

STORED ENERGY DATA

Date: 5/17/2005

BOW MFGR.- 3 RIVERS ARCHERY **BRACE HEIGHT.=** 7.375 INCHES
MODEL - TOMAHAWK DESERT FOX **ZERO INTERCEPT =** 9.13 INCHES
DRAW LENGTH = 30.00 INCHES **P.D.F. =** 65.3 POUNDS

S.N. -

DR LNTH	FORCE	^INCH	^POUND	ELM. AREA	SUM AREA	SUM AREA
INCHES	POUNDS	INCHES	POUNDS	INCH LB.	INCH LB.	FT. LB.
5.00		1.00				0.00
6.00		1.00	0.00	0.00	0.00	0.00
7.00		1.00	0.00	0.00	0.00	0.00
8.00		1.13	0.00	0.00	0.00	0.00
9.13	0.0	0.88	0.00	0.00	0.00	0.00
10.00	6.3	1.00	6.30	2.76	2.76	0.23
11.00	11.5	1.00	5.20	8.90	11.66	0.97
12.00	15.8	1.00	4.30	13.65	25.31	2.11
13.00	19.1	1.00	3.30	17.45	42.76	3.56
14.00	22.5	1.00	3.40	20.80	63.56	5.30
15.00	25.3	1.00	2.80	23.90	87.46	7.29
16.00	28.1	1.00	2.80	26.70	114.16	9.51
17.00	30.7	1.00	2.60	29.40	143.56	11.96
18.00	33.3	1.00	2.60	32.00	175.56	14.63
19.00	35.6	1.00	2.30	34.45	210.01	17.50
20.00	38.1	1.00	2.50	36.85	246.86	20.57
21.00	40.5	1.00	2.40	39.30	286.16	23.85
22.00	42.9	1.00	2.40	41.70	327.86	27.32
23.00	45.4	1.00	2.50	44.15	372.01	31.00
24.00	47.9	1.00	2.50	46.65	418.66	34.89
25.00	50.5	1.00	2.60	49.20	467.86	38.99
26.00	53.3	1.00	2.80	51.90	519.76	43.31
27.00	56.1	1.00	2.80	54.70	574.46	47.87
28.00	59.0	1.00	2.90	57.55	632.01	52.67
29.00	62.0	1.00	3.00	60.50	692.51	57.71
30.00	65.3	1.00	3.30	63.65	756.16	63.01
31.00		1.00	0.00	0.00	0.00	0.00
32.00		1.00	0.00	0.00	0.00	0.00
33.00		1.00	0.00	0.00	0.00	0.00
34.00		1.00	0.00	0.00	0.00	0.00
35.00						0.00

STORED ENERGY (S.E.) = 63.013 FT.LB
S.E./P.D.F. = 0.965 FT.LB./LB.
% OF LET-OFF OVERALL= 41.65 PERCENT
% OF LET-OFF AT 30 IN. = 0.00 PERCENT
ENERGY STORING EFFICIENCY = 38.60 PERCENT OVERALL
ENERGY STORING EFFICIENCY = 55.47 PERCENT POWERSTROKE
BOTTOM OF VALLEY AT INCHES << ENTER VALUE
DRAW FORCE @VALLEY BOTTOM = LB.. << ENTER VALUE
LET-OFF AT BOTTOM OF VALLEY = PERCENT

LET-DOWN DATA

DR LNPTH INCHES	FORCE POUNDS	^INCH INCHES	^POUND POUNDS	ELM. AREA INCH LB.	SUM AREA INCH LB.	SUM AREA FT. LB.
5.00		1.00				0.00
6.00		1.00	0.00	0.00	0.00	0.00
7.00		1.00	0.00	0.00	0.00	0.00
8.00		1.13	0.00	0.00	0.00	0.00
9.13	0.0	0.88	0.00	0.00	0.00	0.00
10.00	5.6	1.00	5.60	2.45	2.45	0.20
11.00	10.5	1.00	4.90	8.05	10.50	0.88
12.00	14.5	1.00	4.00	12.50	23.00	1.92
13.00	18.2	1.00	3.70	16.35	39.35	3.28
14.00	21.4	1.00	3.20	19.80	59.15	4.93
15.00	24.3	1.00	2.90	22.85	82.00	6.83
16.00	26.9	1.00	2.60	25.60	107.60	8.97
17.00	29.4	1.00	2.50	28.15	135.75	11.31
18.00	31.9	1.00	2.50	30.65	166.40	13.87
19.00	34.2	1.00	2.30	33.05	199.45	16.62
20.00	36.6	1.00	2.40	35.40	234.85	19.57
21.00	39.0	1.00	2.40	37.80	272.65	22.72
22.00	41.5	1.00	2.50	40.25	312.90	26.08
23.00	44.0	1.00	2.50	42.75	355.65	29.64
24.00	46.5	1.00	2.50	45.25	400.90	33.41
25.00	49.2	1.00	2.70	47.85	448.75	37.40
26.00	52.0	1.00	2.80	50.60	499.35	41.61
27.00	54.8	1.00	2.80	53.40	552.75	46.06
28.00	58.0	1.00	3.20	56.40	609.15	50.76
29.00	61.3	1.00	3.30	59.65	668.80	55.73
30.00	64.8	1.00	3.50	63.05	731.85	60.99
31.00		1.00	0.00	0.00	0.00	0.00
32.00		1.00	0.00	0.00	0.00	0.00
33.00		1.00	0.00	0.00	0.00	0.00
34.00		1.00	0.00	0.00	0.00	0.00
35.00						0.00

RECOVERED ENERGY = 60.988 FT.-LB

STATIC HYSTERESIS = 2.03 FT.-LB.

