.00	0.00	0.00
2,100.00	10.23	183.61	2,087.93	-149.74	-9.44	150.04	0.00	0.00	0.00
2,200.00	10.23	183.61	2,186.35	-167.46	-10.55	167.80	0.00	0.00	0.00
2,300.00	10.23	183.61	2,284.76	-185.19	-11.67	185.55	0.00	0.00	0.00
2,400.00	10.23	183.61	2,383.17	-202.91	-12.79	203.31	0.00	0.00	0.00
2,500.00	10.23	183.61	2,481.58	-220.63	-13.90	221.07	0.00	0.00	0.00
2,600.00	10.23	183.61	2,579.99	-238.35	-15.02	238.82	0.00	0.00	0.00
2,700.00	10.23	183.61	2,678.40	-256.07	-16.14	256.58	0.00	0.00	0.00
2,800.00	10.23	183.61	2,776.81	-273.79	-17.25	274.34	0.00	0.00	0.00
2,900.00	10.23	183.61	2,875.22	-291.52	-18.37	292.09	0.00	0.00	0.00
3,000.00	10.23	183.61	2,973.63	-309.24	-19.49	309.85	0.00	0.00	0.00
3,100.00	10.23	183.61	3,072.04	-326.96	-20.60	327.61	0.00	0.00	0.00
3,200.00	10.23	183.61	3,170.45	-344.68	-21.72	345.36	0.00	0.00	0.00
3,300.00	10.23	183.61	3,268.87	-362.40	-22.84	363.12	0.00	0.00	0.00
3,400.00	10.23	183.61	3,367.28	-380.12	-23.95	380.88	0.00	0.00	0.00
3,500.00	10.23	183.61	3,465.69	-397.84	-25.07	398.63	0.00	0.00	0.00
3,600.00	10.23	183.61	3,564.10	-415.57	-26.19	416.39	0.00	0.00	0.00
3,700.00	10.23	183.61	3,662.51	-433.29	-27.30	434.15	0.00	0.00	0.00
PARKMAN TOP									
3,711.68	10.23	183.61	3,674.00	-435.36	-27.43	436.22	0.00	0.00	0.00
3,800.00	10.23	183.61	3,760.92	-451.01	-28.42	451.90	0.00	0.00	0.00
3,900.00	10.23	183.61	3,859.33	-468.73	-29.54	469.66	0.00	0.00	0.00
4,000.00	10.23	183.61	3,957.74	-486.45	-30.65	487.42	0.00	0.00	0.00
4,100.00	10.23	183.61	4,056.15	-504.17	-31.77	505.17	0.00	0.00	0.00
SUSSEX TOP									
4,122.20	10.23	183.61	4,078.00	-508.11	-32.02	509.12	0.00	0.00	0.00
4,200.00	10.23	183.61	4,154.56	-521.90	-32.89	522.93	0.00	0.00	0.00
4,300.00	10.23	183.61	4,252.97	-539.62	-34.00	540.69	0.00	0.00	0.00
4,400.00	10.23	183.61	4,351.38	-557.34	-35.12	558.44	0.00	0.00	0.00
4,500.00	10.23	183.61	4,449.80	-575.06	-36.24	576.20	0.00	0.00	0.00
4,600.00	10.23	183.61	4,548.21	-592.78	-37.35	593.96	0.00	0.00	0.00
SHANNON TOP									
4,686.16	10.23	183.61	4,633.00	-608.05	-38.32	609.26	0.00	0.00	0.00
4,700.00	10.23	183.61	4,646.62	-610.50	-38.47	611.71	0.00	0.00	0.00
4,800.00	10.23	183.61	4,745.03	-628.22	-39.59	629.47	0.00	0.00	0.00
4,900.00	10.23	183.61	4,843.44	-645.95	-40.70	647.23	0.00	0.00	0.00
5,000.00	10.23	183.61	4,941.85	-663.67	-41.82	664.98	0.00	0.00	0.00
5,100.00	10.23	183.61	5,040.26	-681.39	-42.94	682.74	0.00	0.00	0.00
5,200.00	10.23	183.61	5,138.67	-699.11	-44.05	700.50	0.00	0.00	0.00
5,300.00	10.23	183.61	5,237.08	-716.83	-45.17	718.25	0.00	0.00	0.00
5,400.00	10.23	183.61	5,335.49	-734.55	-46.29	736.01	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Project:	COLORADO NOTHERN ZONE - 83	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site:	P_SALAZAR PAD	North Reference:	True
Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_SALAZAR 22-20		
Design:	PLAN #1 12-11-09 RHS		

Planned 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)
5,500.00	10.23	183.61	5,433.90	-752.28	-47.40	753.77	0.00	0.00	0.00
Start Drop -2.00									
5,500.41	10.23	183.61	5,434.31	-752.35	-47.41	753.84	0.00	0.00	0.00
5,600.00	8.24	183.61	5,532.60	-768.29	-48.41	769.82	2.00	-2.00	0.00
5,700.00	6.24	183.61	5,631.80	-780.86	-49.21	782.41	2.00	-2.00	0.00
5,800.00	4.24	183.61	5,731.38	-789.97	-49.78	791.54	2.00	-2.00	0.00
5,900.00	2.24	183.61	5,831.21	-795.61	-50.13	797.18	2.00	-2.00	0.00
6,000.00	0.24	183.61	5,931.19	-797.76	-50.27	799.34	2.00	-2.00	0.00
Start 1426.00 hold at 6011.81 MD									
6,011.81	0.00	0.00	5,943.00	-797.78	-50.27	799.37	2.00	-2.00	1,493.10
6,100.00	0.00	0.00	6,031.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,200.00	0.00	0.00	6,131.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,300.00	0.00	0.00	6,231.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,400.00	0.00	0.00	6,331.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,500.00	0.00	0.00	6,431.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,600.00	0.00	0.00	6,531.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,700.00	0.00	0.00	6,631.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,800.00	0.00	0.00	6,731.19	-797.78	-50.27	799.37	0.00	0.00	0.00
6,900.00	0.00	0.00	6,831.19	-797.78	-50.27	799.37	0.00	0.00	0.00
7,000.00	0.00	0.00	6,931.19	-797.78	-50.27	799.37	0.00	0.00	0.00
NIO A TOP									
7,011.81	0.00	0.00	6,943.00	-797.78	-50.27	799.37	0.00	0.00	0.00
7,100.00	0.00	0.00	7,031.19	-797.78	-50.27	799.37	0.00	0.00	0.00
7,200.00	0.00	0.00	7,131.19	-797.78	-50.27	799.37	0.00	0.00	0.00
CODELL TOP									
7,277.81	0.00	0.00	7,209.00	-797.78	-50.27	799.37	0.00	0.00	0.00
7,300.00	0.00	0.00	7,231.19	-797.78	-50.27	799.37	0.00	0.00	0.00
7,400.00	0.00	0.00	7,331.19	-797.78	-50.27	799.37	0.00	0.00	0.00
PBHL_SALAZAR 22-20(2550 FNL 1440 FWL)50'TGT RAD									
7,437.81	0.00	0.00	7,369.00	-797.78	-50.27	799.37	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_SALAZAR 22-20	0.00	0.00	7,369.00	-797.78	-50.27	1,320,472.27	3,162,508.73	40° 12' 41.868 N	104° 55' 5.232 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
900.00	900.00	8 5/8"	8.62	11.00	

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Project:	COLORADO NOTHERN ZONE - 83	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site:	P_SALAZAR PAD	North Reference:	True
Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_SALAZAR 22-20		
Design:	PLAN #1 12-11-09 RHS		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,711.68	3,674.00	PARKMAN TOP				
4,122.20	4,078.00	SUSSEX TOP				
4,686.16	4,633.00	SHANNON TOP				
7,011.81	6,943.00	NIO A TOP				
7,277.81	7,209.00	CODELL TOP				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,511.40	1,508.69	-45.43	-2.86	Start 3989.01 hold at 1511.40 MD	
5,500.41	5,434.31	-752.35	-47.41	Start Drop -2.00	
6,011.81	5,943.00	-797.78	-50.27	Start 1426.00 hold at 6011.81 MD	
7,437.81	7,369.00	-797.78	-50.27	TD at 7437.81	



