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0250025 Coal Hollow prime farmland images, productivity and density testing links

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Tue, Mar 31, 2020 at 11:17 AM

Hello Bir,

It was a pleasure speaking with you this morning. Here are a few sources of information on the nuclear gauge and penetrometer.

Virginia Dept of Transportation. 2016. Field Moisture and Density Testing with the Nuclear Gauge. Chap. 6 In. VDOT Soils and Aggregate Compaction. accessed online at https://www.virginiadot.org/VDOT/Business/asset_upload_file705_118183.pdf

Thomas B. Randrup and John M. Lichter. 2001. Measuring Soil Compaction on Construction Sites: A Review of Surface Nuclear Gauges and Penetrometers. J. of Arboriculture 27(3). at this link https://www.researchgate.net/publication/237518336_Measuring_soil_compaction_on_construction_sites_A_review_of_surface_nuclear_gauges_and_penetrometers

Rutgers New Jersey Experiment Station. 2018. Use of a Penetrometer to Assess Soil Compaction. <https://www.soildistrict.org/wp-content/uploads/2018/03/RCESoilCompactionSOP2018.pdf>

Penn State Extension. 2002 Diagnosing Soil Compaction Using a Penetrometer <https://extension.psu.edu/diagnosing-soil-compaction-using-a-penetrometer-soil-compaction-tester>

The answer to your question regarding the number of AUM/acre (pre-mining) is found on the notes at the bottom of the attached Table 43. This table is page 1279 of a vegetation survey of the prime farmland area. There is also an Order 2 soil survey of the area. They are both available at this link. <https://fs.ogm.utah.gov/FILES/COAL/MRPS/COAL%20HOLLOW%20025005/10%20SUPPLEMENTAL%20REPORTS.pdf> This is a huge document. Use the drop down menu on the far right to get to the Soil Survey and Vegetation reports. The prime farmland maps are on pages 1257 and 1258. The easiest way to see these maps is to click on the vegetation survey and scroll upwards.

I do hope things get back to normal soon so that we can go visit this site. Until then, I attached photos of the farmland before and during mining.

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3 attachments

IMG0162 looking E across farmland.JPG
1626K



Mining looking SE across Prime farmland.JPG
140K

 **Table 43 Productivity information.pdf**
143K





**ANNUAL PRODUCTION SUMMARY
FOR ALL VEGETATION SAMPLE SITES AND PASTURES
IN THE NORTH PRIVATE LEASE STUDY AREA**

The following tables provide baseline data for the general plant communities of the study area including those communities proposed for disturbance by mining activities.

Table 43. Total living cover, annual biomass production, photograph references, and ecological site names of vegetation sample sites in the North Private Lease (2012-2014).

