



Jodie & Warren Woronecki
7075 28th St.
Hebron, ND 58638
701-878-4088

Check us out online at----
www.WoroneckiRanchQuarterHorses.com
Or email, call or stop by the ranch.
woroneckiranch@westriv.com

5 Panel Information as it Pertains to Woronecki Ranch Quarter Horses

At Woronecki Ranch Quarter Horses we order a genetic kit through AQHA and the results are sent to VGL laboratory of the School of Veterinary Medicine at the University of California, Davis. VGL is internationally recognized as a pioneer and expert in DNA-based animal testing. The effects of these equine diseases are wide-ranging, from mild and manageable to severe and terminal. We have compiled a short description of each disorder tested. **In many instances we only test the necessary specific test based upon the parents test results. If both parents are N/N on all or some diseases then the offspring is also N/N on those diseases by default. Please see ALL PAGES of this document link.**

Glycogen Branching Enzyme Deficiency (GBED) doesn't allow a foal to store enough sugar in its cells for energy, function of the brain, heart and skeletal muscles. Most die within couple weeks of age, but none have been known to survive more than 2 months of age. These foals are often still born. GBED is a recessive trait and only horses that inherit both recessive genes from each parent (G/G) will be afflicted. **Carriers (N/G) and non-carriers (N/N) will have no problems in their lives as they will NOT be afflicted at all and they will be able to perform all performance activities. If deciding to breed a carrier (N/G) it is highly advised to not breed to another carrier to avoid producing afflicted offspring.**

Hereditary Equine Regional Dermal Asthenia (HERDA) causes the skin on a horse's back to literally peel away. The skin will slough becoming loose and tented to never return to its original position. HERDA is a recessive trait and only horses that inherit both recessive genes from each parent (HDR/HDR) will be afflicted. **Carriers (N/HDR) and non-carriers (N/N) will have no problems in their lives as they will NOT be afflicted at all and they will be able to perform all performance activities. If deciding to breed a carrier (N/HDR) it is highly advised to not breed to another carrier to avoid producing afflicted offspring**

Hyperkalemic Periodic Paralysis (HYPP) is a muscle condition that leads to weak muscles or severe twitching of the muscles. In most cases symptoms include tremors, weakness, cramping, sweating and inability to relax. In severe cases horse can collapse from a heart attack or respiratory failure and die. **HYPP is a dominant trait and carriers (N/H) will be afflicted, but can be managed with careful nutritional care. It is highly recommended NOT to breed a carrier.**

Malignant Hyperthermia (MH) is a rare but deadly disorder triggered by the use of anesthesia, muscle relaxant succinylcholine and stress. The horse will often experience high heart rate along with rapid breathing and extreme fever. This can also lead to death in some cases. Some horses are also a carrier of PSSM along with MH. **MH is a dominant trait and carriers will be afflicted if undergoing surgery or extreme stress. It is highly recommended NOT to breed a carrier.**

Polysaccharide Storage Myopathy (PSSM1) is when the muscles store too much glycogen causing muscle stiffness and muscle tying up. Most horses experience pain with strenuous exercise. **PSSM1 is a dominant trait but carriers (N/PSSM1) can be managed with proper diet and exercise. It is highly recommended NOT to breed a carrier.**

Top Gun Sultan JW (AQHA)

2019 Buckskin Stallion

GBED Status N/N
HERDA Status N/N
HYPP Status N/N
MH Status N/N
PSSM1 Status N/P1

Carries one copy of the PSSM1 gene. If a breeding stallion, breed to NN mares.

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VETERINARY GENETICS LABORATORY
SCHOOL OF VETERINARY MEDICINE
ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8744

TELEPHONE: (530) 752-2211
FAX: (530) 752-3556

AQHA GENETIC DISEASE PANEL TEST RESULTS

AMERICAN QUARTER HORSE ASSOCIATION P.O. BOX 200 AMARILLO, TX 79168-0001	Case: QHA192966 Date Received: 11-May-2015 Print Date: 15-May-2015 Report ID: 3204-8302-2597-1037 Verify report at www.vgl.ucdavis.edu/myvgl/verify.html
Horse: TOP GUN WHISKEY YOB: 2012 Sex: Stallion Breed: Quarter Horse Alt. ID: 6435445	Reg: 5493617
Sire: PADDYS IRISH WHISKEY Dam: COWGUN	Reg: 2983308 Reg: 4930711

GBED	N/N	N/N - Normal - Does not possess the disease-causing GBED gene
HERDA	N/N	N/N - Normal - horse does not have the HERDA gene
HYPP	N/N	N/N - Normal - Does not possess the disease-causing HYPP gene
MH	N/N	N/N - Normal - horse does not have the MH gene
PSSM1	N/N	N/N - Normal - horse does not have the PSSM1 gene

GBED - Glycogen Branching Enzyme Deficiency. Fatal disease of newborn foals caused by defect in glycogen storage. Affects heart and skeletal muscles and brain. Inherited as recessive disease.

HERDA - Hereditary Equine Regional Dermal Asthenia. Skin disease characterized by hyperextensible skin, scarring, and severe lesions along the back of affected horses. Typical onset is around 2 years of age. Inherited as a recessive disease.