US ROCKIES REGION PLANNING

COLORADO NOTHERN ZONE - 83

P_SALAZAR PAD

P_SALAZAR 22-20

P_SALAZAR 22-20

PLAN #1 12-11-09 RHS

Anticollision Report

11 December, 2009



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 12-11-09 RHS		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 12/11/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,437.81	PLAN #1 12-11-09 RHS (P_SALAZAR 22-	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
P_SALAZAR PAD						
P_SALAZAR 23-20 - P_SALAZAR 23-20 - PLAN #1 12-1	718.17	719.67	5.62	2.62	1.871	CC, ES, SF
P_SALAZAR 25-20 - P_SALAZAR 25-20 - PLAN #1 12-1	1,227.35	1,231.84	63.49	58.39	12.444	CC, ES
P_SALAZAR 25-20 - P_SALAZAR 25-20 - PLAN #1 12-1	1,400.00	1,406.66	66.06	60.28	11.442	SF
P_SALAZAR 31-20 - P_SALAZAR 31-20 - PLAN #1 12-1	1,000.00	1,000.00	62.40	58.16	14.728	CC, ES
P_SALAZAR 31-20 - P_SALAZAR 31-20 - PLAN #1 12-1	1,100.00	1,098.53	65.11	60.46	14.020	SF
SALAZAR FAMILY GAS UNIT #2 EXISTING - SALAZAR	1,000.00	968.00	131.42	92.58	3.384	CC
SALAZAR FAMILY GAS UNIT #2 EXISTING - SALAZAR	1,200.00	1,167.84	136.83	89.69	2.902	ES
SALAZAR FAMILY GAS UNIT #2 EXISTING - SALAZAR	1,400.00	1,366.70	153.79	98.59	2.786	SF

