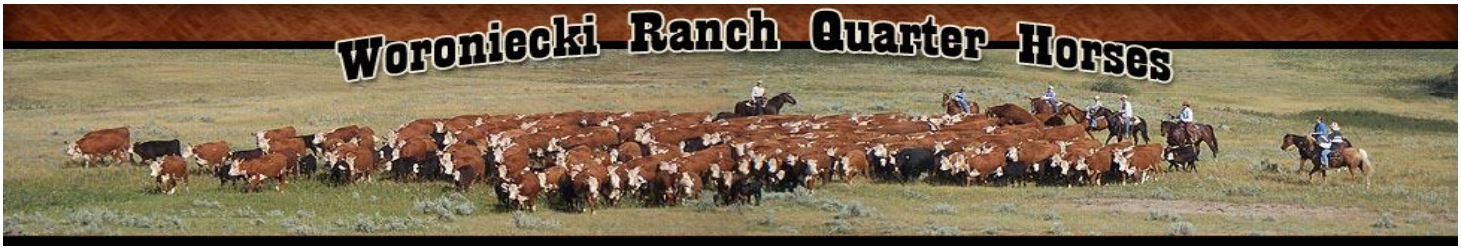

Jodie & Warren Woroniecki
7075 28th St.
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Check us out online at----
www.WoronieckiRanchQuarterHorses.com
Or email, call or stop by the ranch.
woronieckiranch@westriv.com

5 Panel Information as it Pertains to Woroniecki Ranch Quarter Horses

At Woroniecki 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. **Carries (N/HDR) and non-carries (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.**

Leos San Ella JB **(APHA 747,042)**
2001 Bay Mare

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

AnimalGenetics
INCORPORATED
1336 Timberlane Road
Tallahassee, FL 32312-1766

Generated On: 11/1/2019

Equine Genetic Testing Report

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

Date Received: 10/28/2019

Subject Horse

Horse Name: **Leos San Ella JB**
Breed: Paint Horse
Phenotype: Bay
Sex: Mare

Lab Reference #: 00130708
Registration: 747,042
Birth: 2001

Sire

Sire Name: Leo San McCue JB
Breed: Paint Horse
Registration: 272,383
Phenotype: Black Overo

Dam

Dam Name: Dyna Daves Jay
Breed: Quarter Horse
Registration: 2580543
Phenotype: Bay

Coat Color and Pattern Testing

X	Tobiano	nn	Negative for Tobiano.
X	Frame Overo	nO	Heterozygous. Horse carries one copy of the LWO gene. Horse will usually exhibit the frame overo pattern.
X	Sabino 1	nn	Negative for the Sabino 1 gene.
X	Splashed White 1	nn	Negative for the Splashed White SW1 mutation.
X	Splashed White 2	nn	Negative for the Splashed White SW2 mutation.
X	Splashed White 3	nn	Negative for the Splashed White SW3 mutation.
X	Appaloosa (LP)	lp/lp	Tested negative for the main Appaloosa LP gene and is NOT affected by CSNB.
X	PATN1	n/n	Negative: Horse does not the carry the PATN-1 gene mutation.
X	Red/Black Factor	EE	Homozygous for Black Factor. Horse carries two copies of the Black gene. Horse is Black based.
X	Agouti	Aa	Heterozygous. Horse carries one copy of the Agouti gene.
X	Cream Dilution	nn	Negative for Cream Dilution.
X	Dun Dilution	nd2/nd2	Horse is negative for Dun dilution and does not have primitive markings.
X	Silver Dilution	nn	Negative for Silver Dilution.
X	Champagne	nn	Negative for Champagne Dilution.
X	Pearl Dilution	nn	Negative for Pearl Dilution.
	Gray		*Not Tested*
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Genetic Disorders

X	HYPP	n/n	Clear: Negative for the HYPP gene mutation.
X	HERDA	N/N	Clear: Negative for the HERDA gene mutation.
X	GBED	N/N	Clear: Negative for the GBED gene mutation.
X	MH	n/n	Clear: Negative for the MH gene mutation found in Quarter horses and related breeds.
X	IMM	N/IMM	Both the normal and mutant alleles MYH1 gene were detected. Horse has a susceptibility to developing
X	PSSM 1	n/n	Clear: Negative for the PSSM Type 1 gene mutation.
	FIS		*Not Tested*
	JEB1		*Not Tested*
	JEB2		*Not Tested*
	CA		*Not Tested*
	LFS		*Not Tested*
	SCID		*Not Tested*
	OAAM1		*Not Tested*
	WFFS1		*Not Tested*

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	

Additional Comments

nO: Horse is a carrier of the LWO gene. There is a 25% risk of a lethal foal if this horse is bred to another LWO carrier.