SAMPLE SITE	PLANT		PRODUCTION (Pounds/Acre)	
	COMMUNITY	NRCS ECOLOGICAL SITE NAME*		
V-01	Sagebrush	Upland Stony Loam (black sagebrush)	500 ^(a)	700 ^(a)
V-02	Wetland	Semiwet Fresh Meadow	300 ^(a)	2,400 ^(e)
V-03	Sagebrush	Upland Stony Loam (black sagebrush)	600 ^(a)	700 ^(a)
V-04	Wetland	Semiwet Fresh Meadow	1,000 ^(a)	2,400 ^(e)
V-05	Sagebrush	Upland Loam Wyoming big sagebrush	1,000 ^(a)	1,100 ^(f)
V-06	Wetland	Semiwet Fresh Meadow	1,900 ^(a)	2,400 ^(e)
V-07	Sagebrush	Upland Loam (Wyoming big sagebrush)	900 ^(a)	1,100 ^(f)
V-08	Wetland	Semiwet Fresh Meadow	2,100 ^(e)	2,400 ^(e)
V-09	Wetland	Semiwet Fresh Meadow	2,500 ^(a)	2,400 ^(e)
V-10	Wetland	Semiwet Fresh Meadow	1,100 ^(a)	2,400 ^(e)
V-11	Cropland	Upland Loam (Wyoming big sagebrush)	8,000 ^(c)	1,100 ^(f)
V-12	Pastureland	Upland Loam (Wyoming big sagebrush)	1,150 ^(b)	1,100 ^(f)
V-13	Pastureland	Upland Loam (Wyoming big sagebrush)	1,200 ^(b)	1,100 ^(f)
V-14	Pinyon-Juniper/ Sagebrush	Upland Clay (Pinyon-Juniper)/ Upland Loam (Wyoming big sagebrush)	1,200 ^(b)	550 ^(e) /1,100 ^(f)
V-15	Pastureland	Upland Loam (Wyoming big sagebrush)	1,200 ^(b)	1,100 ^(f)
V-16	Pastureland	Upland Loam (Wyoming big sagebrush)	750 ^(b)	1,100 ^(f)
V-17	Pastureland	Upland Loam (Wyoming big sagebrush)	700 ^(b)	1,100 ^(f)
V-18	Pastureland	Upland Loam (Wyoming big sagebrush)	1,200 ^(b)	1,100 ^(f)
V-19	Pastureland	Upland Loam (Wyoming big sagebrush)	500 ^(b)	1,100 ^(f)
V-20	Pastureland	Upland Loam (Wyoming big sagebrush)	700 ^(b)	1,100 ^(f)
V-21	Cropland	Upland Loam (Wyoming big sagebrush)	2,500 ^(b)	1,100 ^(f)

Landowner Production Information^(g): (see MRP Surface Ownership Drawing 1-3)

Property: Heaton Bros. (Parcel 9-6-13-1, 9-6-12-5, 120 acres); Unirrigated; Livestock use - 30 days/year (Jun); 1.67 animals/acre; no hay production.

Property: Dean Heaton. (Parcels 9-6-12-2, 9-5-7-4A, 9-5-18-3, 45 acres); Unirrigated; Livestock use - 60 days/year (Aug & Sep); 1.33 animals/ac; hay production = 1 crop/yr, 2,000 lbs/ac, 9 of 10 years.

Property: Ferril Heaton. (Parcels 9-5-7-3A, 9-5-18-5, 9-5-18-3A, 9-6-12-1, 108.34 acres); Unirrigated; Livestock use - 60 days/year (Sep & Oct); 0.69 animals/ac (with supplemental feed); hay production = 1 crop/yr, 2,000 lbs/ac, 9 of 10 years.

Property: Orvil Palmer. (Parcels 9-6-12-3, 7 acres); Unirrigated; Livestock use - 60 days/year (Jul & Aug); 1.43 animals/ac; no hay production.

Sources:

^(a) Data collected in 2012 by Mt. Nebo Scientific, Inc., Springville, UT.

^(b) Data collected in 2013-14 by Mt. Nebo Scientific, Inc., Springville, UT.

^(c) Personal communications in 2014 with landowners/farmers.

^(d) Benson, Brock. May 2014. Personal communications. USDA, Natural Resources Conservation Service. Utah ecological sites applicable to the Alton, Utah area. Unpublished ecological site description for Upland Clay* (black sagebrush). Ogden, Utah. (The document date on this ESD was March 27, 2012).

^(e) USDA, Natural Resources Conservation Service. 2014 Soil Survey Staff. Utah ecological site descriptions*. Downloaded in May 2014 at: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ut/technical/landuse/pasture/?cid=nrcs141p2_034193.

^(f) Benson, Brock. May 2014. Personal communications. USDA, Natural Resources Conservation Service. Utah ecological sites applicable to the Alton, Utah area. Unpublished ecological site description for Upland Loam* (Wyoming big sagebrush). Ogden, Utah. (The document date on this ESD was April 19, 1992).

^(g) Personal communications in September 2015 with Larry Johnson and landowners.

* Estimates based on vegetation of undeveloped rangelands for this soil type.

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