



State/County: NEW MEXICO/LEA
VS-Azi: 0.00 Degrees
Latitude: 32.78668, Longitude: -103.46329
Grid North = True North -0.47 degs (NAD 27)
Grid Correction Applied = -0.47 degs

30-025-42724

FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : GROUND LEVEL

DRILLOG MS GYRO SURVEY CALCULATIONS

Error Model: VESSI_GYRO_DROP.IPM

Filename: msgyro_run01-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 12/6/2017 / 16:16

VES Survey International
Midland, Texas
432-563-5444
Mike Cook

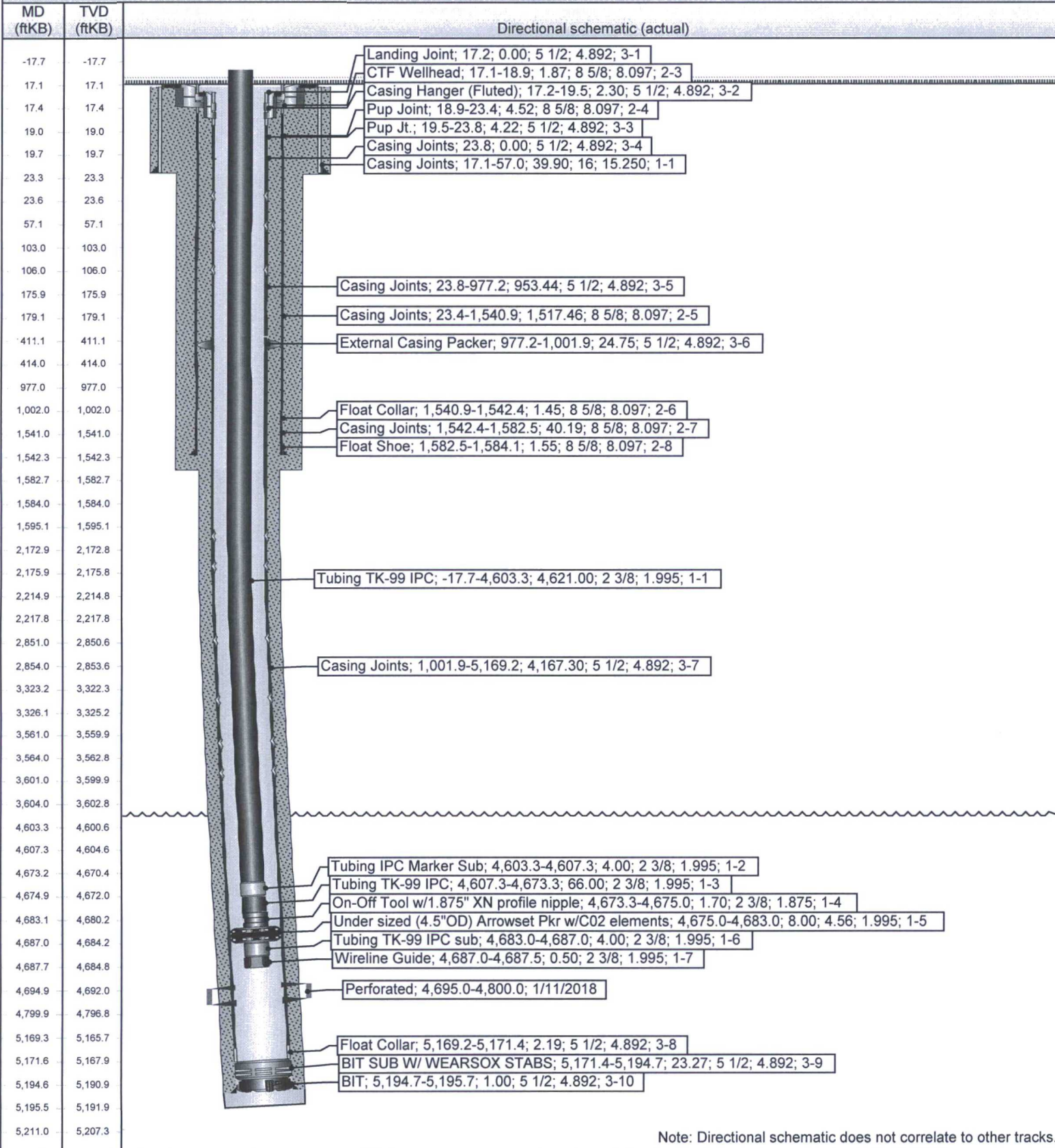
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.38	186.91	100.00	-0.33	-0.04	-0.33	0.33	186.91	0.38
200.00	0.37	276.35	200.00	-0.62	-0.40	-0.62	0.73	212.72	0.52
300.00	0.57	188.09	300.00	-1.08	-0.78	-1.08	1.33	216.06	0.67
400.00	0.16	113.89	399.99	-1.63	-0.72	-1.63	1.78	203.98	0.55
500.00	0.53	145.70	499.99	-2.07	-0.33	-2.07	2.10	189.12	0.41
600.00	0.28	37.85	599.99	-2.26	0.08	-2.26	2.27	177.99	0.67
700.00	0.01	72.07	699.99	-2.07	0.24	-2.07	2.08	173.37	0.27
800.00	0.57	297.28	799.99	-1.84	-0.19	-1.84	1.85	185.96	0.58
900.00	0.23	277.15	899.99	-1.58	-0.84	-1.58	1.79	207.90	0.36
1000.00	0.19	164.36	999.99	-1.71	-1.00	-1.71	1.98	210.18	0.35
1100.00	0.19	184.01	1099.98	-2.03	-0.96	-2.03	2.25	205.36	0.06
1200.00	0.25	43.75	1199.98	-2.04	-0.82	-2.04	2.20	202.00	0.41
1300.00	0.55	275.53	1299.98	-1.84	-1.15	-1.84	2.16	212.00	0.73
1400.00	0.64	335.84	1399.98	-1.28	-1.85	-1.28	2.25	235.23	0.60
1500.00	0.90	43.80	1499.97	-0.21	-1.53	-0.21	1.54	262.26	0.89
1600.00	1.21	52.30	1599.95	1.01	-0.15	1.01	1.02	351.53	0.34
1700.00	1.76	55.14	1699.92	2.53	1.94	2.53	3.19	37.54	0.55
1800.00	2.26	42.54	1799.86	4.85	4.53	4.85	6.64	43.03	0.67
1900.00	2.40	47.41	1899.78	7.72	7.40	7.72	10.70	43.80	0.24
2000.00	2.26	34.10	1999.69	10.77	10.05	10.77	14.73	43.02	0.56
2100.00	2.20	22.58	2099.62	14.17	11.89	14.17	18.50	40.00	0.45
2200.00	2.66	23.66	2199.53	18.07	13.56	18.07	22.59	36.88	0.47
2300.00	3.42	25.59	2299.39	22.88	15.78	22.88	27.80	34.58	0.76
2400.00	3.64	28.62	2399.20	28.36	18.58	28.36	33.91	33.24	0.28
2500.00	3.41	25.25	2499.01	33.83	21.37	33.83	40.02	32.28	0.31
2600.00	3.30	9.72	2598.84	39.36	23.13	39.36	45.65	30.44	0.91
2700.00	3.39	22.76	2698.67	44.93	24.76	44.93	51.30	28.86	0.77
2800.00	2.88	15.74	2798.52	50.07	26.58	50.07	56.69	27.96	0.64
2900.00	2.98	0.34	2898.39	55.09	27.28	55.09	61.47	26.34	0.79
3000.00	3.00	349.93	2998.26	60.27	26.84	60.27	65.97	24.00	0.54
3100.00	3.23	340.76	3098.11	65.50	25.45	65.50	70.27	21.24	0.55
3200.00	3.39	343.17	3197.94	70.98	23.67	70.98	74.82	18.44	0.21

