



Weatherford

Job Number: D099
 Company: Yates Petroleum Corp.
 Lease/Well: Alar AYL State #1
 Location: Lea County
 Rig Name: Patterson #66
 RKB:
 G.L. or M.S.L.:

State/Country: New Mexico
 Declination: 8.88° East
 Grid: True North
 File name: A:\ALAR#1.SVY
 Date/Time: 01-Mar-02 / 14:18
 Curve Name: WORK

SUR: P-19-15s-32e, 660/S & 660/E
 BHL: P-19-15s-32e, 622/S & 419/E
 30-025-35388

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 98.62
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

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
GYRO TIE-IN									
8400.00	1.11	119.10	8399.10	1.71	-62.41	-61.96	62.43	271.57	.00
8531.00	1.90	116.70	8530.05	.12	-59.36	-58.71	59.36	270.11	.60
8563.00	3.70	100.10	8562.01	-.30	-57.87	-57.17	57.87	269.70	6.11
8593.00	5.90	100.90	8591.91	-.76	-55.40	-54.66	55.41	269.21	7.34
8624.00	7.20	97.50	8622.70	-1.32	-51.91	-51.13	51.93	268.54	4.37
8655.00	8.60	99.80	8653.41	-1.97	-47.70	-46.87	47.74	267.64	4.63
8686.00	8.80	96.70	8684.05	-2.64	-43.06	-42.18	43.14	266.49	1.64
8716.00	8.10	94.80	8713.73	-3.08	-38.68	-37.78	38.80	265.44	2.51
8777.00	9.60	98.40	8774.00	-4.19	-29.36	-28.40	29.66	261.89	2.62
8838.00	9.20	101.20	8834.18	-5.88	-19.55	-18.45	20.41	253.27	1.00
8901.00	10.20	97.90	8896.28	-7.62	-9.08	-7.84	11.86	230.00	1.82
8961.00	10.50	99.50	8955.30	-9.25	1.57	2.94	9.39	170.35	.69
9023.00	10.10	98.40	9016.30	-10.98	12.52	14.03	16.65	131.24	.72
9084.00	11.60	99.20	9076.21	-12.74	23.87	25.51	27.06	118.09	2.47
9112.00	12.30	99.00	9103.61	-13.66	29.59	31.31	32.59	114.77	2.50
9136.00	13.50	99.00	9127.00	-14.50	34.89	36.66	37.78	112.56	5.00
9198.00	13.30	97.90	9187.31	-16.61	49.10	51.03	51.83	108.69	.52
9260.00	13.80	93.00	9247.59	-17.98	63.55	65.52	66.04	105.80	2.02
9321.00	14.70	93.20	9306.71	-18.79	78.54	80.47	80.75	103.45	1.48
9383.00	15.50	94.70	9366.57	-19.91	94.65	96.56	96.72	101.88	1.44
9475.00	15.00	94.60	9455.33	-21.87	118.77	120.71	120.77	100.43	.54

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	
9537.00	14.80	95.50	9515.24	-23.27	134.65	136.62	136.65	99.81	.49
9631.00	14.10	98.10	9606.27	-26.04	157.94	160.05	160.07	99.36	1.02
9722.00	14.80	97.30	9694.39	-29.07	180.44	182.76	182.77	99.15	.80
9815.00	13.90	98.10	9784.49	-32.16	203.28	205.80	205.81	98.99	.99
9894.00	13.20	98.80	9861.29	-34.87	221.59	224.31	224.32	98.94	.91
9932.00	12.86	99.14	9898.31	-36.21	230.05	232.88	232.88	98.94	.92
Projection to TD									
9982.00	12.86	99.14	9947.06	-37.98	241.04	244.01	244.01	98.95	.00