

Borehole: Original Borehole Well: Laguna 23 Federal Com #3H Field: NM Lea County (NAD 83) Structure: Aquila 3 MAR 23 2015

Gravity & Magnetic Parameters
Model: BOCM 2014 Dip: 60.411° Date: 30-Sep-2014
MagDec: 7.351° FS: 48447.91mT Gravity FS: 986.48mGal (N.8665 Based)

Surface Location HAD3 New Mexico State Plane, Eastern Zone, US Feet
Lat: N 32 33 8.18 Northing: 565576.1708 Grid Conv: 0.4307
Lon: W 103 31 57.33 Easting: 788062.0128 Scale Fact: 0.9896789

MacMap: Laguna 23
Stat: Federal Com # TVD Ref: RCB(7705R above MSL)
Plan: Nearburg Laguna 23 Fed Com #3H Gyro-MWD Dr to 13955ft

RECEIVED

CONTROLLED

Plan of
Drawing ref
Copy number
Date

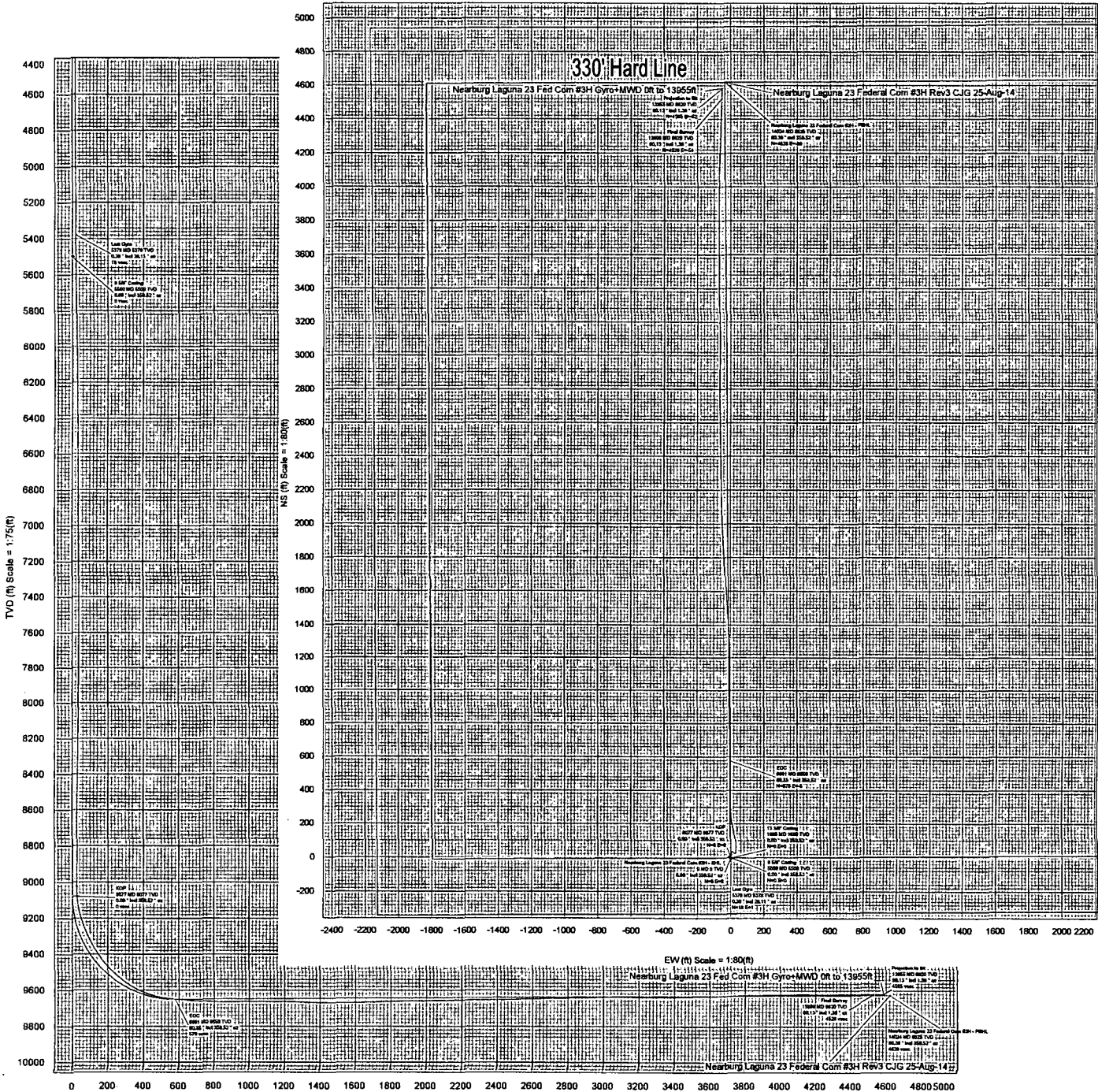
1. Signature
2. Date
3. Date
4. Date

Grid
True
Mag

Grid North
Tot Corr (N→G 6.920°)
Mag Dec (7.351°)
Grid Conv (0.431°)