Offset Design P_SALAZAR PAD - P_SALAZAR 23-20 - P_SALAZAR 23-20 - PLAN #1 12-11-09 RHS													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-20.98	29.13	-11.17	31.19					
100.00	100.00	100.00	100.00	0.10	0.10	-20.98	29.13	-11.17	31.19	31.00	0.19	163.281		
200.00	200.00	200.00	200.00	0.32	0.32	-20.98	29.13	-11.17	31.19	30.55	0.64	48.698		
300.00	300.00	300.00	300.00	0.55	0.55	-20.98	29.13	-11.17	31.19	30.10	1.09	28.616		
400.00	400.00	401.04	401.02	0.77	0.75	-20.36	27.60	-10.24	29.46	27.94	1.52	19.408		
500.00	500.00	501.83	501.66	0.99	0.95	-17.95	23.06	-7.47	24.30	22.36	1.94	12.534		
600.00	600.00	602.12	601.56	1.22	1.19	-10.52	15.54	-2.89	15.88	13.50	2.37	6.687		
700.00	700.00	701.68	700.36	1.44	1.46	34.07	5.12	3.46	6.19	3.31	2.89	2.145		
718.17	718.17	719.67	718.17	1.48	1.52	58.63	2.93	4.80	5.62	2.62	3.01	1.871	CC, ES, SF	
800.00	800.00	800.27	797.73	1.67	1.78	125.05	-8.07	11.51	14.24	10.94	3.30	4.313		
900.00	900.00	897.67	893.34	1.89	2.15	138.49	-23.91	21.17	32.62	28.88	3.74	8.724		
1,000.00	1,000.00	993.69	986.94	2.12	2.57	142.56	-42.23	32.34	54.77	50.57	4.20	13.040		
1,100.00	1,099.98	1,088.51	1,078.60	2.31	3.04	-39.63	-62.94	44.96	78.96	74.34	4.62	17.075		
1,200.00	1,199.84	1,182.41	1,168.52	2.49	3.56	-39.82	-85.99	59.01	103.74	98.68	5.06	20.513		
1,300.00	1,299.45	1,275.36	1,256.62	2.68	4.13	-40.65	-111.28	74.43	129.09	123.57	5.51	23.409		
1,400.00	1,398.70	1,367.33	1,342.81	2.90	4.75	-41.78	-138.68	91.14	155.06	149.05	6.00	25.829		
1,500.00	1,497.47	1,458.31	1,427.01	3.15	5.43	-43.05	-168.11	109.08	181.68	175.15	6.53	27.812		
1,511.40	1,508.69	1,468.63	1,436.48	3.18	5.50	-43.20	-171.58	111.20	184.76	178.17	6.60	28.013		
1,600.00	1,595.88	1,548.07	1,508.97	3.43	6.14	-44.47	-199.35	128.13	209.95	202.84	7.11	29.531		
1,700.00	1,694.29	1,636.19	1,588.27	3.74	6.90	-45.45	-232.15	148.12	241.20	233.48	7.71	31.274		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - P_SALAZAR 23-20 - P_SALAZAR 23-20 - PLAN #1 12-11-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,800.00	1,792.70	1,722.56	1,664.81	4.06	7.68	-46.07	-266.30	168.94	275.31	266.98	8.33	33.039	
1,900.00	1,891.11	1,811.09	1,742.14	4.40	8.53	-46.46	-303.10	191.38	311.89	302.91	8.98	34.720	
2,000.00	1,989.52	1,903.98	1,823.08	4.76	9.44	-46.78	-342.02	215.10	348.88	339.21	9.67	36.089	
2,100.00	2,087.93	1,996.87	1,904.02	5.11	10.36	-47.03	-380.93	238.83	385.88	375.52	10.36	37.232	
2,200.00	2,186.35	2,089.76	1,984.97	5.48	11.28	-47.24	-419.84	262.55	422.89	411.82	11.07	38.194	
2,300.00	2,284.76	2,182.65	2,065.91	5.85	12.20	-47.41	-458.76	286.28	459.90	448.11	11.79	39.008	
2,400.00	2,383.17	2,275.54	2,146.85	6.23	13.13	-47.56	-497.67	310.00	496.91	484.40	12.51	39.709	
2,500.00	2,481.58	2,368.43	2,227.79	6.61	14.05	-47.69	-536.58	333.73	533.93	520.69	13.24	40.317	
2,600.00	2,579.99	2,461.32	2,308.73	6.99	14.98	-47.80	-575.50	357.45	570.95	556.97	13.98	40.849	
2,700.00	2,678.40	2,554.21	2,389.67	7.38	15.91	-47.90	-614.41	381.18	607.97	593.25	14.71	41.317	
2,800.00	2,776.81	2,647.10	2,470.62	7.77	16.84	-47.99	-653.32	404.90	644.99	629.53	15.46	41.730	
2,900.00	2,875.22	2,740.00	2,551.56	8.16	17.78	-48.07	-692.23	428.62	682.01	665.81	16.20	42.095	
3,000.00	2,973.63	2,832.89	2,632.50	8.55	18.71	-48.14	-731.15	452.35	719.03	702.08	16.95	42.421	
3,100.00	3,072.04	2,925.78	2,713.44	8.94	19.64	-48.20	-770.06	476.07	756.06	738.36	17.70	42.714	
3,200.00	3,170.45	3,018.67	2,794.38	9.34	20.58	-48.26	-808.97	499.80	793.08	774.63	18.45	42.978	
3,300.00	3,268.87	3,111.56	2,875.33	9.74	21.51	-48.31	-847.89	523.52	830.11	810.90	19.21	43.217	
3,400.00	3,367.28	3,204.45	2,956.27	10.13	22.45	-48.35	-886.80	547.25	867.13	847.17	19.96	43.435	
3,500.00	3,465.69	3,297.34	3,037.21	10.53	23.38	-48.40	-925.71	570.97	904.16	883.44	20.72	43.633	
3,600.00	3,564.10	3,390.23	3,118.15	10.93	24.32	-48.44	-964.63	594.69	941.19	919.70	21.48	43.815	
3,700.00	3,662.51	3,483.12	3,199.09	11.33	25.25	-48.48	-1,003.54	618.42	978.21	955.97	22.24	43.982	
3,800.00	3,760.92	3,576.01	3,280.03	11.73	26.19	-48.51	-1,042.45	642.14	1,015.24	992.24	23.00	44.136	
3,900.00	3,859.33	3,668.90	3,360.98	12.13	27.13	-48.54	-1,081.37	665.87	1,052.27	1,028.50	23.76	44.278	
4,000.00	3,957.74	3,761.79	3,441.92	12.53	28.06	-48.57	-1,120.28	689.59	1,089.30	1,064.77	24.53	44.410	
4,100.00	4,056.15	3,854.68	3,522.86	12.93	29.00	-48.60	-1,159.19	713.32	1,126.32	1,101.03	25.29	44.533	
4,200.00	4,154.56	3,947.57	3,603.80	13.34	29.94	-48.63	-1,198.11	737.04	1,163.35	1,137.30	26.06	44.647	
4,300.00	4,252.97	4,040.46	3,684.74	13.74	30.88	-48.65	-1,237.02	760.77	1,200.38	1,173.56	26.82	44.753	
4,400.00	4,351.38	4,133.35	3,765.68	14.14	31.81	-48.67	-1,275.93	784.49	1,237.41	1,209.82	27.59	44.853	
4,500.00	4,449.80	4,226.25	3,846.63	14.55	32.75	-48.69	-1,314.85	808.21	1,274.44	1,246.08	28.35	44.946	
4,600.00	4,548.21	4,319.14	3,927.57	14.95	33.69	-48.71	-1,353.76	831.94	1,311.47	1,282.35	29.12	45.034	
4,700.00	4,646.62	4,412.03	4,008.51	15.35	34.63	-48.73	-1,392.67	855.66	1,348.50	1,318.61	29.89	45.116	
4,800.00	4,745.03	4,504.92	4,089.45	15.76	35.57	-48.75	-1,431.59	879.39	1,385.53	1,354.87	30.66	45.194	
4,900.00	4,843.44	4,597.81	4,170.39	16.16	36.50	-48.77	-1,470.50	903.11	1,422.56	1,391.13	31.43	45.267	
5,000.00	4,941.85	4,690.70	4,251.34	16.57	37.44	-48.79	-1,509.41	926.84	1,459.59	1,427.39	32.19	45.336	
5,100.00	5,040.26	4,783.59	4,332.28	16.97	38.38	-48.80	-1,548.33	950.56	1,496.61	1,463.65	32.96	45.402	
5,200.00	5,138.67	4,876.48	4,413.22	17.38	39.32	-48.82	-1,587.24	974.28	1,533.64	1,499.91	33.73	45.464	
5,300.00	5,237.08	4,969.37	4,494.16	17.78	40.26	-48.83	-1,626.15	998.01	1,570.67	1,536.17	34.50	45.522	
5,400.00	5,335.49	5,062.26	4,575.10	18.19	41.20	-48.84	-1,665.07	1,021.73	1,607.70	1,572.43	35.27	45.578	
5,500.41	5,434.31	5,155.53	4,656.38	18.59	42.14	-48.86	-1,704.14	1,045.56	1,644.89	1,608.84	36.05	45.632	
5,600.00	5,532.60	5,247.61	4,736.61	18.92	43.07	-49.44	-1,742.71	1,069.07	1,682.82	1,645.98	36.84	45.682	
5,700.00	5,631.80	5,339.11	4,816.34	19.16	43.99	-49.98	-1,781.04	1,092.44	1,722.99	1,685.44	37.55	45.890	
5,800.00	5,731.38	5,429.55	4,895.14	19.37	44.91	-50.48	-1,818.93	1,115.54	1,765.22	1,727.01	38.21	46.195	
5,900.00	5,831.21	5,518.81	4,972.92	19.54	45.81	-50.94	-1,856.32	1,138.34	1,809.49	1,770.65	38.84	46.590	
6,000.00	5,931.19	5,606.79	5,049.59	19.68	46.70	-51.38	-1,893.18	1,160.81	1,855.76	1,816.34	39.43	47.069	
6,011.81	5,943.00	5,617.09	5,058.56	19.69	46.80	132.18	-1,897.49	1,163.44	1,861.36	1,821.87	39.50	47.128	
6,100.00	6,031.19	5,758.51	5,182.64	19.81	48.01	132.83	-1,955.42	1,198.76	1,902.69	1,862.82	39.87	47.724	
6,200.00	6,131.19	6,019.10	5,419.17	19.93	49.75	133.77	-2,048.62	1,255.57	1,943.40	1,902.97	40.43	48.072	
6,300.00	6,231.19	6,300.49	5,684.55	20.05	51.25	134.49	-2,128.20	1,304.09	1,975.63	1,934.59	41.04	48.139	
6,400.00	6,331.19	6,599.24	5,974.85	20.17	52.40	134.99	-2,187.94	1,340.51	1,998.44	1,956.79	41.65	47.979	
6,500.00	6,431.19	6,910.03	6,282.87	20.29	53.11	135.26	-2,222.35	1,361.49	2,011.08	1,968.87	42.21	47.644	
6,600.00	6,531.19	7,158.56	6,531.19	20.41	53.35	135.31	-2,229.38	1,365.78	2,013.63	1,971.00	42.63	47.240	
6,700.00	6,631.19	7,258.56	6,631.19	20.54	53.40	135.31	-2,229.38	1,365.78	2,013.63	1,970.75	42.87	46.969	
