



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.
Garrett 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

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	
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	C L O S U R E		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