

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES			Dogleg Deg/100ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00	
428.00	0.00	0.00	428.00	0.00 N	0.00 E	0.00	0.00	
481.00	0.80	271.30	481.00	0.01 N	0.37 W	1.51	-0.25	
510.00	2.10	355.50	509.99	0.54 N	0.61 W	7.48	-0.04	
541.00	3.50	9.50	540.95	2.04 N	0.50 W	4.99	1.11	
599.00	6.70	37.20	598.72	6.49 N	1.84 E	6.81	5.92	
689.00	13.50	34.10	687.28	19.38 N	10.91 E	7.58	21.48	
779.00	20.30	34.10	773.34	41.03 N	25.57 E	7.56	47.21	
899.00	30.40	29.90	881.65	84.71 N	52.45 E	8.54	97.23	
928.00	33.20	30.70	906.30	97.90 N	60.16 E	9.76	112.05	
987.00	33.40	36.90	955.63	124.78 N	78.16 E	5.78	143.86	
1018.00	35.10	40.60	981.25	135.37 N	89.09 E	8.67	162.21	
1040.00	36.40	41.10	999.11	148.10 N	97.50 E	6.06	174.04	
1105.00	40.60	44.20	1049.97	177.81 N	124.93 E	7.11	214.47	
1134.00	44.30	43.20	1071.36	191.96 N	138.45 E	12.97	234.04	
1256.00	56.40	42.50	1149.07	260.73 N	202.18 E	9.93	327.76	
1349.00	64.90	39.50	1194.62	321.90 N	255.23 E	9.56	408.59	
1441.00	75.70	38.30	1225.58	389.23 N	309.52 E	11.80	494.68	
1503.00	81.10	38.20	1238.05	436.91 N	347.11 E	8.71	515.05	
1565.00	80.40	37.80	1248.01	485.13 N	384.78 E	1.30	655.86	
1597.00	80.00	37.70	1253.46	510.06 N	404.08 E	1.29	647.18	
1629.00	82.60	38.30	1258.30	534.98 N	423.56 E	8.33	678.62	
1660.00	85.10	39.00	1261.62	559.05 N	442.81 E	8.37	709.28	
1690.00	85.80	39.70	1264.00	582.18 N	461.77 E	3.29	739.07	
1785.00	84.90	42.40	1271.70	653.58 N	523.94 E	2.99	833.59	
1816.00	84.00	43.10	1274.70	676.24 N	544.89 E	3.67	864.43	
1847.00	83.60	42.50	1278.05	698.85 N	565.83 E	2.32	895.24	
1909.00	83.10	42.40	1285.23	744.29 N	607.39 E	0.82	956.79	
1940.00	82.80	43.20	1289.03	766.86 N	628.29 E	2.74	987.54	
2037.00	78.40	44.50	1304.87	835.86 N	694.57 E	4.72	1083.21	
2066.00	78.30	44.90	1310.73	856.05 N	714.55 E	1.39	1111.61	
2097.00	78.70	46.70	1316.91	877.23 N	736.32 E	5.83	1141.98	
2156.00	84.40	48.80	1325.58	916.44 N	779.51 E	10.28	1200.21	
2188.00	85.50	48.80	1328.39	937.44 N	803.49 E	3.44	1231.99	
2281.00	86.20	48.80	1335.12	998.53 N	873.28 E	0.75	1324.47	
2403.00	85.10	49.50	1344.38	1078.10 N	965.30 E	1.07	1445.69	
2495.00	84.00	48.80	1353.12	1138.00 N	1034.57 E	1.42	1536.95	
2588.00	85.20	50.90	1361.87	1197.70 N	1105.34 E	2.59	1629.11	
2679.00	86.40	52.40	1368.53	1254.00 N	1176.51 E	2.11	1719.13	
2696.00	86.30	52.30	1369.62	1264.37 N	1189.94 E	0.83	1735.93	

All data is in feet unless otherwise stated
 Coordinates are from IW22DH-22-65 and TVDs are from wellhead.
 Vertical section is from N 0.00 E 0.00 on azimuth 44.37 degrees.
 Calculation uses the minimum curvature method.

Targets associated with this wellpath
 =====

Target name	Position	T.V.D.	Local rectangular coords.	Date revised
Target 1 IW22DH	1291368.000, 859820.000	1285.00	733.00N 578.18E	5-Aug-97
FBHL/TD IW22DH	1292020.000, 860380.000	1374.50	1293.00N 1230.18E	1-Oct-97

All data is in feet unless otherwise stated
 Coordinates are from IW22DH-22-65 and TVDs are from wellhead.
 Vertical section is from N 0.00 E 0.00 on azimuth 44.37 degrees.
 Calculation uses the minimum curvature method.