6,800.00	6,731.19	7,358.56	6,731.19	20.67	53.45	135.31	-2,229.38	1,365.78	2,013.63	1,970.51	43.12	46.701	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - P_SALAZAR 23-20 - P_SALAZAR 23-20 - PLAN #1 12-11-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,900.00	6,831.19	7,458.56	6,831.19	20.80	53.50	135.31	-2,229.38	1,365.78	2,013.63	1,970.26	43.37	46.433	
7,000.00	6,931.19	7,558.56	6,931.19	20.93	53.55	135.31	-2,229.38	1,365.78	2,013.63	1,970.01	43.62	46.165	
7,100.00	7,031.19	7,658.56	7,031.19	21.06	53.60	135.31	-2,229.38	1,365.78	2,013.63	1,969.75	43.87	45.897	
7,200.00	7,131.19	7,758.56	7,131.19	21.20	53.65	135.31	-2,229.38	1,365.78	2,013.63	1,969.49	44.13	45.628	
7,300.00	7,231.19	7,858.56	7,231.19	21.33	53.71	135.31	-2,229.38	1,365.78	2,013.63	1,969.23	44.39	45.360	
7,400.00	7,331.19	7,958.56	7,331.19	21.47	53.76	135.31	-2,229.38	1,365.78	2,013.63	1,968.97	44.66	45.091	
7,437.81	7,369.00	7,996.37	7,369.00	21.52	53.78	135.31	-2,229.38	1,365.78	2,013.63	1,968.87	44.76	44.990	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - P_SALAZAR 25-20 - P_SALAZAR 25-20 - PLAN #1 12-11-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-31.53	54.63	-33.51	64.09				
100.00	100.00	100.00	100.00	0.10	0.10	-31.53	54.63	-33.51	64.09	63.90	0.19	335.462	
200.00	200.00	200.00	200.00	0.32	0.32	-31.53	54.63	-33.51	64.09	63.45	0.64	100.050	
300.00	300.00	300.00	300.00	0.55	0.55	-31.53	54.63	-33.51	64.09	63.00	1.09	58.792	
400.00	400.00	400.00	400.00	0.77	0.77	-31.53	54.63	-33.51	64.09	62.55	1.54	41.627	
500.00	500.00	500.00	500.00	0.99	0.99	-31.53	54.63	-33.51	64.09	62.10	1.99	32.220	
600.00	600.00	600.00	600.00	1.22	1.22	-31.53	54.63	-33.51	64.09	61.65	2.44	26.280	
700.00	700.00	700.00	700.00	1.44	1.44	-31.53	54.63	-33.51	64.09	61.20	2.89	22.190	
800.00	800.00	800.00	800.00	1.67	1.67	-31.53	54.63	-33.51	64.09	60.75	3.34	19.202	
900.00	900.00	900.00	900.00	1.89	1.89	-31.53	54.63	-33.51	64.09	60.30	3.79	16.922	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-31.53	54.63	-33.51	64.09	59.85	4.24	15.127	
1,100.00	1,099.98	1,102.10	1,102.07	2.31	2.33	146.39	53.54	-32.06	63.88	59.24	4.64	13.774	
1,200.00	1,199.84	1,204.02	1,203.85	2.49	2.52	150.98	50.27	-27.71	63.52	58.52	5.00	12.708	
1,227.35	1,227.11	1,231.84	1,231.59	2.54	2.58	152.77	49.00	-26.02	63.49	58.39	5.10	12.444 CC, ES	
1,300.00	1,299.45	1,305.59	1,305.01	2.68	2.73	158.61	44.85	-20.50	63.82	58.45	5.38	11.873	
1,400.00	1,398.70	1,406.66	1,405.29	2.90	2.96	168.82	37.32	-10.48	66.06	60.28	5.77	11.442 SF	
1,500.00	1,497.47	1,507.04	1,504.40	3.15	3.23	-179.59	27.75	2.27	71.69	65.48	6.21	11.544	
1,511.40	1,508.69	1,518.44	1,515.61	3.18	3.27	-178.25	26.53	3.89	72.61	66.34	6.27	11.588	
1,600.00	1,595.88	1,606.69	1,602.17	3.43	3.54	-168.04	16.18	17.65	80.50	73.75	6.75	11.929	
1,700.00	1,694.29	1,705.57	1,698.45	3.74	3.90	-157.01	2.70	35.60	91.18	83.79	7.39	12.339	
1,800.00	1,792.70	1,803.43	1,792.94	4.06	4.31	-146.74	-12.61	55.97	104.41	96.28	8.13	12.842	
1,900.00	1,891.11	1,900.00	1,885.27	4.40	4.78	-137.45	-29.60	78.58	120.69	111.75	8.95	13.489	
2,000.00	1,989.52	1,995.34	1,975.43	4.76	5.32	-129.25	-48.20	103.33	140.32	130.51	9.81	14.299	
2,100.00	2,087.93	2,089.01	2,062.97	5.11	5.90	-122.16	-68.22	129.98	163.42	152.72	10.70	15.277	
2,200.00	2,186.35	2,180.94	2,147.78	5.48	6.54	-116.09	-89.53	158.34	189.96	178.38	11.58	16.406	
2,300.00	2,284.76	2,272.67	2,231.33	5.85	7.24	-110.89	-112.27	188.60	219.72	207.27	12.45	17.648	
2,400.00	2,383.17	2,366.17	2,316.29	6.23	7.98	-106.73	-135.72	219.80	251.16	237.85	13.32	18.861	
2,500.00	2,481.58	2,459.66	2,401.25	6.61	8.73	-103.49	-159.16	251.00	283.56	269.39	14.17	20.017	
2,600.00	2,579.99	2,553.16	2,486.22	6.99	9.50	-100.91	-182.61	282.20	316.61	301.60	15.01	21.099	
2,700.00	2,678.40	2,646.66	2,571.18	7.38	10.28	-98.81	-206.06	313.41	350.14	334.30	15.84	22.104	
2,800.00	2,776.81	2,740.16	2,656.14	7.77	11.06	-97.07	-229.50	344.61	384.01	367.34	16.67	23.033	
2,900.00	2,875.22	2,833.65	2,741.10	8.16	11.85	-95.62	-252.95	375.81	418.16	400.65	17.50	23.890	
3,000.00	2,973.63	2,927.15	2,826.06	8.55	12.64	-94.38	-276.40	407.01	452.50	434.17	18.33	24.682	
3,100.00	3,072.04	3,020.65	2,911.02	8.94	13.44	-93.32	-299.84	438.22	487.01	467.85	19.16	25.414	
3,200.00	3,170.45	3,114.15	2,995.99	9.34	14.24	-92.39	-323.29	469.42	521.64	501.65	19.99	26.092	
3,300.00	3,268.87	3,207.65	3,080.95	9.74	15.04	-91.58	-346.74	500.62	556.39	535.56	20.82	26.720	
3,400.00	3,367.28	3,301.14	3,165.91	10.13	15.85	-90.87	-370.18	531.82	591.21	569.56	21.65	27.303	
3,500.00	3,465.69	3,394.64	3,250.87	10.53	16.65	-90.23	-393.63	563.03	626.11	603.63	22.48	27.846	
3,600.00	3,564.10	3,488.14	3,335.83	10.93	17.46	-89.67	-417.08	594.23	661.08	637.76	23.32	28.353	
3,700.00	3,662.51	3,581.64	3,420.79	11.33	18.27	-89.15	-440.52	625.43	696.09	671.94	24.15	28.827	
3,800.00	3,760.92	3,675.13	3,505.76	11.73	19.09	-88.69	-463.97	656.63	731.14	706.17	24.98	29.270	
3,900.00	3,859.33	3,768.63	3,590.72	12.13	19.90	-88.27	-487.42	687.83	766.24	740.43	25.81	29.687	
4,000.00	3,957.74	3,862.13	3,675.68	12.53	20.71	-87.89	-510.86	719.04	801.37	774.72	26.64	30.078	
4,100.00	4,056.15	3,955.63	3,760.64	12.93	21.53	-87.54	-534.31	750.24	836.52	809.05	27.47	30.447	
4,200.00	4,154.56	4,049.12	3,845.60	13.34	22.34	-87.21	-557.76	781.44	871.71	843.40	28.31	30.795	
4,300.00	4,252.97	4,142.62	3,930.56	13.74	23.16	-86.91	-581.20	812.64	906.91	877.77	29.14	31.124	
4,400.00	4,351.38	4,236.12	4,015.53	14.14	23.98	-86.64	-604.65	843.85	942.14	912.17	29.97	31.436	
4,500.00	4,449.80	4,329.62	4,100.49	14.55	24.79	-86.38	-628.09	875.05	977.38	946.58	30.80	31.731	
4,600.00	4,548.21	4,423.12	4,185.45	14.95	25.61	-86.14	-651.54	906.25	1,012.64	981.00	31.63	32.011	
4,700.00	4,646.62	4,516.61	4,270.41	15.35	26.43	-85.92	-674.99	937.45	1,047.91	1,015.45	32.46	32.278	
4,800.00	4,745.03	4,610.11	4,355.37	15.76	27.25	-85.71	-698.43	968.66	1,083.20	1,049.90	33.30	32.532	
4,900.00	4,843.44	4,703.61	4,440.34	16.16	28.07	-85.52	-721.88	999.86	1,118.49	1,084.37	34.13	32.775	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - P_SALAZAR 25-20 - P_SALAZAR 25-20 - PLAN #1 12-11-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,941.85	4,797.11	4,525.30	16.57	28.89	-85.34	-745.33	1,031.06	1,153.80	1,118.84	34.96	33.006	
5,100.00	5,040.26	4,890.60	4,610.26	16.97	29.71	-85.16	-768.77	1,062.26	1,189.12	1,153.33	35.79	33.227	
5,200.00	5,138.67	4,984.10	4,695.22	17.38	30.53	-85.00	-792.22	1,093.47	1,224.45	1,187.83	36.62	33.439	
5,300.00	5,237.08	5,096.01	4,797.08	17.78	31.46	-84.83	-820.06	1,130.52	1,259.56	1,222.06	37.51	33.582	
5,400.00	5,335.49	5,250.68	4,940.30	18.19	32.42	-84.75	-855.11	1,177.16	1,291.33	1,252.85	38.48	33.562	
5,500.41	5,434.31	5,410.60	5,091.48	18.59	33.30	-84.87	-886.41	1,218.81	1,318.64	1,279.17	39.47	33.406	
5,600.00	5,532.60	5,573.05	5,247.77	18.92	34.05	-85.52	-912.97	1,254.15	1,341.17	1,300.66	40.51	33.110	
5,700.00	5,631.80	5,739.41	5,410.16	19.16	34.67	-86.01	-934.60	1,282.94	1,359.18	1,317.84	41.34	32.876	
5,800.00	5,731.38	5,908.33	5,576.91	19.37	35.16	-86.37	-950.74	1,304.42	1,372.43	1,330.40	42.03	32.653	
5,900.00	5,831.21	6,079.08	5,746.78	19.54	35.51	-86.58	-961.02	1,318.11	1,380.79	1,338.23	42.56	32.445	
6,000.00	5,931.19	6,250.84	5,918.36	19.68	35.72	-86.65	-965.22	1,323.69	1,384.19	1,341.25	42.94	32.239	
6,011.81	5,943.00	6,271.16	5,938.68	19.69	35.74	96.95	-965.31	1,323.81	1,384.26	1,341.28	42.97	32.212	