Comments	Survey	Inc	Azim	TVD	SSTVD	VS	NS	EW	Latitude	Longitude	Easting	Northing	DLS
Nearburg Laguna 23 Federal Com #3H - SHL	0.00	0.00	359.52	0.00	-3683.00	0.00	0.00	0.00	N 32 33 8.181	W 103 31 57.329	788062.00	565575.10	
13 3/8" Casing	1680.00	0.00	359.52	1680.00	-2003.00	0.00	0.00	0.00	N 32 33 8.181	W 103 31 57.329	788062.00	565575.10	0.00
9 5/8" Casing	5500.00	0.00	359.52	5500.00	1817.00	0.00	0.00	0.00	N 32 33 8.181	W 103 31 57.329	788062.00	565575.10	0.00
KOP - Build @ 10°/100ft DLS	9077.05	0.00	359.52	9077.05	5394.05	0.00	0.00	0.00	N 32 33 8.181	W 103 31 57.329	788062.00	565575.10	0.00
Nearburg Laguna 23 Federal Com #3H - Landing	9980.55	90.35	359.52	9650.00	5967.00	576.46	576.44	-4.80	N 32 33 13.885	W 103 31 57.334	788057.20	566151.52	10.00
Nearburg Laguna 23 Federal Com #3H - PBHL	14024.24	90.36	359.52	9625.00	5942.00	4620.07	4619.91	-38.50	N 32 33 53.895	W 103 31 57.373	788023.50	570194.90	0.00



APR 03 2015

Nearburg Laguna 23 Fed Com #3H Gyro+MWD Off to 13955ft Survey

Geodetic Report

(Non-Def Survey)