STATIC HYSTERESIS = 3.21 PERCENT OF STORED ENERGY

ARROW VELOCITY - TEST DATA

ARROW TYPE	WEIGHT GRAINS	VELOCITY FT. / SEC.	KIN. ENRGY FT.-LB.	DYN. EFFNCY PERCENT	VIRT. MASS GRAINS
3-49/390	360.0	232.0	43.04	68.30	167.11
AFC 2300	407.0	222.8	44.87	71.21	164.54
2115	451.0	215.4	46.48	73.76	160.48
2315	495.0	207.2	47.20	74.90	165.84
2117	540.0	203.0	49.42	78.44	148.47
XT 19-12	599.0	192.2	49.15	77.99	169.01
2419	654.0	187.2	50.90	80.78	155.59
			0	0.00	0.00
			0	0.00	0.00
			0	0.00	0.00
			0	0.00	0.00
AVERAGE VIRTUAL MASS=					161.57

ENTER NUMBER OF ARROWS > 7 < HERE

ARO WGT. GRAINS	VIR MASS GRAINS	Wa ^2	Wa*Wk	Wk ^2		
360.0	167.11	129600.00	60158.36	27924.60		
407.0	164.54	165649.00	66966.37	27072.27		
451.0	160.48	203401.00	72376.94	25754.16		
495.0	165.84	245025.00	82089.71	27502.17	A =	-0.0262685
540.0	148.47	291600.00	80171.47	22042.06		
599.0	169.01	358801.00	101237.77	28564.82	B =	174.731646
654.0	155.59	427716.00	101752.88	24206.83		
0.0	0.00	0.00	0.00	0.00		
0.0	0.00	0.00	0.00	0.00		
0.0	0.00	0.00	0.00	0.00		
0.0	0.00	0.00	0.00	0.00		

3506.0	1131.02	1821792.00	564753.49	183066.91		

PERFORMANCE FROM REGRESSION CURVE

ARO WGT. GRAINS	VIR MASS GRAINS	Wa+Wk GRAINS	VEL. FT./SEC.	DYN. EFF. PERCENT	KIN. ENERGY FT.-LB.
150	170.79	320.79	297.39	46.76	29.46
175	170.13	345.13	286.71	50.70	31.95
200	169.48	369.48	277.10	54.13	34.11
225	168.82	393.82	268.40	57.13	36.00
250	168.16	418.16	260.47	59.79	37.67
275	167.51	442.51	253.21	62.15	39.16
300	166.85	466.85	246.52	64.26	40.49
325	166.19	491.19	240.33	66.17	41.69
350	165.54	515.54	234.59	67.89	42.78
375	164.88	539.88	229.24	69.46	43.77
400	164.22	564.22	224.24	70.89	44.67
425	163.57	588.57	219.55	72.21	45.50
450	162.91	612.91	215.15	73.42	46.26

ARO WGT.	VIR MASS	Wa+Wk	VEL.	DYN. EFF.	KIN. ENERGY
GRAINS	GRAINS	GRAINS	FT./SEC.	PERCENT	FT.-LB.
475	162.25	637.25	211.00	74.54	46.97
500	161.60	661.60	207.08	75.57	47.62
525	160.94	685.94	203.37	76.54	48.23
550	160.28	710.28	199.86	77.43	48.79
575	159.63	734.63	196.52	78.27	49.32
600	158.97	758.97	193.34	79.05	49.81
625	158.31	783.31	190.31	79.79	50.28
650	157.66	807.66	187.42	80.48	50.71
675	157.00	832.00	184.66	81.13	51.12
700	156.34	856.34	182.02	81.74	51.51
360	165.28	525.28	232.40	68.54	43.19
540	160.55	700.55	201.24	77.08	48.57

RATING VELOCITY WITH 360 GRAIN ARROW (60#--30"-360 GR.) : 222.77

RATING VELOCITY WITH 540 GRAIN ARROW (60#-30"-540 GR.) : 192.90

ONLY THOSE ARROW WEIGHT VALUES CORRESPONDING TO THE ACCEPTABLE SPINE RANGE FOR THE TEST BOW AND WITHIN THE GENERAL RANGE OF ARROW WEIGHT TESTED SHOULD BE USED WITH COMPLETE CONFIDENCE. EXTRAPOLATING DATA FOR VERY LOW WEIGHT ARROWS ON HEAVIER BOWS MAY BE SUBJECT TO ERROR.