6,100.00	6,031.19	6,363.66	6,031.19	19.81	35.81	96.95	-965.32	1,323.82	1,384.27	1,341.08	43.19	32.052	
6,200.00	6,131.19	6,463.66	6,131.19	19.93	35.88	96.95	-965.32	1,323.82	1,384.27	1,340.86	43.41	31.887	
6,300.00	6,231.19	6,563.66	6,231.19	20.05	35.96	96.95	-965.32	1,323.82	1,384.27	1,340.63	43.64	31.721	
6,400.00	6,331.19	6,663.66	6,331.19	20.17	36.03	96.95	-965.32	1,323.82	1,384.27	1,340.40	43.87	31.554	
6,500.00	6,431.19	6,763.66	6,431.19	20.29	36.11	96.95	-965.32	1,323.82	1,384.27	1,340.16	44.10	31.387	
6,600.00	6,531.19	6,863.66	6,531.19	20.41	36.19	96.95	-965.32	1,323.82	1,384.27	1,339.93	44.34	31.219	
6,700.00	6,631.19	6,963.66	6,631.19	20.54	36.27	96.95	-965.32	1,323.82	1,384.27	1,339.69	44.58	31.051	
6,800.00	6,731.19	7,063.66	6,731.19	20.67	36.35	96.95	-965.32	1,323.82	1,384.27	1,339.44	44.82	30.882	
6,900.00	6,831.19	7,163.66	6,831.19	20.80	36.44	96.95	-965.32	1,323.82	1,384.27	1,339.20	45.07	30.713	
7,000.00	6,931.19	7,263.66	6,931.19	20.93	36.52	96.95	-965.32	1,323.82	1,384.27	1,338.95	45.32	30.543	
7,100.00	7,031.19	7,363.66	7,031.19	21.06	36.61	96.95	-965.32	1,323.82	1,384.27	1,338.69	45.57	30.374	
7,200.00	7,131.19	7,463.66	7,131.19	21.20	36.69	96.95	-965.32	1,323.82	1,384.27	1,338.44	45.83	30.204	
7,300.00	7,231.19	7,563.66	7,231.19	21.33	36.78	96.95	-965.32	1,323.82	1,384.27	1,338.18	46.09	30.034	
7,400.00	7,331.19	7,663.66	7,331.19	21.47	36.87	96.95	-965.32	1,323.82	1,384.27	1,337.91	46.35	29.864	
7,437.81	7,369.00	7,701.47	7,369.00	21.52	36.90	96.95	-965.32	1,323.82	1,384.27	1,337.82	46.45	29.800	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - P_SALAZAR 31-20 - P_SALAZAR 31-20 - PLAN #1 12-11-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-20.98	58.26	-22.34	62.40				
100.00	100.00	100.00	100.00	0.10	0.10	-20.98	58.26	-22.34	62.40	62.21	0.19	326.622	
200.00	200.00	200.00	200.00	0.32	0.32	-20.98	58.26	-22.34	62.40	61.76	0.64	97.414	
300.00	300.00	300.00	300.00	0.55	0.55	-20.98	58.26	-22.34	62.40	61.31	1.09	57.243	
400.00	400.00	400.00	400.00	0.77	0.77	-20.98	58.26	-22.34	62.40	60.86	1.54	40.530	
500.00	500.00	500.00	500.00	0.99	0.99	-20.98	58.26	-22.34	62.40	60.41	1.99	31.371	
600.00	600.00	600.00	600.00	1.22	1.22	-20.98	58.26	-22.34	62.40	59.96	2.44	25.588	
700.00	700.00	700.00	700.00	1.44	1.44	-20.98	58.26	-22.34	62.40	59.51	2.89	21.605	
800.00	800.00	800.00	800.00	1.67	1.67	-20.98	58.26	-22.34	62.40	59.06	3.34	18.696	
900.00	900.00	900.00	900.00	1.89	1.89	-20.98	58.26	-22.34	62.40	58.61	3.79	16.476	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-20.98	58.26	-22.34	62.40	58.16	4.24	14.728 CC, ES	
1,100.00	1,099.98	1,098.53	1,098.51	2.31	2.33	154.89	58.83	-23.94	65.11	60.46	4.64	14.020 SF	
1,200.00	1,199.84	1,196.62	1,196.46	2.49	2.54	153.53	60.51	-28.70	73.23	68.21	5.02	14.588	
1,300.00	1,299.45	1,293.81	1,293.30	2.68	2.76	151.82	63.27	-36.54	86.79	81.39	5.41	16.054	
1,400.00	1,398.70	1,389.70	1,388.50	2.90	3.00	150.13	67.07	-47.30	105.75	99.95	5.81	18.212	
1,500.00	1,497.47	1,483.89	1,481.59	3.15	3.25	148.64	71.83	-60.79	130.03	123.81	6.23	20.886	
1,511.40	1,508.69	1,494.50	1,492.05	3.18	3.28	148.48	72.43	-62.49	133.14	126.86	6.27	21.220	
1,600.00	1,595.88	1,576.32	1,572.44	3.43	3.54	147.39	77.49	-76.82	158.41	151.71	6.69	23.665	
1,700.00	1,694.29	1,667.25	1,661.23	3.74	3.86	145.94	84.01	-95.29	189.15	181.95	7.19	26.294	
1,800.00	1,792.70	1,756.53	1,747.77	4.06	4.21	144.41	91.32	-115.99	222.27	214.55	7.72	28.782	
1,900.00	1,891.11	1,844.05	1,831.89	4.40	4.61	142.87	99.35	-138.75	257.79	249.52	8.28	31.150	
2,000.00	1,989.52	1,929.70	1,913.46	4.76	5.04	141.39	108.03	-163.35	295.71	286.86	8.85	33.414	
2,100.00	2,087.93	2,013.38	1,992.38	5.11	5.51	139.98	117.30	-189.60	336.01	326.57	9.44	35.598	
2,200.00	2,186.35	2,101.38	2,074.71	5.48	6.05	138.62	127.64	-218.91	378.11	368.04	10.07	37.555	
2,300.00	2,284.76	2,191.70	2,159.17	5.85	6.64	137.49	138.29	-249.08	420.45	409.73	10.72	39.235	
2,400.00	2,383.17	2,282.01	2,243.62	6.23	7.23	136.57	148.94	-279.25	462.90	451.52	11.37	40.708	
2,500.00	2,481.58	2,372.32	2,328.08	6.61	7.84	135.80	159.59	-309.42	505.43	493.40	12.03	42.007	
2,600.00	2,579.99	2,462.63	2,412.53	6.99	8.46	135.15	170.23	-339.59	548.02	535.33	12.70	43.160	
2,700.00	2,678.40	2,552.95	2,496.99	7.38	9.08	134.60	180.88	-369.76	590.67	577.30	13.37	44.188	
2,800.00	2,776.81	2,643.26	2,581.45	7.77	9.72	134.11	191.53	-399.93	633.35	619.31	14.04	45.109	
2,900.00	2,875.22	2,733.57	2,665.90	8.16	10.35	133.69	202.18	-430.10	676.07	661.35	14.72	45.940	
3,000.00	2,973.63	2,823.89	2,750.36	8.55	10.99	133.32	212.83	-460.27	718.81	703.42	15.39	46.692	
3,100.00	3,072.04	2,914.20	2,834.81	8.94	11.64	132.99	223.47	-490.43	761.57	745.50	16.08	47.376	
3,200.00	3,170.45	3,004.51	2,919.27	9.34	12.28	132.70	234.12	-520.60	804.36	787.60	16.76	48.001	
3,300.00	3,268.87	3,094.82	3,003.73	9.74	12.93	132.43	244.77	-550.77	847.16	829.72	17.44	48.574	
3,400.00	3,367.28	3,185.14	3,088.18	10.13	13.58	132.19	255.42	-580.94	889.97	871.84	18.13	49.101	
3,500.00	3,465.69	3,275.45	3,172.64	10.53	14.24	131.98	266.07	-611.11	932.79	913.98	18.81	49.588	
3,600.00	3,564.10	3,365.76	3,257.10	10.93	14.89	131.78	276.71	-641.28	975.62	956.13	19.50	50.040	
3,700.00	3,662.51	3,456.07	3,341.55	11.33	15.55	131.60	287.36	-671.45	1,018.47	998.28	20.18	50.460	
3,800.00	3,760.92	3,546.39	3,426.01	11.73	16.21	131.43	298.01	-701.62	1,061.32	1,040.45	20.87	50.852	
3,900.00	3,859.33	3,636.70	3,510.46	12.13	16.86	131.28	308.66	-731.79	1,104.17	1,082.62	21.56	51.218	
4,000.00	3,957.74	3,727.01	3,594.92	12.53	17.52	131.13	319.31	-761.96	1,147.04	1,124.78	22.25	51.549	
4,100.00	4,056.15	3,817.33	3,679.38	12.93	18.18	131.00	329.95	-792.13	1,189.90	1,166.95	22.95	51.845	
4,200.00	4,154.56	3,907.64	3,763.83	13.34	18.85	130.88	340.60	-822.30	1,232.78	1,209.12	23.65	52.122	
4,300.00	4,252.97	3,997.95	3,848.29	13.74	19.51	130.76	351.25	-852.46	1,275.65	1,251.30	24.35	52.381	
4,400.00	4,351.38	4,088.26	3,932.74	14.14	20.17	130.66	361.90	-882.63	1,318.54	1,293.48	25.06	52.623	
4,500.00	4,449.80	4,178.58	4,017.20	14.55	20.83	130.56	372.55	-912.80	1,361.42	1,335.66	25.76	52.852	
4,600.00	4,548.21	4,268.89	4,101.66	14.95	21.50	130.46	383.19	-942.97	1,404.31	1,377.84	26.46	53.067	
4,700.00	4,646.62	4,359.20	4,186.11	15.35	22.16	130.37	393.84	-973.14	1,447.20	1,420.03	27.17	53.270	
4,800.00	4,745.03	4,449.51	4,270.57	15.76	22.82	130.29	404.49	-1,003.31	1,490.09	1,462.22	27.87	53.461	
4,900.00	4,843.44	4,539.83	4,355.02	16.16	23.49	130.21	415.14	-1,033.48	1,532.99	1,504.41	28.58	53.642	
5,000.00	4,941.85	4,630.14	4,439.48	16.57	24.15	130.13	425.79	-1,063.65	1,575.89	1,546.60	29.28	53.814	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - P_SALAZAR 31-20 - P_SALAZAR 31-20 - PLAN #1 12-11-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	5,040.26	4,720.45	4,523.94	16.97	24.82	130.06	436.43	-1,093.82	1,618.79	1,588.80	29.99	53.977	
5,200.00	5,138.67	4,810.77	4,608.39	17.38	25.48	130.00	447.08	-1,123.99	1,661.69	1,630.99	30.70	54.132	
5,300.00	5,237.08	4,901.08	4,692.85	17.78	26.15	129.93	457.73	-1,154.16	1,704.59	1,673.19	31.40	54.279	
5,400.00	5,335.49	4,991.39	4,777.31	18.19	26.82	129.87	468.38	-1,184.32	1,747.50	1,715.39	32.11	54.419	
5,500.41	5,434.31	5,082.07	4,862.11	18.59	27.49	129.81	479.07	-1,214.62	1,790.58	1,757.76	32.82	54.553	
