



Guidance Services

Job Number: 091117505054
 Company: Yates Petroleum
 Lease/Well: Haracz "AMO" Federal, Well #8H
 Location: Eddy County, New Mexico
 Rig Name: Silver Oak #9
 RKB: ☐
 G.L. or M.S.L.: ☐

State/Country: New Mexico/USA
 Declination: 7.63°
 Grid: East To Grid
 File name: F:\SURVEY\2009SU~1\YATESP~1\HARACZ8H.SVY
 Date/Time: 14-Jan-09 / 10:22
 Curve Name: Surface - 8450' M.D. (gyroscopic)

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 8450' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
Paul Diamond 11/14/09
 Multi-Shot Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.25	35.62	200.00	.35	.25	.35	.44	35.62	.12
400.00	.50	5.00	400.00	1.58	.58	1.58	1.68	20.31	.16
600.00	.75	8.37	599.98	3.74	.85	3.74	3.84	12.81	.13
800.00	1.00	10.74	799.96	6.75	1.37	6.75	6.89	11.44	.13
1000.00	1.00	352.12	999.93	10.20	1.45	10.20	10.30	8.11	.16
1200.00	1.00	11.49	1199.90	13.64	1.56	13.64	13.72	6.53	.17
1400.00	.50	358.86	1399.88	16.22	1.89	16.22	16.33	6.65	.26
1600.00	.75	348.24	1599.87	18.37	1.61	18.37	18.44	5.00	.14
1800.00	.25	346.61	1799.86	20.08	1.24	20.08	20.12	3.53	.25

30.015-34778

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2000.00	.50	347.98	1999.86	21.36	.96	21.36	21.38	2.56	.13
2200.00	.50	358.36	2199.85	23.08	.75	23.08	23.09	1.86	.05
2400.00	.25	34.73	2399.85	24.31	.97	24.31	24.33	2.29	.17
2600.00	.25	236.10	2599.84	24.43	.86	24.43	24.44	2.02	.25
2800.00	.25	231.34	2799.84	23.91	.16	23.91	23.91	.38	.01
3000.00	.25	259.72	2999.84	23.56	-.61	23.56	23.57	358.51	.06
3200.00	.25	337.09	3199.84	23.89	-1.21	23.89	23.92	357.09	.16
3400.00	.25	18.46	3399.84	24.70	-1.24	24.70	24.73	357.12	.09
3600.00	.25	79.84	3599.84	25.19	-.68	25.19	25.20	358.46	.13
3800.00	2.00	75.20	3799.79	26.16	3.13	26.16	26.35	6.82	.88
4000.00	2.25	87.58	3999.65	27.22	10.42	27.22	29.15	20.96	.26
4200.00	4.25	99.99	4199.32	26.10	21.65	26.10	33.91	39.67	1.05
4400.00	2.50	108.35	4398.97	23.44	33.09	23.44	40.55	54.69	.91
4600.00	1.50	105.71	4598.85	21.36	39.75	21.36	45.12	61.75	.50
4800.00	1.25	102.08	4798.79	20.19	44.40	20.19	48.78	65.55	.13
5000.00	1.00	95.45	4998.75	19.57	48.27	19.57	52.09	67.93	.14
5200.00	.50	101.82	5198.73	19.22	50.86	19.22	54.37	69.29	.25
5400.00	.25	109.20	5398.73	18.90	52.13	18.90	55.45	70.07	.13
5600.00	.25	124.57	5598.73	18.51	52.90	18.51	56.04	70.71	.03
5800.00	.25	123.94	5798.72	18.02	53.62	18.02	56.57	71.42	.00
6000.00	.25	207.32	5998.72	17.39	53.78	17.39	56.52	72.08	.17
6200.00	.25	184.69	6198.72	16.57	53.55	16.57	56.05	72.81	.05
6400.00	.25	184.06	6398.72	15.70	53.48	15.70	55.74	73.64	.00
6600.00	.50	162.44	6598.71	14.43	53.71	14.43	55.62	74.96	.14
6800.00	1.00	198.67	6798.70	11.94	53.42	11.94	54.74	77.40	.33
7000.00	2.25	228.03	6998.62	7.66	49.94	7.66	50.52	81.27	.73
7200.00	3.25	225.38	7198.38	1.06	42.98	1.06	43.00	88.59	.50
7400.00	2.50	223.77	7398.13	-6.08	35.93	-6.08	36.44	99.60	.38
7600.00	1.75	222.16	7597.99	-11.49	30.86	-11.49	32.93	110.42	.38
7800.00	1.75	221.53	7797.90	-16.04	26.79	-16.04	31.22	120.91	.01

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
8000.00	1.25	218.91	7997.83	-20.02	23.39	-20.02	30.79	130.56	.25
8200.00	1.00	207.29	8197.79	-23.27	21.22	-23.27	31.50	137.63	.17
8400.00	.50	247.66	8397.77	-25.15	19.62	-25.15	31.90	142.05	.35
Last Survey Depth Recorded									
8450.00	.75	234.01	8447.77	-25.43	19.15	-25.43	31.83	143.02	.58