HYPP - Hyperkalemic Periodic Paralysis. Muscle disease caused by defect in sodium channel gene that causes involuntary muscle contraction and increased level of potassium in blood. Inherited as dominant disease. Two copies of defective gene produce more severe signs than one copy.

MH - Malignant Hyperthermia. Rare but life-threatening skeletal muscle disease triggered by exposure to volatile anesthetics (halothane), depolarizing muscle relaxants (succinylcholine), and stress. Presumed inheritance as dominant disease.

PSSM1 - Polysaccharide Storage Myopathy Type 1. Muscle disease characterized by accumulation of abnormal complex sugars in skeletal muscles. Signs include muscle pain, stiffness, skin twitching, sweating, weakness and reluctance to move. Inherited as a dominant disease.

GBED testing performed under a license agreement with the University of Minnesota.

HERDA testing performed under a license agreement with the University of California, Davis.

PSSM1 testing performed under a license agreement with the American Quarter Horse Association.

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AQHA GENETIC DISEASE PANEL TEST RESULTS

AMERICAN QUARTER HORSE ASSOCIATION P.O. BOX 200 AMARILLO, TX 79168-0001	Case: QHA207914 Date Received: 11-Sep-2015 Print Date: 15-Sep-2015 Report ID: 1249-1032-2311-7159 Verify report at www.vgl.ucdavis.edu/myvgl/verify.html
Horse: BLONDY BUENO Reg: 4599869 <i>YOB: 2004 Sex: Mare Breed: Quarter Horse Alt. ID: 5408791</i>	
Sire: MARLINS BUENO JOE Reg: 3584348 Dam: HASTE CHLOE Reg: 2474735	

GBED	N/N	N/N - Normal - Does not possess the disease-causing GBED gene
HERDA	N/N	N/N - Normal - horse does not have the HERDA gene
HYPP	N/N	N/N - Normal - Does not possess the disease-causing HYPP gene
MH	N/N	N/N - Normal - horse does not have the MH gene
PSSM1	N/PSSM1	N/PSSM1 - Affected - horse has one copy of the PSSM1 gene

GBED - Glycogen Branching Enzyme Deficiency. Fatal disease of newborn foals caused by defect in glycogen storage. Affects heart and skeletal muscles and brain. Inherited as recessive disease.

HERDA - Hereditary Equine Regional Dermal Asthenia. Skin disease characterized by hyperextensible skin, scarring, and severe lesions along the back of affected horses. Typical onset is around 2 years of age. Inherited as a recessive disease.

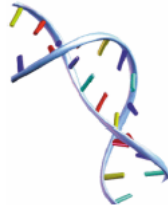
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MH - Malignant Hyperthermia. Rare but life-threatening skeletal muscle disease triggered by exposure to volatile anesthetics (halothane), depolarizing muscle relaxants (succinylcholine), and stress. Presumed inheritance as dominant disease.

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PSSM1 testing performed under a license agreement with the American Quarter Horse Association.

Equine Genetic Testing Report



Submitted By
Jodie & Warren Woroniecki Woroniecki Ranch Quarter Horses 7075 28th St Hebron, ND 58638

Subject Horse

Date Received: 6/17/2019

Horse Name: 2019 Colt out of Blondy Bueno	Lab Reference #: 00125453
Breed: Quarter Horse	Registration:
Phenotype: Buckskin	Birth: 2019
Sex: Colt	

Sire
Sire Name: Top Gun Whiskey Breed: Quarter Horse Registration: 5493617 Phenotype: Bay

Dam
Dam Name: Blondy Bueno Breed: Quarter Horse Registration: 4599869 Phenotype: Palomino

Coat Color and Pattern Testing		
Tobiano		Not Tested
Frame Overo		Not Tested
Sabino 1		Not Tested
Splashed White 1		Not Tested
Splashed White 2		Not Tested
Splashed White 3		Not Tested
Appaloosa (LP)		Not Tested
PATN1		Not Tested
Red/Black Factor		Not Tested
Agouti		Not Tested
Cream Dilution		Not Tested
Dun Dilution		Not Tested
Silver Dilution		Not Tested
Champagne		Not Tested
Pearl Dilution		Not Tested
Gray		Not Tested

Genetic Disorders			
	HYPP		Not Tested
	HERDA		Not Tested
	GBED		Not Tested
	MH		Not Tested
	IMM		Not Tested
X	PSSM 1	n/P1	Heterozygous: Horse carries one copy of the PSSM Type 1 gene mutation and is affected.
	FIS		Not Tested
	JEB1		Not Tested
	JEB2		Not Tested
	CA		Not Tested
	LFS		Not Tested
	SCID		Not Tested
	OAAM1		Not Tested
	WFFS1		Not Tested

Additional Comments
None

Genetic Marker Results							Run Date:
-	-	-	-	-	-	-	Not Tested
AHT4	AHT5	ASB17	ASB2	ASB23	AME	CA425UK	
-	-	-	-	-	-	-	
HMS3	HMS6	HMS7	HTG10	HTG4	LEX3	LEX33	
-	-	-	-	-	-	-	
VHL20	UM011	HMS1	HMS2	HTG6	HTG7		