

Unit Petroleum

Reno County, Kansas [NAD 83]

Section 23 T25S-R10W

Ismert 23 #1H

OH

Plan: Design #1

Standard Planning Report

06 March, 2014

INWELL INC.



Unit Petroleum
 Project: Reno County, Kansas [NAD 83]
 Site: Section 23 T25S-R10W
 Well: Ismert 23 #1H
 Wellbore: OH
 Design: Design #1
 Lat: 37° 51' 11.520 N
 Long: 98° 23' 46.985 W
 Pad GL: 1728.00
 KB: 20' KB @ 1748.00usft (UDI 303)



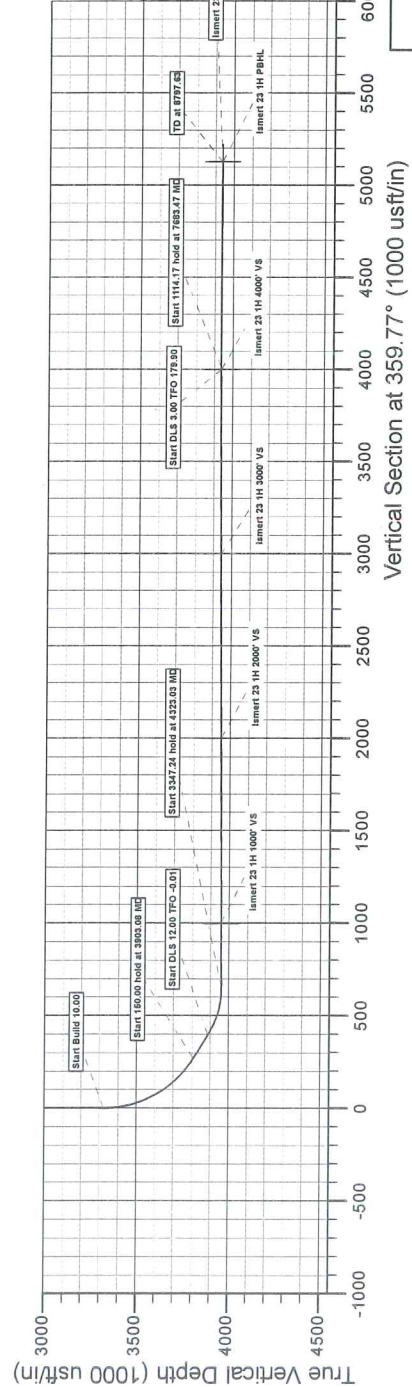
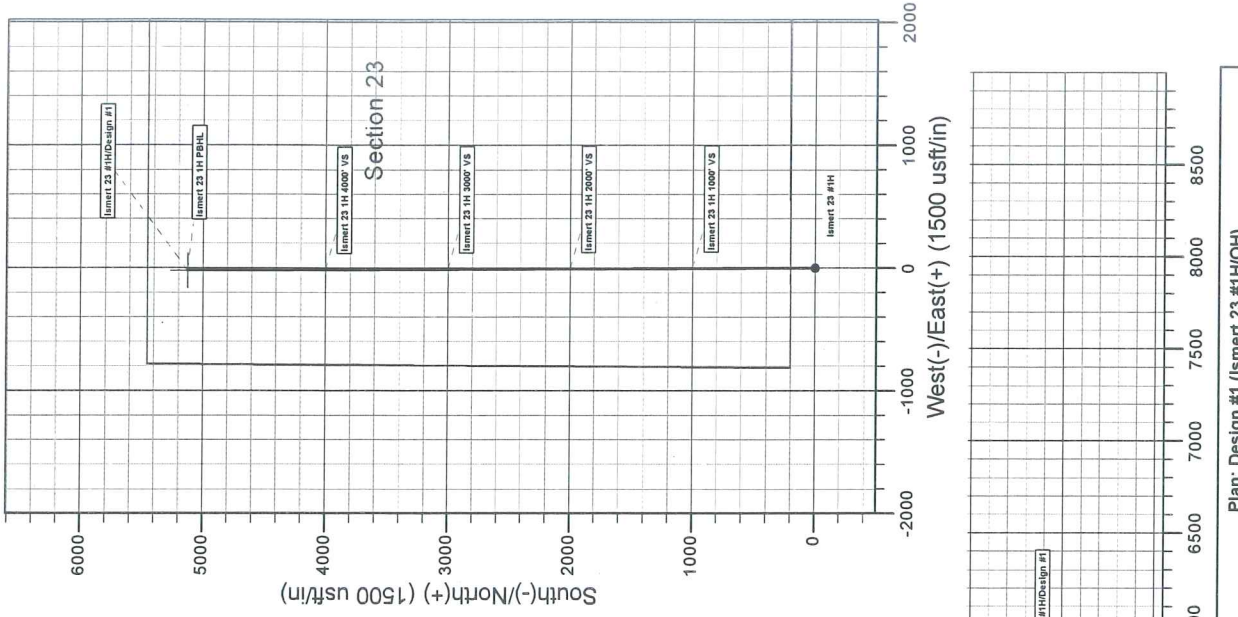
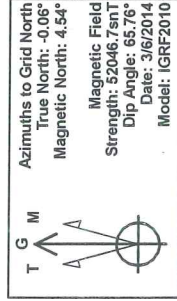
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Slot
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3323.08	0.00	0.00	3323.08	0.00	0.00	0.00	0.00	0.00	
3903.08	58.00	359.77	3808.98	269.33	-1.08	0.00	0.00	269.34	
4053.08	58.00	359.77	3888.46	396.54	-1.59	10.00	359.77	396.54	
4323.03	90.39	359.76	3961.00	652.84	-2.63	12.00	0.00	652.84	
4683.47	90.39	359.76	3938.00	3999.97	-16.38	0.00	0.00	4000.00	
7683.47	90.00	359.77	3937.95	4013.17	-16.44	3.00	179.90	4013.20	
8797.63	90.00	359.77	3938.00	5127.33	-21.00	0.00	0.00	5127.37	