Report Date: October 26, 2014 - 09:10 AM
Client: NM Lee County (NAD 83)
Field: Nearburg Laguna 23 Federal Com #3H / Laguna 23 Federal Com #3H
Structure / Shot: Nearburg Laguna 23 Federal Com #3H
Well: Laguna 23 Federal Com #3H
Borehole: Unknown / Unknown
Survey Name: Nearburg Laguna 23 Fed Com #3H Gyro+MWD Off to 13955ft
Survey Date: September 21, 2014
Tort / AHD / DD / ERD Ratio: 157.388' / 4652.788 ft / 6.024 / 0.481
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 33' 8.1808" W 103° 31' 57.3289"
Location Lat / NE VK: N 32° 33' 8.1808" W 103° 31' 57.3289"
CRS Grid Convergence Angle: 0.4309°
Grid Scale Factor: 0.999788
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 358.523° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: FCB
TVD Reference Elevation: 3705.000 ft above MSL
Seabed / Ground Elevation: 3863.000 ft above MSL
Magnetic Declination: 7.351°
Total Gravity Field Strength: 986.4978mgn (8.0095 Gauss)
Gravity Model: GARM
Total Magnetic Field Strength: 48447.816 nT
Magnetic Dip Angle: 60.411°
Declination Date: September 30, 2014
Magnetic Declination Model: IGRM 2014
North Reference: Grid North
Grid Convergence Used: 0.4309°
Total Cor Mag North->Grid North: 6.9188°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Adm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Nothing (ft/100)	Eastng (ft)	Latitude (N/S, °)	Longitude (E/W, °)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	565577.10	788062.00	N 32.33	8.18 W 103.31 57.33
	100.00	0.17	304.46	100.00	0.08	0.86	-0.12	0.17	565575.16	788061.08	N 32.33	8.18 W 103.31 57.33
	200.00	0.15	335.27	200.00	0.29	0.29	-0.30	0.09	565575.39	788061.70	N 32.33	8.18 W 103.31 57.33
	300.00	0.16	346.95	300.00	0.54	0.54	-0.39	0.03	565575.64	788061.61	N 32.33	8.19 W 103.31 57.33
	400.00	0.20	328.80	400.00	0.83	0.83	-0.51	0.07	565575.93	788061.49	N 32.33	8.19 W 103.31 57.33
	500.00	0.18	351.28	500.00	1.14	1.13	-0.62	0.08	565576.23	788061.38	N 32.33	8.19 W 103.31 57.34
	600.00	0.26	331.09	600.00	1.49	1.49	-0.76	0.11	565576.59	788061.24	N 32.33	8.20 W 103.31 57.34
	700.00	0.29	326.80	700.00	1.90	1.80	-1.00	0.04	565577.00	788061.00	N 32.33	8.20 W 103.31 57.34
	800.00	0.22	297.28	800.00	2.21	2.20	-1.31	0.15	565577.30	788060.89	N 32.33	8.20 W 103.31 57.34
	900.00	0.30	251.39	899.89	2.21	2.20	-1.73	0.22	565577.30	788060.27	N 32.33	8.20 W 103.31 57.35
	1000.00	0.39	245.51	899.89	1.82	1.90	-2.45	0.28	565577.00	788059.55	N 32.33	8.20 W 103.31 57.36
	1100.00	0.62	256.24	1099.89	1.59	1.96	-3.44	0.12	565576.86	788058.56	N 32.33	8.20 W 103.31 57.36
	1200.00	0.72	266.46	1199.89	1.43	1.39	-4.60	0.16	565576.49	788057.40	N 32.33	8.19 W 103.31 57.36
	1300.00	0.59	271.19	1299.87	1.41	1.37	-5.74	0.14	565576.47	788056.28	N 32.33	8.19 W 103.31 57.40
	1400.00	0.63	275.13	1399.87	1.48	1.43	-6.80	0.06	565576.53	788055.20	N 32.33	8.20 W 103.31 57.41
	1500.00	0.71	269.21	1499.86	1.53	1.47	-7.97	0.11	565576.57	788054.03	N 32.33	8.20 W 103.31 57.42
	1600.00	0.55	285.26	1599.85	1.49	1.42	-9.06	0.17	565576.52	788052.94	N 32.33	8.20 W 103.31 57.43
	1700.00	0.75	294.50	1699.85	1.33	1.25	-10.18	0.21	565576.35	788051.82	N 32.33	8.19 W 103.31 57.45
	1800.00	0.53	251.19	1799.84	1.06	0.87	-11.28	0.23	565576.07	788050.74	N 32.33	8.19 W 103.31 57.46
	1900.00	0.53	243.10	1899.84	0.71	0.81	-12.11	0.07	565575.71	788049.69	N 32.33	8.19 W 103.31 57.47
	2000.00	0.33	231.74	1899.83	0.33	0.22	-12.75	0.22	565575.32	788048.25	N 32.33	8.18 W 103.31 57.48
	2100.00	0.31	232.46	2099.83	-0.01	-0.12	-13.19	0.02	565574.88	788046.81	N 32.33	8.18 W 103.31 57.48