5,600.00	5,532.60	5,189.21	4,962.34	18.92	28.25	130.39	491.65	-1,250.28	1,832.25	1,798.49	33.76	54.278	
5,700.00	5,631.80	5,413.22	5,175.43	19.16	29.40	130.69	514.60	-1,315.28	1,868.00	1,833.17	34.84	53.619	
5,800.00	5,731.38	5,650.33	5,406.09	19.37	30.33	130.88	532.77	-1,366.76	1,894.70	1,858.91	35.79	52.933	
5,900.00	5,831.21	5,897.25	5,650.24	19.54	31.02	130.99	544.88	-1,401.07	1,911.72	1,875.13	36.59	52.245	
6,000.00	5,931.19	6,149.79	5,902.24	19.68	31.40	131.02	549.98	-1,415.52	1,918.63	1,881.44	37.19	51.583	
6,011.81	5,943.00	6,179.78	5,932.23	19.69	31.43	-45.37	550.09	-1,415.85	1,918.77	1,881.51	37.26	51.502	
6,100.00	6,031.19	6,278.74	6,031.19	19.81	31.52	-45.37	550.11	-1,415.90	1,918.79	1,881.27	37.52	51.142	
6,200.00	6,131.19	6,378.74	6,131.19	19.93	31.61	-45.37	550.11	-1,415.90	1,918.79	1,881.00	37.79	50.774	
6,300.00	6,231.19	6,478.74	6,231.19	20.05	31.71	-45.37	550.11	-1,415.90	1,918.79	1,880.72	38.07	50.407	
6,400.00	6,331.19	6,578.74	6,331.19	20.17	31.80	-45.37	550.11	-1,415.90	1,918.79	1,880.44	38.34	50.042	
6,500.00	6,431.19	6,678.74	6,431.19	20.29	31.90	-45.37	550.11	-1,415.90	1,918.79	1,880.16	38.63	49.677	
6,600.00	6,531.19	6,778.74	6,531.19	20.41	32.00	-45.37	550.11	-1,415.90	1,918.79	1,879.88	38.91	49.314	
6,700.00	6,631.19	6,878.74	6,631.19	20.54	32.10	-45.37	550.11	-1,415.90	1,918.79	1,879.59	39.20	48.952	
6,800.00	6,731.19	6,978.74	6,731.19	20.67	32.20	-45.37	550.11	-1,415.90	1,918.79	1,879.30	39.49	48.591	
6,900.00	6,831.19	7,078.74	6,831.19	20.80	32.30	-45.37	550.11	-1,415.90	1,918.79	1,879.01	39.78	48.232	
7,000.00	6,931.19	7,178.74	6,931.19	20.93	32.40	-45.37	550.11	-1,415.90	1,918.79	1,878.71	40.08	47.875	
7,100.00	7,031.19	7,278.74	7,031.19	21.06	32.50	-45.37	550.11	-1,415.90	1,918.79	1,878.41	40.38	47.520	
7,200.00	7,131.19	7,378.74	7,131.19	21.20	32.61	-45.37	550.11	-1,415.90	1,918.79	1,878.11	40.68	47.167	
7,300.00	7,231.19	7,478.74	7,231.19	21.33	32.72	-45.37	550.11	-1,415.90	1,918.79	1,877.80	40.99	46.816	
7,400.00	7,331.19	7,578.74	7,331.19	21.47	32.82	-45.37	550.11	-1,415.90	1,918.79	1,877.50	41.29	46.467	
7,437.81	7,369.00	7,616.55	7,369.00	21.52	32.87	-45.37	550.11	-1,415.90	1,918.79	1,877.38	41.41	46.336	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - SALAZAR FAMILY GAS UNIT #2 EXISTING - SALAZAR FAMILY GAS UNIT #2 EX												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-36.51	105.62	-78.20	135.26				
100.00	100.00	68.00	68.00	0.10	1.36	-36.51	105.62	-78.20	131.42	129.96	1.46	90.285	
200.00	200.00	168.00	168.00	0.32	4.72	-36.51	105.62	-78.20	131.42	126.38	5.04	26.074	
300.00	300.00	268.00	268.00	0.55	8.72	-36.51	105.62	-78.20	131.42	122.15	9.27	14.184	
400.00	400.00	368.00	368.00	0.77	12.72	-36.51	105.62	-78.20	131.42	117.93	13.49	9.742	
500.00	500.00	468.00	468.00	0.99	16.72	-36.51	105.62	-78.20	131.42	113.70	17.71	7.419	
600.00	600.00	568.00	568.00	1.22	20.72	-36.51	105.62	-78.20	131.42	109.48	21.94	5.990	
700.00	700.00	668.00	668.00	1.44	24.72	-36.51	105.62	-78.20	131.42	105.25	26.16	5.023	
800.00	800.00	768.00	768.00	1.67	28.72	-36.51	105.62	-78.20	131.42	101.03	30.39	4.325	
900.00	900.00	868.00	868.00	1.89	32.72	-36.51	105.62	-78.20	131.42	96.80	34.61	3.797	
1,000.00	1,000.00	968.00	968.00	2.12	36.72	-36.51	105.62	-78.20	131.42	92.58	38.84	3.384 CC	
1,100.00	1,099.98	1,067.98	1,067.98	2.31	40.72	140.35	105.62	-78.20	132.76	89.74	43.02	3.086	
1,200.00	1,199.84	1,167.84	1,167.84	2.49	44.71	141.70	105.62	-78.20	136.83	89.69	47.14	2.902 ES	
1,300.00	1,299.45	1,267.45	1,267.45	2.68	48.70	143.76	105.62	-78.20	143.78	92.57	51.21	2.808	
1,400.00	1,398.70	1,366.70	1,366.70	2.90	52.67	146.33	105.62	-78.20	153.79	98.59	55.20	2.786 SF	
1,500.00	1,497.47	1,465.47	1,465.47	3.15	56.62	149.16	105.62	-78.20	167.07	107.99	59.08	2.828	
1,511.40	1,508.69	1,476.69	1,476.69	3.18	57.07	149.49	105.62	-78.20	168.80	109.28	59.52	2.836	
1,600.00	1,595.88	1,563.88	1,563.88	3.43	60.56	151.99	105.62	-78.20	182.58	119.45	63.12	2.892	
1,700.00	1,694.29	1,662.29	1,662.29	3.74	64.49	154.39	105.62	-78.20	198.48	131.28	67.21	2.953	
1,800.00	1,792.70	1,760.70	1,760.70	4.06	68.43	156.43	105.62	-78.20	214.67	143.38	71.29	3.011	
1,900.00	1,891.11	1,859.11	1,859.11	4.40	72.36	158.19	105.62	-78.20	231.10	155.71	75.39	3.065	
2,000.00	1,989.52	1,957.52	1,957.52	4.76	76.30	159.71	105.62	-78.20	247.70	168.22	79.49	3.116	
2,100.00	2,087.93	2,055.93	2,055.93	5.11	80.24	161.04	105.62	-78.20	264.46	180.87	83.59	3.164	
2,200.00	2,186.35	2,154.35	2,154.35	5.48	84.17	162.22	105.62	-78.20	281.34	193.65	87.69	3.208	
2,300.00	2,284.76	2,252.76	2,252.76	5.85	88.11	163.26	105.62	-78.20	298.32	206.52	91.80	3.250	
2,400.00	2,383.17	2,351.17	2,351.17	6.23	92.05	164.19	105.62	-78.20	315.39	219.48	95.91	3.288	
2,500.00	2,481.58	2,449.58	2,449.58	6.61	95.98	165.02	105.62	-78.20	332.53	232.51	100.02	3.325	
2,600.00	2,579.99	2,547.99	2,547.99	6.99	99.92	165.77	105.62	-78.20	349.73	245.60	104.13	3.359	
2,700.00	2,678.40	2,646.40	2,646.40	7.38	103.86	166.45	105.62	-78.20	366.98	258.74	108.24	3.390	
2,800.00	2,776.81	2,744.81	2,744.81	7.77	107.79	167.07	105.62	-78.20	384.28	271.92	112.36	3.420	
2,900.00	2,875.22	2,843.22	2,843.22	8.16	111.73	167.64	105.62	-78.20	401.62	285.15	116.47	3.448	
3,000.00	2,973.63	2,941.63	2,941.63	8.55	115.67	168.16	105.62	-78.20	418.99	298.40	120.59	3.475	
3,100.00	3,072.04	3,040.04	3,040.04	8.94	119.60	168.63	105.62	-78.20	436.40	311.69	124.71	3.499	
3,200.00	3,170.45	3,138.45	3,138.45	9.34	123.54	169.08	105.62	-78.20	453.83	325.00	128.83	3.523	
3,300.00	3,268.87	3,236.87	3,236.87	9.74	127.47	169.48	105.62	-78.20	471.29	338.34	132.95	3.545	
3,400.00	3,367.28	3,335.28	3,335.28	10.13	131.41	169.86	105.62	-78.20	488.76	351.70	137.07	3.566	
3,500.00	3,465.69	3,433.69	3,433.69	10.53	135.35	170.22	105.62	-78.20	506.26	365.07	141.19	3.586	
3,600.00	3,564.10	3,532.10	3,532.10	10.93	139.28	170.55	105.62	-78.20	523.78	378.47	145.31	3.605	
3,700.00	3,662.51	3,630.51	3,630.51	11.33	143.22	170.86	105.62	-78.20	541.31	391.88	149.43	3.622	
3,800.00	3,760.92	3,728.92	3,728.92	11.73	147.16	171.15	105.62	-78.20	558.85	405.30	153.55	3.639	
3,900.00	3,859.33	3,827.33	3,827.33	12.13	151.09	171.42	105.62	-78.20	576.41	418.73	157.68	3.656	
4,000.00	3,957.74	3,925.74	3,925.74	12.53	155.03	171.67	105.62	-78.20	593.98	432.18	161.80	3.671	
4,100.00	4,056.15	4,024.15	4,024.15	12.93	158.97	171.91	105.62	-78.20	611.56	445.64	165.92	3.686	
4,200.00	4,154.56	4,122.56	4,122.56	13.34	162.90	172.14	105.62	-78.20	629.15	459.10	170.05	3.700	
4,300.00	4,252.97	4,220.97	4,220.97	13.74	166.84	172.36	105.62	-78.20	646.75	472.58	174.17	3.713	
4,400.00	4,351.38	4,319.38	4,319.38	14.14	170.78	172.56	105.62	-78.20	664.36	486.06	178.30	3.726	
4,500.00	4,449.80	4,417.80	4,417.80	14.55	174.71	172.75	105.62	-78.20	681.97	499.55	182.42	3.738	
4,600.00	4,548.21	4,516.21	4,516.21	14.95	178.65	172.94	105.62	-78.20	699.60	513.05	186.55	3.750	
4,700.00	4,646.62	4,614.62	4,614.62	15.35	182.58	173.11	105.62	-78.20	717.23	526.55	190.67	3.762	
4,800.00	4,745.03	4,713.03	4,713.03	15.76	186.52	173.28	105.62	-78.20	734.86	540.06	194.80	3.772	
4,900.00	4,843.44	4,811.44	4,811.44	16.16	190.46	173.43	105.62	-78.20	752.50	553.58	198.93	3.783	
5,000.00	4,941.85	4,909.85	4,909.85	16.57	194.39	173.59	105.62	-78.20	770.15	567.10	203.05	3.793	