WELL DETAILS: Ismert 23 #1H			
+N/-S	+E/-W	Ground Level:	1728.00
0.00	0.00	Easting	1342249.00
		Latitude	37° 51' 11.520 N
		Longitude	98° 23' 46.985 W

PROJECT DETAILS: Reno County, Kansas [NAD 83]
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Kansas Southern Zone
 System Datum: Mean Sea Level

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	+N/-S	+E/-W	TVD	Northing	Easting
Ismert 23 1H 4000' VS	3999.97	-16.38	3938.00	1748392.71	1342232.62
Ismert 23 1H PBHL	5127.33	-21.00	3938.00	1749520.00	1342228.00
Ismert 23 1H 2000' VS	2999.97	-12.29	3944.00	1747392.78	1342236.71
Ismert 23 1H 1000' VS	1999.98	-8.19	3950.00	1746392.86	1342240.81
Ismert 23 1H 0000' VS	999.99	-4.10	3956.00	1745392.93	1342244.90

NOTE: All Lease lines and Hard lines are estimates only and are subject to the customers' approval.





Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Ismert 23 #1H
Company:	Unit Petroleum	TVD Reference:	20' KB @ 1748.00usft (UDI 303)
Project:	Reno County, Kansas [NAD 83]	MD Reference:	20' KB @ 1748.00usft (UDI 303)
Site:	Section 23 T25S-R10W	North Reference:	Grid
Well:	Ismert 23 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Project	Reno County, Kansas [NAD 83]		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Kansas Southern Zone		Using geodetic scale factor

Site	Section 23 T25S-R10W				
Site Position:		Northing:	1,744,393.00 usft	Latitude:	37° 51' 11.520 N
From:	Map	Easting:	1,342,249.00 usft	Longitude:	98° 23' 46.985 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.06 °

Well	Ismert 23 #1H					
Well Position	+N/-S	0.00 usft	Northing:	1,744,393.00 usft	Latitude:	37° 51' 11.520 N
	+E/-W	0.00 usft	Easting:	1,342,249.00 usft	Longitude:	98° 23' 46.985 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	1,728.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/6/2014	4.60	65.76	52,047

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.77

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,323.08	0.00	0.00	3,323.08	0.00	0.00	0.00	0.00	0.00	0.00	
3,903.08	58.00	359.77	3,808.98	269.33	-1.08	10.00	10.00	0.00	359.77	
4,053.08	58.00	359.77	3,888.46	396.54	-1.59	0.00	0.00	0.00	0.00	
4,323.03	90.39	359.76	3,961.00	652.84	-2.63	12.00	12.00	0.00	-0.01	
7,670.26	90.39	359.76	3,938.00	3,999.97	-16.38	0.00	0.00	0.00	0.00	Ismert 23 1H 4000' V
7,683.47	90.00	359.77	3,937.95	4,013.17	-16.44	3.00	-3.00	0.01	179.90	
8,797.63	90.00	359.77	3,938.00	5,127.33	-21.00	0.00	0.00	0.00	0.00	Ismert 23 1H PBHL