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
3300.00	3.39	339.89	3297.77	76.58	21.80	76.58	79.62	15.89	0.19
3400.00	3.45	344.61	3397.59	82.25	19.99	82.25	84.64	13.66	0.29
3500.00	3.76	346.48	3497.39	88.33	18.42	88.33	90.24	11.78	0.34
3600.00	3.53	343.58	3597.19	94.47	16.79	94.47	95.95	10.08	0.30
3700.00	3.57	344.34	3697.00	100.42	15.08	100.42	101.55	8.54	0.06
3800.00	3.58	348.25	3796.81	106.47	13.60	106.47	107.34	7.28	0.24
3900.00	3.16	353.05	3896.63	112.26	12.64	112.26	112.97	6.42	0.51
4000.00	2.96	2.26	3996.49	117.57	12.40	117.57	118.22	6.02	0.53
4100.00	3.42	4.00	4096.34	123.12	12.71	123.12	123.78	5.90	0.47
4200.00	3.98	13.01	4196.13	129.48	13.70	129.48	130.20	6.04	0.80
4300.00	3.47	23.57	4295.92	135.63	15.69	135.63	136.53	6.60	0.85
4400.00	3.46	21.41	4395.74	141.21	18.00	141.21	142.35	7.27	0.13
4500.00	4.02	17.86	4495.52	147.36	20.18	147.36	148.74	7.80	0.61
4600.00	4.21	19.37	4595.26	154.17	22.48	154.17	155.80	8.30	0.22
4700.00	4.44	18.27	4694.98	161.31	24.91	161.31	163.22	8.78	0.25
4800.00	4.79	16.48	4794.65	169.00	27.31	169.00	171.19	9.18	0.38
4900.00	4.61	14.58	4894.32	176.89	29.51	176.89	179.34	9.47	0.24
5000.00	4.61	16.56	4993.99	184.64	31.67	184.64	187.33	9.73	0.16
5100.00	4.62	24.39	5093.67	192.16	34.47	192.16	195.23	10.17	0.63

HORIZONTAL DISPLACEMENT IS
195.23 FEET AT 10.17 DEGREES

District PERMIAN CONVENTIONAL	Field Name VACUUM	API / UWI 3002542724	County LEA	State/Province NEW MEXICO
Original Spud Date 10/26/2017	Surface Legal Location Section 33, Township 17S, Range 35E	East/West Distance (ft) 2,290.00	East/West Reference FWL	North/South Distance (ft) 991.00 North/South Reference FSL

VERTICAL - Original Hole, 2/14/2018 2:29:20 PM



Note: Directional schematic does not correlate to other tracks.