	2200.00	0.34	246.80	2199.83	-0.29	-0.40	-13.68	0.09	565574.70	788045.32	N 32.33	8.18 W 103.31 57.49
	2300.00	0.33	255.85	2299.83	-0.47	-0.59	-14.23	0.05	565574.51	788043.77	N 32.33	8.18 W 103.31 57.50
	2400.00	0.29	283.41	2399.83	-0.48	-0.80	-14.76	0.15	565574.50	788042.24	N 32.33	8.18 W 103.31 57.50
	2500.00	0.39	301.67	2499.83	-0.23	-0.36	-15.29	0.15	565574.74	788040.71	N 32.33	8.18 W 103.31 57.51
	2600.00	0.56	343.21	2599.82	0.28	0.28	-15.72	0.37	565575.38	788039.28	N 32.33	8.18 W 103.31 57.51
	2700.00	0.82	4.76	2699.81	1.88	1.55	-15.80	0.45	565576.05	788037.85	N 32.33	8.20 W 103.31 57.51
	2800.00	0.85	13.77	2799.80	3.29	3.16	-15.54	0.15	565578.26	788036.46	N 32.33	8.21 W 103.31 57.51
	2800.00	1.05	29.73	2899.89	4.88	4.76	-14.88	0.28	565578.86	788034.12	N 32.33	8.23 W 103.31 57.50
	3000.00	1.04	43.14	2999.87	6.33	6.22	-13.81	0.24	565581.32	788032.49	N 32.33	8.24 W 103.31 57.49
	3100.00	0.87	54.99	3099.85	7.42	7.31	-12.57	0.26	565582.41	788030.43	N 32.33	8.25 W 103.31 57.48
	3200.00	0.82	66.32	3199.85	8.06	7.97	-11.45	0.29	565583.07	788028.55	N 32.33	8.26 W 103.31 57.48
	3300.00	0.64	72.23	3299.84	8.44	8.35	-10.42	0.07	565583.45	788026.03	N 32.33	8.26 W 103.31 57.45
	3400.00	0.49	71.42	3399.84	8.74	8.66	-9.48	0.15	565583.76	788023.52	N 32.33	8.27 W 103.31 57.44
	3500.00	0.59	67.01	3499.83	9.07	9.00	-8.61	0.11	565584.10	788021.39	N 32.33	8.27 W 103.31 57.43
	3600.00	0.75	49.16	3599.83	9.69	9.63	-7.64	0.28	565584.73	788019.28	N 32.33	8.28 W 103.31 57.42
	3700.00	0.73	43.13	3699.82	10.58	10.52	-6.71	0.08	565585.62	788017.09	N 32.33	8.29 W 103.31 57.41
	3800.00	0.56	37.04	3799.81	11.44	11.39	-5.87	0.17	565586.49	788014.83	N 32.33	8.29 W 103.31 57.40
	3900.00	0.47	41.38	3899.81	12.15	12.10	-5.39	0.12	565587.20	788012.61	N 32.33	8.30 W 103.31 57.39
	4000.00	0.50	47.60	3999.80	12.74	12.70	-4.80	0.06	565587.80	788010.20	N 32.33	8.31 W 103.31 57.38
	4100.00	0.53	34.98	4099.80	13.41	13.38	-4.21	0.12	565588.48	788007.79	N 32.33	8.31 W 103.31 57.38
	4200.00	0.79	47.52	4199.79	14.25	14.22	-3.43	0.30	565589.32	788005.57	N 32.33	8.32 W 103.31 57.37
	4300.00	0.81	46.86	4299.78	15.19	15.17	-2.41	0.02	565590.27	788003.59	N 32.33	8.33 W 103.31 57.36
	4400.00	0.78	30.16	4399.77	16.24	16.22	-1.56	0.23	565591.32	788001.44	N 32.33	8.34 W 103.31 57.35
	4500.00	0.46	11.68	4499.77	17.22	17.21	-1.14	0.34	565592.31	788000.88	N 32.33	8.35 W 103.31 57.34
	4600.00	0.23	343.28	4599.76	17.82	17.81	-1.12	0.30	565592.91	788000.69	N 32.33	8.36 W 103.31 57.34
	4700.00	0.24	354.74	4699.76	18.22	18.21	-1.19	0.05	565593.31	788000.81	N 32.33	8.36 W 103.31 57.34
	4800.00	0.36	81.66	4799.76	18.47	18.47	-0.90	0.42	565593.57	788001.10	N 32.33	8.36 W 103.31 57.34
	4900.00	0.41	103.88	4899.76	18.43	18.43	-0.24	0.16	565593.52	788001.76	N 32.33	8.36 W 103.31 57.33
	5000.00	0.16	51.04	4999.76	18.42	18.43	0.21	0.34	565593.53	788002.21	N 32.33	8.36 W 103.31 57.32
	5100.00	0.11	84.28	5099.76	18.52	18.52	0.42	0.09	565593.62	788002.62	N 32.33	8.36 W 103.31 57.32
	5200.00	0.37	20.67	5199.76	18.83	18.84	0.63	0.34	565593.94	788003.43	N 32.33	8.37 W 103.31 57.32
	5300.00	0.13	283.89	5299.76	19.16	19.17	0.63	0.41	565594.26	788002.83	N 32.33	8.37 W 103.31 57.32
	5400.00	0.20	28.11	5379.76	19.30	19.31	0.81	0.33	565594.41	788002.62	N 32.33	8.37 W 103.31 57.32
	5500.00	0.62	352.21	5499.75	20.36	20.37	0.82	0.31	565595.47	788002.02	N 32.33	8.38 W 103.31 57.32
	5600.00	1.14	5626.74	5626.74	21.73	21.74	0.91	0.72	565596.84	788002.91	N 32.33	8.40 W 103.31 57.32
	5721.00	0.53	23.71	5720.73	22.99	23.00	1.44	0.65	565598.10	788003.44	N 32.33	8.41 W 103.31 57.31

