

STORED ENERGY DATA

Date: 5/24/2005

DRAW FORCE AND STORED ENERGY INTERPOLATED FROM 26" & 30 " TESTS

BOW MFGR.- 3 RIVERS ARCHERY **BRACE HEIGHT.=** 7.25 INCHES
MODEL - TOMAHAWK DESERT FOX **ZERO INTERCEPT =** 9.00 INCHES
DRAW LENGTH = 28.00 INCHES **P.D.F. =** 58.20 POUNDS

S.N. - 9352

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		1.00	0.00	0.00	0.00	0.00
9.00	0.0	1.00	0.00	0.00	0.00	0.00
10.00	6.9	1.00	6.90	3.45	3.45	0.29
11.00	11.8	1.00	4.90	9.35	12.80	1.07
12.00	15.7	1.00	3.90	13.75	26.55	2.21
13.00	19.1	1.00	3.40	17.40	43.95	3.66
14.00	22.0	1.00	2.90	20.55	64.50	5.38
15.00	25.0	1.00	3.00	23.50	88.00	7.33
16.00	27.7	1.00	2.70	26.35	114.35	9.53
17.00	30.2	1.00	2.50	28.95	143.30	11.94
18.00	32.7	1.00	2.50	31.45	174.75	14.56
19.00	35.0	1.00	2.30	33.85	208.60	17.38
20.00	37.5	1.00	2.50	36.25	244.85	20.40
21.00	39.8	1.00	2.30	38.65	283.50	23.63
22.00	42.2	1.00	2.40	41.00	324.50	27.04
23.00	44.2	1.00	2.00	43.20	367.70	30.64
24.00	47.2	1.00	3.00	45.70	413.40	34.45
25.00	49.8	1.00	2.60	48.50	461.90	38.49
26.00	52.5	1.00	2.70	51.15	513.05	42.75
27.00	55.3	1.00	2.80	53.90	566.95	47.25
28.00	58.2	1.00	2.90	56.75	623.70	51.98
29.00		1.00	0.00	0.00	0.00	0.00
30.00		1.00	0.00	0.00	0.00	0.00
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.) = 51.984 FT.LB
S.E./P.D.F. = 0.893 FT.LB./LB.
% OF LET-OFF OVERALL= 35.57 PERCENT
% OF LET-OFF AT 30 IN. = 100.00 PERCENT
ENERGY STORING EFFICIENCY = 38.28 PERCENT OVERALL
ENERGY STORING EFFICIENCY = 56.41 PERCENT POWERSTROKE
BOTTOM OF VALLEY AT INCHES << ENTER VALUE
DRAW FORCE @VALLEY BOTTOM = LB.. << ENTER VALUE
LET-OFF AT BOTTOM OF VALLEY = 100.00 PERCENT

LET-DOWN DATA

DATA INTERPOLATED FROM 26" & 30" TESTS

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		1.00	0.00	0.00	0.00	0.00
9.00	0.0	1.00	0.00	0.00	0.00	0.00
10.00	6.5	1.00	6.50	3.25	3.25	0.27
11.00	11.1	1.00	4.60	8.80	12.05	1.00
12.00	15.0	1.00	3.90	13.05	25.10	2.09
13.00	18.5	1.00	3.50	16.75	41.85	3.49
14.00	21.6	1.00	3.10	20.05	61.90	5.16
15.00	24.3	1.00	2.70	22.95	84.85	7.07
16.00	26.9	1.00	2.60	25.60	110.45	9.20
17.00	29.4	1.00	2.50	28.15	138.60	11.55
18.00	31.7	1.00	2.30	30.55	169.15	14.10
19.00	34.0	1.00	2.30	32.85	202.00	16.83
20.00	36.4	1.00	2.40	35.20	237.20	19.77
21.00	38.8	1.00	2.40	37.60	274.80	22.90
22.00	41.2	1.00	2.40	40.00	314.80	26.23
23.00	43.6	1.00	2.40	42.40	357.20	29.77
24.00	46.2	1.00	2.60	44.90	402.10	33.51
25.00	48.8	1.00	2.60	47.50	449.60	37.47
26.00	51.5	1.00	2.70	50.15	499.75	41.65
27.00	54.4	1.00	2.90	52.95	552.70	46.06
28.00	57.5	1.00	3.10	55.95	608.65	50.72
29.00		1.00	0.00	0.00	0.00	0.00
30.00		1.00	0.00	0.00	0.00	0.00
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						