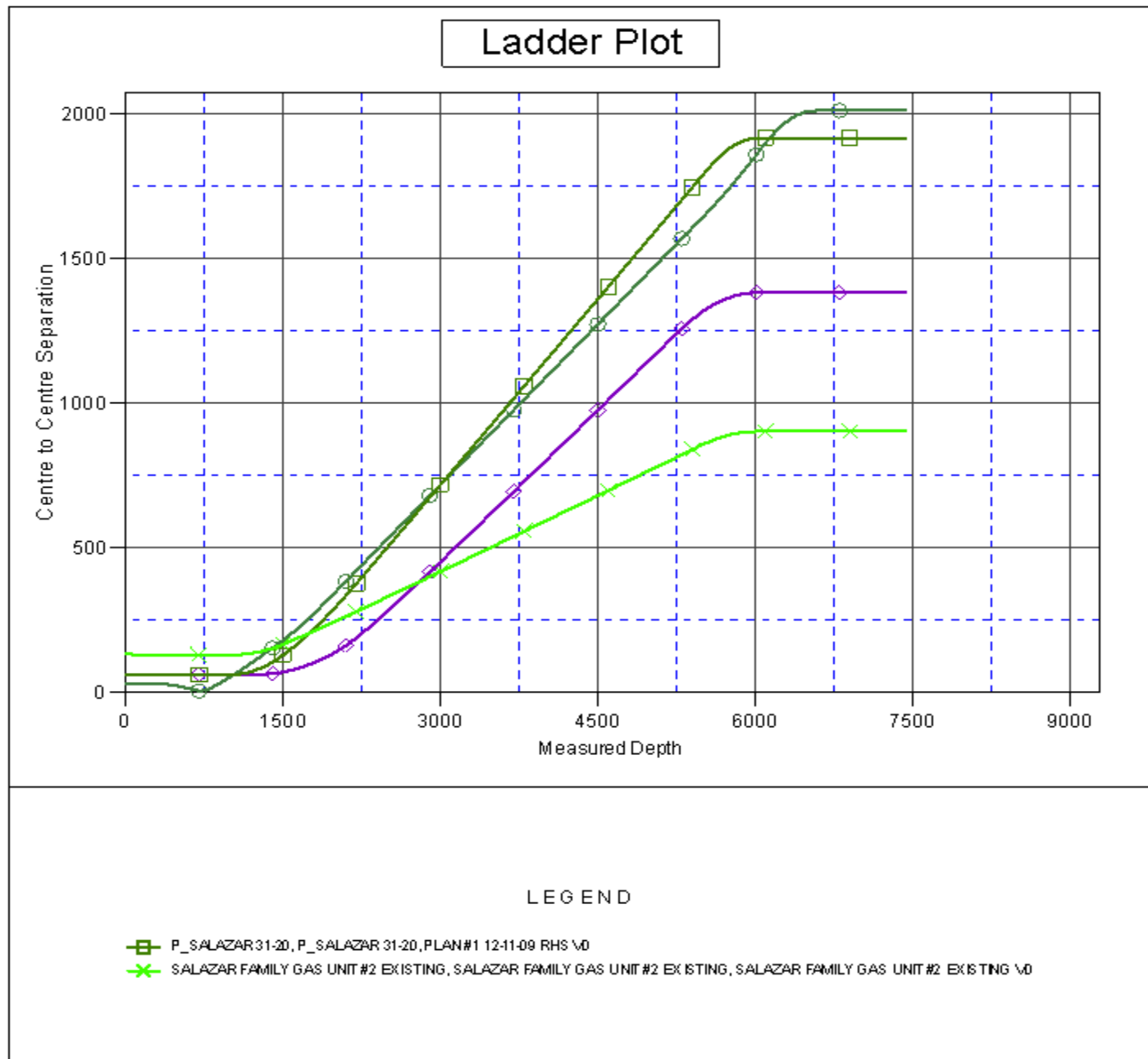
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design P_SALAZAR PAD - SALAZAR FAMILY GAS UNIT #2 EXISTING - SALAZAR FAMILY GAS UNIT #2 EX												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	5,040.26	5,008.26	5,008.26	16.97	198.33	173.73	105.62	-78.20	787.80	580.62	207.18	3.803	
5,200.00	5,138.67	5,106.67	5,106.67	17.38	202.27	173.87	105.62	-78.20	805.46	594.15	211.31	3.812	
5,300.00	5,237.08	5,205.08	5,205.08	17.78	206.20	174.00	105.62	-78.20	823.12	607.68	215.43	3.821	
5,400.00	5,335.49	5,303.49	5,303.49	18.19	210.14	174.13	105.62	-78.20	840.78	621.22	219.56	3.829	
5,500.41	5,434.31	5,402.31	5,402.31	18.59	214.09	174.25	105.62	-78.20	858.52	634.82	223.70	3.838	
5,600.00	5,532.60	5,500.60	5,500.60	18.92	218.02	174.38	105.62	-78.20	874.42	645.46	228.97	3.819	
5,700.00	5,631.80	5,599.80	5,599.80	19.16	221.99	174.49	105.62	-78.20	886.96	652.91	234.05	3.790	
5,800.00	5,731.38	5,699.38	5,699.38	19.37	225.98	174.56	105.62	-78.20	896.04	657.15	238.89	3.751	
5,900.00	5,831.21	5,799.21	5,799.21	19.54	229.97	174.61	105.62	-78.20	901.66	658.19	243.47	3.703	
6,000.00	5,931.19	5,899.19	5,899.19	19.68	233.97	174.62	105.62	-78.20	903.81	656.05	247.76	3.648	
6,011.81	5,943.00	5,911.00	5,911.00	19.69	234.44	-1.77	105.62	-78.20	903.84	655.59	248.25	3.641	
6,100.00	6,031.19	5,999.19	5,999.19	19.81	237.97	-1.77	105.62	-78.20	903.84	651.90	251.94	3.588	
6,200.00	6,131.19	6,099.19	6,099.19	19.93	241.97	-1.77	105.62	-78.20	903.84	647.72	256.11	3.529	
6,300.00	6,231.19	6,199.19	6,199.19	20.05	245.97	-1.77	105.62	-78.20	903.84	643.55	260.29	3.472	
6,400.00	6,331.19	6,299.19	6,299.19	20.17	249.97	-1.77	105.62	-78.20	903.84	639.38	264.46	3.418	
6,500.00	6,431.19	6,399.19	6,399.19	20.29	253.97	-1.77	105.62	-78.20	903.84	635.20	268.64	3.365	
6,600.00	6,531.19	6,499.19	6,499.19	20.41	257.97	-1.77	105.62	-78.20	903.84	631.02	272.82	3.313	
6,700.00	6,631.19	6,599.19	6,599.19	20.54	261.97	-1.77	105.62	-78.20	903.84	626.84	276.99	3.263	
6,800.00	6,731.19	6,699.19	6,699.19	20.67	265.97	-1.77	105.62	-78.20	903.84	622.66	281.17	3.215	
6,900.00	6,831.19	6,799.19	6,799.19	20.80	269.97	-1.77	105.62	-78.20	903.84	618.48	285.36	3.167	
7,000.00	6,931.19	6,899.19	6,899.19	20.93	273.97	-1.77	105.62	-78.20	903.84	614.30	289.54	3.122	
7,100.00	7,031.19	6,999.19	6,999.19	21.06	277.97	-1.77	105.62	-78.20	903.84	610.12	293.72	3.077	
7,200.00	7,131.19	7,099.19	7,099.19	21.20	281.97	-1.77	105.62	-78.20	903.84	605.93	297.91	3.034	
7,300.00	7,231.19	7,199.19	7,199.19	21.33	285.97	-1.77	105.62	-78.20	903.84	601.75	302.09	2.992	
7,400.00	7,331.19	7,299.19	7,299.19	21.47	289.97	-1.77	105.62	-78.20	903.84	597.56	306.28	2.951	
7,437.81	7,369.00	7,337.00	7,337.00	21.52	291.48	-1.77	105.62	-78.20	903.84	595.98	307.86	2.936	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