Comments	MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	Northing	Eastng	Latitude	Longitude
(M)	(°)	(°)	(M)	(M)	(M)	(M)	(M)	(1/1000)	(M)	(M)	(N S ° E W)	(E W ° N S)
5616.00	0.62	29.56	5615.73	23.63	23.65	23.65	1.67	0.11	565598.55	788083.87	N 32.33 8.42	W 103.31 57.30
5912.00	0.62	25.92	5911.72	24.75	24.77	24.77	2.35	0.04	565599.87	788064.35	N 32.33 8.43	W 103.31 57.30
6007.00	0.79	29.21	6006.71	25.78	25.80	25.80	2.90	0.18	565600.90	788064.90	N 32.33 8.44	W 103.31 57.29
6102.00	0.70	30.75	6101.71	26.84	26.87	26.87	3.51	0.10	565601.97	788065.51	N 32.33 8.45	W 103.31 57.28
6196.00	0.70	26.39	6195.70	27.85	27.88	27.88	4.06	0.06	565602.88	788066.06	N 32.33 8.46	W 103.31 57.28
6286.00	0.70	29.63	6286.69	28.85	28.89	28.89	4.60	0.04	565603.88	788066.69	N 32.33 8.47	W 103.31 57.27
6383.00	0.70	19.79	6382.69	29.88	29.92	29.92	5.07	0.13	565605.02	788067.07	N 32.33 8.48	W 103.31 57.27
6475.00	0.79	13.42	6474.68	31.02	31.07	31.07	5.41	0.13	565606.17	788067.41	N 32.33 8.49	W 103.31 57.26
6570.00	0.70	18.96	6569.67	32.21	32.26	32.26	5.75	0.12	565607.36	788067.75	N 32.33 8.50	W 103.31 57.26
6664.00	0.53	18.37	6663.66	33.16	33.21	33.21	6.08	0.18	565608.31	788068.08	N 32.33 8.51	W 103.31 57.26
6752.00	0.35	18.24	6751.66	33.90	33.90	33.90	6.30	0.19	565609.00	788068.30	N 32.33 8.52	W 103.31 57.21
6852.00	0.44	6.55	6851.66	34.47	34.53	34.53	6.43	0.13	565609.43	788068.43	N 32.33 8.52	W 103.31 57.25
6947.00	0.35	18.05	6946.66	35.11	35.17	35.17	6.57	0.13	565610.27	788068.57	N 32.33 8.53	W 103.31 57.25
7042.00	0.26	36.63	7041.66	35.56	35.62	35.62	6.78	0.14	565610.71	788068.78	N 32.33 8.53	W 103.31 57.25
7138.00	0.18	45.54	7137.66	35.84	35.90	35.90	7.02	0.09	565610.99	788069.02	N 32.33 8.54	W 103.31 57.24
7232.00	0.26	78.60	7232.65	35.98	36.04	36.04	7.34	0.15	565611.14	788069.34	N 32.33 8.54	W 103.31 57.24
7328.00	0.18	90.63	7327.65	36.02	36.08	36.08	7.70	0.10	565611.18	788069.70	N 32.33 8.54	W 103.31 57.24
7422.00	0.28	98.18	7421.65	35.98	36.05	36.05	8.06	0.09	565611.15	788070.08	N 32.33 8.54	W 103.31 57.23
7518.00	0.26	105.21	7517.65	35.68	35.96	35.96	8.46	0.03	565611.06	788070.48	N 32.33 8.54	W 103.31 57.23
7612.00	0.44	114.94	7611.65	35.68	35.76	35.76	8.02	0.20	565610.85	788071.02	N 32.33 8.53	W 103.31 57.22
7708.00	0.53	120.52	7707.65	35.29	35.37	35.37	8.73	0.11	565610.47	788071.73	N 32.33 8.53	W 103.31 57.21
7801.00	0.82	132.79	7800.64	34.73	34.81	34.81	10.47	0.16	565609.91	788072.47	N 32.33 8.52	W 103.31 57.20
7896.00	0.70	131.22	7895.64	33.98	34.08	34.08	11.28	0.09	565609.37	788073.28	N 32.33 8.52	W 103.31 57.19
7991.00	0.70	136.55	7990.64	33.17	33.27	33.27	12.12	0.06	565609.18	788074.12	N 32.33 8.51	W 103.31 57.18
8094.00	0.79	130.04	8093.62	32.34	32.45	32.45	13.00	0.13	565607.55	788075.00	N 32.33 8.50	W 103.31 57.17