Northwest Natural Gas Company

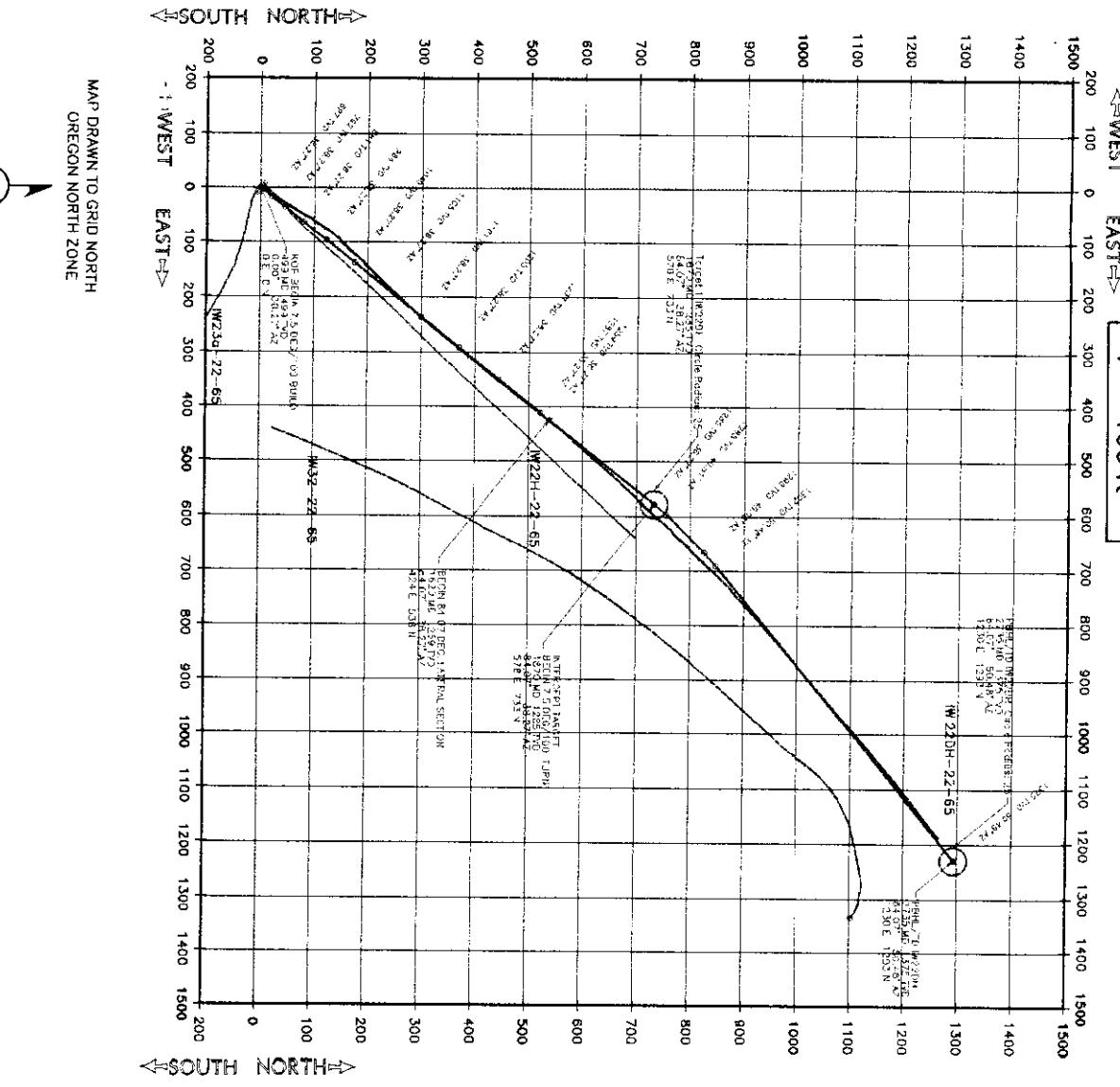
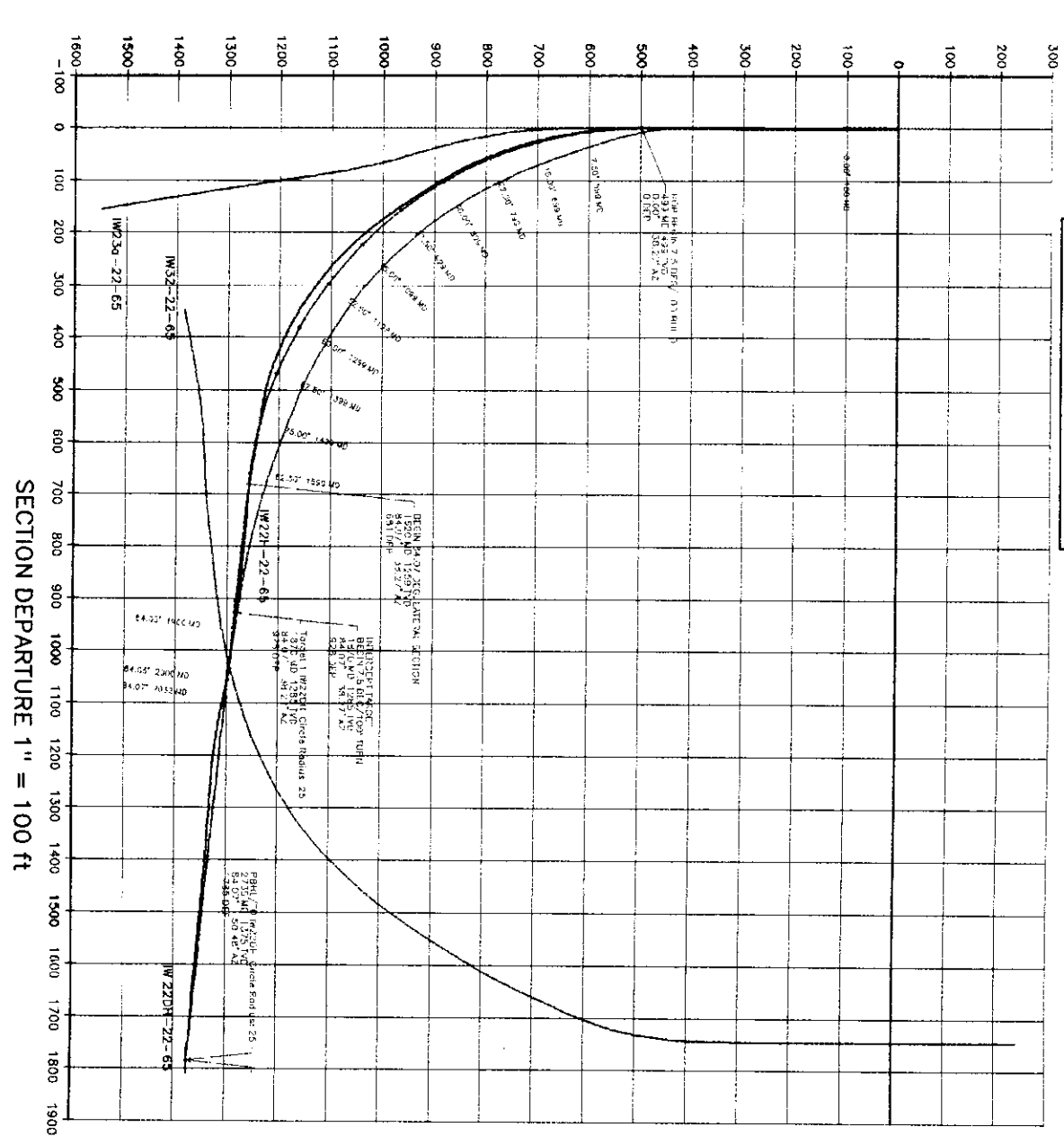
Schlumberger

Well: IW 22DH-22-65

Field: Mist Gas Field

Well: Taylor #4

Magnetic Declination: 18.6217° on 5/15/82
 Date: 10 Dec 97
 Well: IW22DH-22-65
 Date: 10 Dec 97
 Well: Taylor #4
 Date: 02 Feb 98
 Well: Taylor #4
 Date: 18 Feb 98



Magnetic to Grid North Correction = 20.587 East

Legend:
 - - - - - Existing Wells
 - - - - - Proposed Wells
 - - - - - Prop. Well As Drilled

CONTROLLED

Drawn by: Thomas Sandberg
 Checked by: Dennis Lee
 Date: 02/26/98