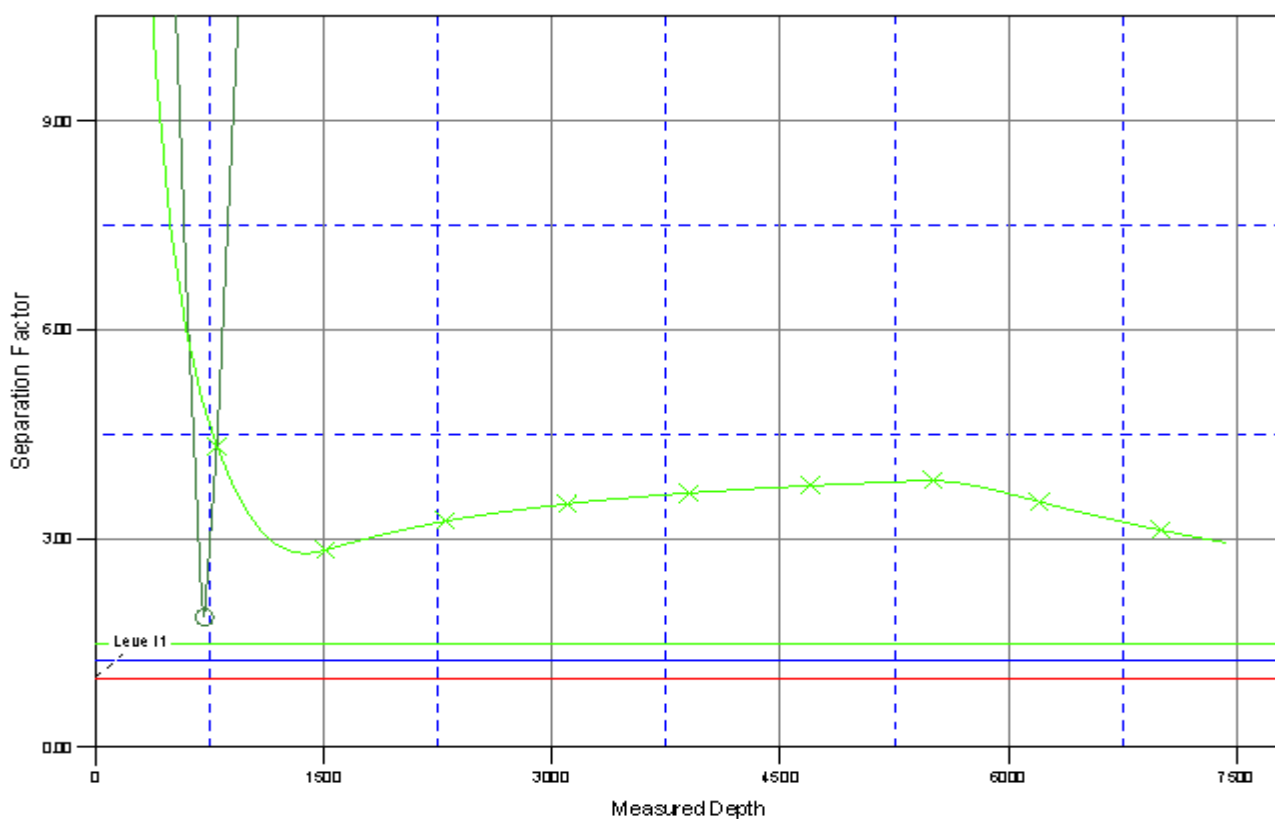
Reference Depths are relative to WELL @ 4919.00ft (Original Well Elev) Coordinates are relative to: P_SALAZAR 22-20
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.38°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_SALAZAR 22-20
Project:	COLORADO NOTHERN ZONE - 83	TVD Reference:	WELL @ 4919.00ft (Original Well Elev)
Reference Site:	P_SALAZAR PAD	MD Reference:	WELL @ 4919.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_SALAZAR 22-20	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_SALAZAR 22-20	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 12-11-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4919.00ft (Original Well Elev) Coordinates are relative to: P_SALAZAR 22-20
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

- P_SALAZAR 31-20, P_SALAZAR 31-20, PLAN #1 12-11-09 RHS V0
- x SALAZAR FAMILY GAS UNIT #2 EXISTING, SALAZAR FAMILY GAS UNIT #2 EXISTING, SALAZAR FAMILY GAS UNIT #2 EXISTING V0