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AQHA GENETIC DISEASE PANEL TEST RESULTS

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| AMERICAN QUARTER HORSE ASSOCIATION P.O. BOX 200 AMARILLO, TX 79168-0001 | Case: QHA122564 Date Received: 06-Dec-2013 Report Date: 10-Dec-2013 Report ID: 2324-8229-9202-3064 Verify report at www.vgl.ucdavis.edu/myvgl/verify.html |
| Horse: SIRPRIZERIZED YOB: 07 Breed: QH Sex: S Sire: SIRPRIZERIFFIC Dam: PERPETUAL SMOOTHIE | Reg: 4926201 Alt. ID: 5796875 Reg: 3894207 Reg: 3653874 |

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| 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.

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.