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Ismert 23 #1H
Company:	Unit Petroleum	TVD Reference:	20' KB @ 1748.00usft (UDI 303)
Project:	Reno County, Kansas [NAD 83]	MD Reference:	20' KB @ 1748.00usft (UDI 303)
Site:	Section 23 T25S-R10W	North Reference:	Grid
Well:	Ismert 23 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Planned 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	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
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,323.08	0.00	0.00	3,323.08	0.00	0.00	0.00	0.00	0.00	0.00
3,350.00	2.69	359.77	3,349.99	0.63	0.00	0.63	10.00	10.00	0.00
3,400.00	7.69	359.77	3,399.77	5.16	-0.02	5.16	10.00	10.00	0.00
3,450.00	12.69	359.77	3,448.96	14.00	-0.06	14.00	10.00	10.00	0.00
3,500.00	17.69	359.77	3,497.20	27.10	-0.11	27.10	10.00	10.00	0.00
3,550.00	22.69	359.77	3,544.11	44.35	-0.18	44.35	10.00	10.00	0.00
3,600.00	27.69	359.77	3,589.34	65.63	-0.26	65.63	10.00	10.00	0.00
3,650.00	32.69	359.77	3,632.55	90.76	-0.36	90.76	10.00	10.00	0.00
3,700.00	37.69	359.77	3,673.40	119.57	-0.48	119.57	10.00	10.00	0.00
3,750.00	42.69	359.77	3,711.58	151.83	-0.61	151.83	10.00	10.00	0.00
3,800.00	47.69	359.77	3,746.80	187.29	-0.75	187.29	10.00	10.00	0.00
3,850.00	52.69	359.77	3,778.80	225.69	-0.91	225.69	10.00	10.00	0.00
3,903.08	58.00	359.77	3,808.98	269.33	-1.08	269.34	10.00	10.00	0.00
4,000.00	58.00	359.77	3,860.34	351.53	-1.41	351.53	0.00	0.00	0.00
4,053.08	58.00	359.77	3,888.46	396.54	-1.59	396.54	0.00	0.00	0.00
4,075.00	60.63	359.77	3,899.65	415.39	-1.67	415.39	12.00	12.00	0.00
4,100.00	63.63	359.77	3,911.33	437.49	-1.76	437.49	12.00	12.00	0.00
4,125.00	66.63	359.77	3,921.85	460.17	-1.85	460.17	12.00	12.00	0.00
4,150.00	69.63	359.77	3,931.16	483.36	-1.94	483.37	12.00	12.00	0.00
4,175.00	72.63	359.77	3,939.24	507.02	-2.04	507.02	12.00	12.00	0.00