8179.00	0.78	143.52	8178.61	31.38	31.50	31.50	13.89	0.20	565606.60	788075.89	N 32.33 8.50	W 103.31 57.16
8275.00	0.79	141.06	8274.60	30.33	30.45	30.45	14.70	0.04	565605.35	788076.70	N 32.33 8.48	W 103.31 57.15
8369.00	0.88	146.68	8368.59	29.21	29.34	29.34	15.50	0.13	565604.44	788077.50	N 32.33 8.47	W 103.31 57.15
8463.00	0.70	140.42	8462.58	28.16	28.30	28.30	16.26	0.21	565603.40	788078.26	N 32.33 8.46	W 103.31 57.14
8559.00	0.79	119.45	8558.58	27.38	27.52	27.52	17.21	0.30	565602.62	788079.21	N 32.33 8.45	W 103.31 57.13
8652.00	1.14	109.03	8651.59	26.75	26.90	26.90	18.65	0.42	565602.00	788080.65	N 32.33 8.43	W 103.31 57.00
8748.00	1.41	100.63	8747.54	26.20	26.37	26.37	20.71	0.34	565601.47	788082.71	N 32.33 8.44	W 103.31 57.08
8842.00	1.49	94.96	8841.51	25.85	26.04	26.04	23.06	0.18	565601.14	788083.06	N 32.33 8.44	W 103.31 57.06
8936.00	1.58	89.35	8935.48	25.63	25.84	25.84	25.57	0.10	565600.94	788083.57	N 32.33 8.43	W 103.31 57.03
9016.00	1.41	93.11	9015.45	25.47	25.70	25.70	27.86	0.22	565600.80	788083.65	N 32.33 8.43	W 103.31 57.00
9032.00	1.41	90.90	9031.44	25.45	25.69	25.69	28.05	0.34	565600.79	788083.95	N 32.33 8.43	W 103.31 57.00
9064.00	1.67	53.31	9063.43	25.72	25.96	25.96	28.82	3.18	565601.06	788090.82	N 32.33 8.44	W 103.31 56.99
9096.00	4.66	14.82	9095.38	27.25	27.50	27.50	29.52	10.97	565602.60	788091.52	N 32.33 8.45	W 103.31 56.98
9128.00	8.28	3.85	9127.16	37.06	37.32	37.32	30.81	12.86	565603.25	788092.20	N 32.33 8.49	W 103.31 56.97
9160.00	13.63	1.94	9159.54	45.41	45.67	45.67	31.16	15.60	565612.41	788093.81	N 32.33 8.55	W 103.31 56.97
9191.00	17.67	1.34	9188.39	55.36	55.62	55.62	31.33	13.21	565620.77	788095.05	N 32.33 8.73	W 103.31 56.96
9222.00	19.79	0.68	9221.75	68.58	68.84	68.84	31.37	6.87	565630.72	788093.33	N 32.33 8.73	W 103.31 56.96
9254.00	21.28	359.67	9247.71	68.58	68.64	68.64	31.37	4.78	565641.94	788093.37	N 32.33 8.84	W 103.31 56.96
9286.00	23.13	356.96	9277.34	78.64	78.83	78.83	31.00	6.60	565654.03	788093.00	N 32.33 8.96	W 103.31 56.96
9318.00	25.08	353.30	9308.46	91.87	92.09	92.09	29.86	9.27	565661.19	788091.63	N 32.33 9.09	W 103.31 56.97
9351.00	35.15	28.75	9334.93	106.35	106.59	106.59	27.87	10.07	565681.68	788092.87	N 32.33 9.33	W 103.31 56.99
9382.00	31.57	349.68	9382.60	122.22	122.44	122.44	25.18	9.11	565697.53	788087.18	N 32.33 9.29	W 103.31 57.02
9413.00	34.21	348.54	9388.63	138.78	138.96	138.96	22.00	8.75	565714.06	788094.00	N 32.33 9.55	W 103.31 57.06
9445.00	38.78	347.82	9414.68	156.89	157.14	157.14	18.19	8.07	565732.24	788090.18	N 32.33 8.73	W 103.31 57.10
9476.00	38.95	348.68	9439.16	175.64	175.77	175.77	14.32	7.27	565750.86	788090.18	N 32.33 8.92	W 103.31 57.15
