



Jodie & Warren Woronecki  
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Hebron, ND 58638  
701-878-4088

Check us out online at----  
[www.WoroneckiRanchQuarterHorses.com](http://www.WoroneckiRanchQuarterHorses.com)  
Or email, call or stop by the ranch.  
[woroneckiranch@westriv.com](mailto: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.**

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### **Mia Holly Gunpowder (AQHA) 2020 Gray Mare**

GBED Status	N/G	Carries one copy of the GBED gene. If breeding mare, breed to a N/N stallions.
HERDA Status	N/N	
HYPP Status	N/N	
MH Status	N/N	
PSSM1 Status	N/N	

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REGISTERED NAME  
**MIA HOLLY GUNPOWDER**

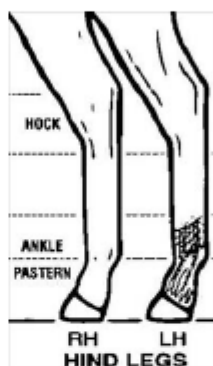
DATE ISSUED  
**03/09/2021**

REGISTRATION NUMBER  
**6061500**



OWNER NAME  
**JODIE & WARREN WORONIECKI**

JODIE & WARREN WORONIECKI  
7075 28TH ST  
HEBRON ND 58638



DNA CASE NUMBER  
**QHA477076**

MARKINGS  
**STAR AND STRIP. LEFT HIND SOCK. NO OTHER MARKINGS.**

**DISEASE PANEL RESULTS: HYPP-N/N HERDA-N/N MH-N/N PSSM TYPE1-N/N GBED-N/G**  
For more information regarding the disease results, refer to [www.aqha.com/geneticTesting](http://www.aqha.com/geneticTesting)

The name on the front of this certificate listed as CURRENT OWNER is the present owner of this horse as shown on the records of American Quarter Horse Association. If ownership changes have occurred, up to three previous owners are listed below. All other ownership records are on file in the AQHA office.

(Physical Address)  
1600 Quarter Horse Drive  
Amarillo, TX 79104

Telephone: (806)376-4811  
[www.aqha.com](http://www.aqha.com)

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P.O. Box 200  
Amarillo, Texas 79168