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Project:	Reno County, Kansas [NAD 83]	MD Reference:	20' KB @ 1748.00usft (UDI 303)
Site:	Section 23 T25S-R10W	North Reference:	Grid
Well:	Ismert 23 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Planned 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)
4,200.00	75.63	359.77	3,946.08	531.06	-2.14	531.07	12.00	12.00	0.00
4,225.00	78.63	359.77	3,951.65	555.43	-2.24	555.44	12.00	12.00	0.00
4,250.00	81.63	359.77	3,955.93	580.06	-2.34	580.06	12.00	12.00	0.00
4,275.00	84.63	359.77	3,958.92	604.88	-2.44	604.88	12.00	12.00	0.00
4,300.00	87.63	359.77	3,960.61	629.82	-2.54	629.82	12.00	12.00	0.00
4,323.03	90.39	359.76	3,961.00	652.84	-2.63	652.84	12.00	12.00	0.00
4,400.00	90.39	359.76	3,960.48	729.81	-2.95	729.81	0.00	0.00	0.00
4,500.00	90.39	359.76	3,959.79	829.80	-3.36	829.81	0.00	0.00	0.00
4,600.00	90.39	359.76	3,959.10	929.80	-3.77	929.81	0.00	0.00	0.00
4,700.00	90.39	359.76	3,958.41	1,029.80	-4.18	1,029.81	0.00	0.00	0.00
4,800.00	90.39	359.76	3,957.73	1,129.79	-4.59	1,129.80	0.00	0.00	0.00
4,900.00	90.39	359.76	3,957.04	1,229.79	-5.00	1,229.80	0.00	0.00	0.00
5,000.00	90.39	359.76	3,956.35	1,329.79	-5.41	1,329.80	0.00	0.00	0.00
5,100.00	90.39	359.76	3,955.66	1,429.78	-5.83	1,429.80	0.00	0.00	0.00
5,200.00	90.39	359.76	3,954.98	1,529.78	-6.24	1,529.79	0.00	0.00	0.00
5,300.00	90.39	359.76	3,954.29	1,629.78	-6.65	1,629.79	0.00	0.00	0.00
5,400.00	90.39	359.76	3,953.60	1,729.77	-7.06	1,729.79	0.00	0.00	0.00
5,500.00	90.39	359.76	3,952.92	1,829.77	-7.47	1,829.79	0.00	0.00	0.00
5,600.00	90.39	359.76	3,952.23	1,929.77	-7.88	1,929.78	0.00	0.00	0.00
5,700.00	90.39	359.76	3,951.54	2,029.77	-8.29	2,029.78	0.00	0.00	0.00
5,800.00	90.39	359.76	3,950.85	2,129.76	-8.70	2,129.78	0.00	0.00	0.00
5,900.00	90.39	359.76	3,950.17	2,229.76	-9.11	2,229.78	0.00	0.00	0.00
6,000.00	90.39	359.76	3,949.48	2,329.76	-9.52	2,329.78	0.00	0.00	0.00
6,100.00	90.39	359.76	3,948.79	2,429.75	-9.93	2,429.77	0.00	0.00	0.00
6,200.00	90.39	359.76	3,948.10	2,529.75	-10.34	2,529.77	0.00	0.00	0.00
6,300.00	90.39	359.76	3,947.42	2,629.75	-10.75	2,629.77	0.00	0.00	0.00
6,400.00	90.39	359.76	3,946.73	2,729.74	-11.17	2,729.77	0.00	0.00	0.00
6,500.00	90.39	359.76	3,946.04	2,829.74	-11.58	2,829.76	0.00	0.00	0.00
6,600.00	90.39	359.76	3,945.36	2,929.74	-11.99	2,929.76	0.00	0.00	0.00
6,700.00	90.39	359.76	3,944.67	3,029.73	-12.40	3,029.76	0.00	0.00	0.00
6,800.00	90.39	359.76	3,943.98	3,129.73	-12.81	3,129.76	0.00	0.00	0.00
6,900.00	90.39	359.76	3,943.29	3,229.73	-13.22	3,229.75	0.00	0.00	0.00
7,000.00	90.39	359.76	3,942.61	3,329.72	-13.63	3,329.75	0.00	0.00	0.00
7,100.00	90.39	359.76	3,941.92	3,429.72	-14.04	3,429.75	0.00	0.00	0.00
7,200.00	90.39	359.76	3,941.23	3,529.72	-14.45	3,529.75	0.00	0.00	0.00
7,300.00	90.39	359.76	3,940.54	3,629.71	-14.86	3,629.74	0.00	0.00	0.00
7,400.00	90.39	359.76	3,939.86	3,729.71	-15.27	3,729.74	0.00	0.00	0.00
7,500.00	90.39	359.76	3,939.17	3,829.71	-15.68	3,829.74	0.00	0.00	0.00
7,600.00	90.39	359.76	3,938.48	3,929.70	-16.10	3,929.74	0.00	0.00	0.00
7,670.26	90.39	359.76	3,938.00	3,999.97	-16.38	4,000.00	0.00	0.00	0.00
7,683.47	90.00	359.77	3,937.95	4,013.17	-16.44	4,013.20	3.00	-3.00	0.01
7,700.00	90.00	359.77	3,937.96	4,029.70	-16.51	4,029.74	0.00	0.00	0.00
7,800.00	90.00	359.77	3,937.96	4,129.70	-16.92	4,129.74	0.00	0.00	0.00
7,900.00	90.00	359.77	3,937.96	4,229.70	-17.32	4,229.74	0.00	0.00	0.00
8,000.00	90.00	359.77	3,937.97	4,329.70	-17.73	4,329.74	0.00	0.00	0.00
8,100.00	90.00	359.77	3,937.97	4,429.70	-18.14	4,429.74	0.00	0.00	0.00
8,200.00	90.00	359.77	3,937.98	4,529.70	-18.55	4,529.74	0.00	0.00	0.00
8,300.00	90.00	359.77	3,937.98	4,629.70	-18.96	4,629.74	0.00	0.00	0.00
8,400.00	90.00	359.77	3,937.98	4,729.70	-19.37	4,729.74	0.00	0.00	0.00
8,500.00	90.00	359.77	3,937.99	4,829.70	-19.78	4,829.74	0.00	0.00	0.00
8,600.00	90.00	359.77	3,937.99	4,929.69	-20.19	4,929.74	0.00	0.00	0.00
8,700.00	90.00	359.77	3,938.00	5,029.69	-20.60	5,029.74	0.00	0.00	0.00
8,797.63	90.00	359.77	3,938.00	5,127.33	-21.00	5,127.37	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Ismert 23 #1H
Company:	Unit Petroleum	TVD Reference:	20' KB @ 1748.00usft (UDI 303)
Project:	Reno County, Kansas [NAD 83]	MD Reference:	20' KB @ 1748.00usft (UDI 303)
Site:	Section 23 T25S-R10W	North Reference:	Grid
Well:	Ismert 23 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Ismert 23 1H PBHL	0.00	0.00	3,938.00	5,127.33	-21.00	1,749,520.00	1,342,228.00	37° 52' 2.209 N	98° 23' 47.176 W
- plan hits target center									
- Point									
Ismert 23 1H 4000' VS	0.00	0.00	3,938.00	3,999.97	-16.38	1,748,392.71	1,342,232.62	37° 51' 51.064 N	98° 23' 47.134 W
- plan hits target center									
- Point									