9507.00	41.94	350.25	9462.75	195.44	195.54	195.54	10.65	10.18	565770.63	788072.65	N 32.33 10.11	W 103.31 57.18
9539.00	45.11	352.07	9485.95	217.24	217.31	217.31	7.27	10.65	565782.40	788069.27	N 32.33 10.33	W 103.31 57.22
9571.00	47.75	353.83	9508.00	240.27	240.32	240.32	4.46	9.26	565815.41	788066.46	N 32.33 10.56	W 103.31 57.26
9601.00	50.65	355.47	9527.60	262.90	262.93	262.93	2.37	10.42	565838.02	788064.37	N 32.33 10.78	W 103.31 57.28
9632.00	53.48	357.65	9546.36	287.31	287.33	287.33	0.81	10.63	565862.42	788062.91	N 32.33 11.02	W 103.31 57.29
9664.00	56.89	358.71	9564.94	313.57	313.58	313.58	11.06	11.06	565886.67	788062.08	N 32.33 11.28	W 103.31 57.30
9695.00	60.06	359.40	9581.14	339.99	339.99	339.99	0.35	10.40	565915.09	788061.65	N 32.33 11.54	W 103.31 57.30
9727.00	63.66	359.68	9596.23	368.20	368.21	368.21	-0.58	11.27	565944.30	788061.42	N 32.33 11.82	W 103.31 57.30
9759.00	67.44	359.84	9609.45	426.32	426.32	426.32	-0.71	11.82	565972.42	788061.28	N 32.33 12.11	W 103.31 57.30
9790.00	71.23	359.45	9620.41	458.82	458.82	458.82	-0.89	12.26	566001.42	788061.11	N 32.33 12.40	W 103.31 57.30
9822.00	74.83	0.12	9629.75	488.04	488.05	488.05	-1.00	11.43	566032.02	788061.00	N 32.33 12.70	W 103.31 57.30
9854.00	78.26	0.30	9637.20	518.52	518.53	518.53	-0.89	10.73	566063.14	788061.11	N 32.33 13.01	W 103.31 57.30
9886.00	81.25	359.69	9642.69	551.28	551.29	551.29	-0.84	9.43	566094.82	788061.16	N 32.33 13.32	W 103.31 57.29
9918.00	84.77	0.02	9646.78	582.18	582.18	582.18	-0.86	11.01	566126.38	788061.14	N 32.33 13.64	W 103.31 57.28
9949.00	85.65	359.69	9648.37	614.09	614.09	614.09	-1.22	3.03	566157.27	788061.06	N 32.33 13.90	W 103.31 57.29
9981.00	85.65	359.31	9651.80	644.99	644.99	644.99	-1.75	1.18	566189.18	788060.78	N 32.33 14.26	W 103.31 57.29
10012.00	85.65	358.71	9654.15	676.88	676.88	676.88	-2.48	1.83	566220.08	788060.25	N 32.33 14.56	W 103.31 57.29
10044.00	85.30	358.68	9656.67	708.78	708.78	708.78	-3.25	1.10	566251.97	788059.52	N 32.33 14.88	W 103.31 57.30
10076.00	85.82	358.54	9659.15	740.69	740.69	740.69	-4.10	1.68	566283.87	788058.75	N 32.33 15.19	W 103.31 57.25
10108.00	86.09	358.42	9661.41	772.63	772.61	772.61	-4.97	0.82	566315.77	788057.90	N 32.33 15.51	W 103.31 57.31
10140.00	86.61	358.45	9663.44	804.56	804.56	804.56	-5.74	1.63	566347.70	788057.03	N 32.33 15.83	W 103.31 57.32
10172.00	87.36	358.61	9665.07	834.54	834.54	834.54	-6.29	3.23	566379.64	788056.26	N 32.33 16.14	W 103.31 57.33
10202.00	89.08	359.06	9665.94	868.56	868.56	868.56	-6.47	5.07	566409.63	788055.71	N 32.33 16.44	W 103.31 57.33
10236.00	91.71	0.62	9665.50	892.52	892.52	892.52	-6.03	4.78	566473.61	788055.53	N 32.33 16.70	W 103.31 57.33
10269.00	89.87	359.92	9664.20	918.53	918.53	918.53	-5.82	2.08</				