RECOVERED ENERGY = 50.722 FT.-LB

STATIC HYSTERESIS = 1.26 FT.-LB.

STATIC HYSTERESIS = 2.43 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	212.6	36.14	69.52	157.83
AFC 2300	407.0	203.0	37.25	71.66	160.97
2115	451.0	196.6	38.72	74.48	154.55
2315	495.0	188.8	39.19	75.39	161.61
2117	540.0	184.0	40.61	78.11	151.32
XT 19-12	599.0	175.0	40.74	78.38	165.25
2419	654.0	170.2	42.08	80.94	153.97
			0	0.00	0.00
			0	0.00	0.00
			0	0.00	0.00
			0	0.00	0.00
AVERAGE VIRTUAL MASS=					157.93

ENTER NUMBER OF ARROWS > 7 < HERE

ARO WGT. GRAINS	VIR MASS GRAINS	Wa ^2	Wa*Wk	Wk ^2	
360.0	157.83	129600.00	56818.82	24910.32	
407.0	160.97	165649.00	65512.82	25909.78	
451.0	154.55	203401.00	69700.00	23884.30	
495.0	161.61	245025.00	79998.67	26118.91	A = -0.0041078
540.0	151.32	291600.00	81711.94	22897.26	
599.0	165.25	358801.00	98987.10	27308.86	B = 159.985336
654.0	153.97	427716.00	100695.68	23706.43	
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	1105.50	1821792.00	553425.02	174735.86	

PERFORMANCE FROM REGRESSION CURVE

ARO WGT. GRAINS	VIR MASS GRAINS	Wa+Wk GRAINS	VEL. FT./SEC.	DYN. EFF. PERCENT	KIN. ENERGY FT.-LB.
150	159.37	309.37	275.05	48.49	25.20
175	159.27	334.27	264.61	52.35	27.22
200	159.16	359.16	255.28	55.69	28.95
225	159.06	384.06	246.86	58.58	30.45
250	158.96	408.96	239.23	61.13	31.78
275	158.86	433.86	232.27	63.39	32.95
300	158.75	458.75	225.87	65.39	33.99
325	158.65	483.65	219.98	67.20	34.93
350	158.55	508.55	214.53	68.82	35.78
375	158.44	533.44	209.47	70.30	36.54
400	158.34	558.34	204.74	71.64	37.24
425	158.24	583.24	200.32	72.87	37.88
450	158.14	608.14	196.18	74.00	38.47

ARO WGT.	VIR MASS	Wa+Wk	VEL.	DYN. EFF.	KIN. ENERGY
GRAINS	GRAINS	GRAINS	FT./SEC.	PERCENT	FT.-LB.
475	158.03	633.03	192.28	75.04	39.01
500	157.93	657.93	188.61	76.00	39.51
525	157.83	682.83	185.14	76.89	39.97
550	157.73	707.73	181.85	77.71	40.40
575	157.62	732.62	178.74	78.49	40.80
600	157.52	757.52	175.78	79.21	41.17
625	157.42	782.42	172.96	79.88	41.53
650	157.32	807.32	170.27	80.51	41.85
675	157.21	832.21	167.70	81.11	42.16
700	157.11	857.11	165.25	81.67	42.46
360	158.51	518.51	212.46	69.43	36.09
540	157.77	697.77	183.15	77.39	40.23

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

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

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.