Comments	MD	Incl	Azim Grd	TWD	VSEC	NS	EW	DLS	Northng	Eastng	Latitude	Longitude
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(1/100ft)	(ft/s)	(ft/s)	(N - S)	(E - W)
11115.00	91.71	356.21	9864.14	1746.72	1746.49	-35.12	0.81	56732.55	788026.88	N 32 33 25.48	W 103 31 57.59	
11210.00	91.71	356.44	9861.30	1641.53	1641.25	-41.20	0.24	567116.31	788020.80	N 32 33 26.40	W 103 31 57.65	
11304.00	90.57	356.97	9859.43	1935.40	1935.07	-46.60	1.34	567510.13	788015.40	N 32 33 27.33	W 103 31 57.70	
11388.00	90.66	358.01	9858.01	2029.33	2028.98	-50.72	1.11	567894.03	788011.28	N 32 33 28.26	W 103 31 57.74	
11492.00	91.54	359.21	9856.62	2123.30	2122.93	-53.00	1.59	567997.98	788009.00	N 32 33 29.19	W 103 31 57.76	
11588.00	91.19	358.71	9854.33	2219.27	2218.89	-54.74	0.64	567793.83	788007.26	N 32 33 30.14	W 103 31 57.77	
11682.00	89.87	358.60	9853.46	2313.25	2312.86	-56.87	1.40	567987.80	788005.13	N 32 33 31.07	W 103 31 57.78	
11778.00	91.19	358.87	9852.58	2409.23	2408.83	-58.92	1.39	567983.87	788003.08	N 32 33 32.02	W 103 31 57.81	
11878.00	82.24	358.53	9849.73	2504.16	2503.76	-61.07	1.16	568078.80	788001.83	N 32 33 32.96	W 103 31 57.82	
11888.00	91.80	358.96	9846.36	2599.11	2598.68	-63.24	0.58	568173.72	787998.77	N 32 33 33.90	W 103 31 57.84	
12062.00	91.80	358.87	9843.43	2693.06	2692.61	-65.10	0.01	568267.65	787996.91	N 32 33 34.83	W 103 31 57.85	
12158.00	90.13	0.27	9841.82	2789.04	2788.59	-66.82	2.27	568363.62	787994.19	N 32 33 35.78	W 103 31 57.85	
12253.00	91.19	0.69	9840.72	2884.02	2883.58	-68.02	1.20	568458.61	787991.88	N 32 33 36.72	W 103 31 57.84	
12349.00	91.89	0.17	9838.17	2978.97	2978.54	-64.31	0.92	568553.57	787987.89	N 32 33 37.66	W 103 31 57.82	
12442.00	90.13	0.15	9836.51	3072.95	3072.52	-64.05	1.67	568647.55	787987.96	N 32 33 38.59	W 103 31 57.81	
12539.00	88.81	358.64	9837.40	3168.94	3168.51	-64.81	1.67	568742.54	787987.19	N 32 33 39.54	W 103 31 57.81	
12632.00	89.78	359.37	9838.56	3262.93	3262.48	-68.18	1.13	568837.52	787985.81	N 32 33 40.47	W 103 31 57.82	
12726.00	90.48	359.05	9838.34	3356.93	3356.46	-67.49	0.82	568931.50	787984.51	N 32 33 41.40	W 103 31 57.82	
12821.00	82.15	359.89	9836.16	3451.90	3451.45	-68.29	2.02	569026.47	787983.72	N 32 33 42.34	W 103 31 57.82	
12917.00	90.92	359.59	9833.59	3547.89	3547.41	-68.64	1.35	569122.43	787983.36	N 32 33 43.29	W 103 31 57.82	
13010.00	91.19	359.51	9831.88	3640.84	3640.39	-69.37	0.30	569215.41	787982.63	N 32 33 44.21	W 103 31 57.82	
13094.00	91.56	359.24	9831.34	3739.79	3739.33	-69.63	1.33	569309.40	787982.37	N 32 33 45.14	W 103 31 57.82	
13129.00	92.24	0.12	9828.36	3834.75	3834.27	-70.16	1.31	569403.35	787981.84	N 32 33 46.06	W 103 31 57.82	
13224.00	90.40	0.16	9826.28	3929.70	3929.22	-69.83	1.94	569497.32	787981.07	N 32 33 46.98	W 103 31 57.80	
13318.00	90.31	0.10	9823.59	3948.75	3948.30	-69.71	0.12	569591.31	787980.28	N 32 33 47.85	W 103 31 57.80	
13413.00	91.80	1.12	9823.64	4043.71	4043.28	-68.70	1.90	569685.28	787983.30	N 32 33 48.19	W 103 31 57.78	
13508.00	89.87	2.06	9822.46	4138.63	4138.23	-68.07	2.26	569779.23	787985.93	N 32 33 49.13	W 103 31 57.74	
13602.00	90.31	2.04	9822.31	4232.54	4232.17	-62.71	0.47	569873.17	787989.30	N 32 33 50.06	W 103 31 57.69	
13697.00	91.01	1.60	9821.45	4327.45	4327.10	-58.52	0.78	569967.10	788002.48	N 32 33 51.00	W 103 31 57.64	
13793.00	89.96	1.71	9820.40	4423.37	4423.05	-56.58	1.10	569968.05	788005.42	N 32 33 51.95	W 103 31 57.60	
13887.00	89.96	1.32	9820.47	4517.32	4517.02	-54.10	0.41	570062.02	788007.90	N 32 33 52.88	W 103 31 57.56	
13899.00	90.13	1.36	9820.46	4526.31	4526.02	-53.89	1.94	570101.01	788008.11	N 32 33 52.97	W 103 31 57.56	
13955.00	90.13	1.36	9820.33	4535.28	4535.00	-52.49	0.00	570160.00	788008.51	N 32 33 53.55	W 103 31 57.54	

Survey Type: Non-Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7665 sigma

Survey Program:	Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
		1	0.000	22.000	Adt Sigs	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Nearburg
		1	22.000	5379.000	Adt Sigs	30.000	30.000	SLB_NSG+MSHOT	Laguna 23 Fed Com #3H Gyro+MWD Off to 13955ft
		1	5379.000	13899.000	Adt Sigs	30.000	30.000	SLB_MWD-STD	Original Borehole / Nearburg
		1	13899.000	13955.000	Adt Sigs	30.000	30.000	SLB_BLIND-TREND	Laguna 23 Fed Com #3H