

# ENVIRONMENTAL ASSESSMENT

**PROJECT NAME:** A.M. Welles, Inc.

**SITE NAME:** Bayers Pit

**LOCATION:** Section 11, T3S, R6W

**COUNTY:** Madison

**TYPE AND PURPOSE OF ACTION:** Proponent has applied for a 15-acre permit to mine sand and gravel. The grassland site is located on a slight bench south of Twin Bridges.

Proponent states that the maximum depth of mining would be 15-20 feet and that 50,000 to 75,000 cubic yards of mine material would be excavated at the site. Processing equipment that may be used includes a grizzly, screen, crusher, and asphalt plant. The tentative final reclamation date is May 2014. The site would be reclaimed to rangeland/pasture by recontouring, respreading topsoil and reseeding the site with grasses.

A = significant unavoidable impacts. B = insignificant as a result of conditioned mitigation. C = insignificant as proposed.

	POTENTIAL IMPACTS AND MITIGATIVE MEASURES					
	A	B	C	LONG TERM	SHORT TERM	EXPLANATION
<b>PHYSICAL ENVIRONMENT</b>						
1. <u>TOPOGRAPHY</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Gravel removal to a maximum depth of 20 feet would alter the topography by lowering the surface and creating new slopes. All surfaces would be graded to 3:1 or flatter and blended into the surrounding topography and drainageways. Existing topography is rolling hills with drainages.
2. <u>GEOLOGY:</u> stability	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The proposed operation is located on the edge of a bench sloping to the west. The bench is on the east side of the Jefferson River Valley. The material that is proposed for mining is Tertiary valley fill.
3. <u>SOILS:</u> quality, distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The soil averages 3 inches deep on the area not previously mined and is of a silty loam texture. There is approximately 3 inches overburden. After regrading the 3 inches of both soil and overburden would be replaced. Microorganisms should reinvade the soil. There are no fragile, compactible or unstable soils present, no unusual geologic features, or special reclamation considerations.
4. <u>WATER:</u> quality, quantity; distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There is an irrigation ditch below the bench to the west. This ditch would likely not be impacted by the proposed operation. The water table is estimated to be at 6 feet below the toe of the bench. The site would be mined to a depth of 20 feet. There would likely be a minimum eight feet of separation between the pit floor and the water table. Bulk fuel would be stored in a lined and bermed area as per the department's guidelines. Any accidental petroleum-based-products spills would be immediately cleaned up and properly disposed of. Best Management Practices would be used to prevent any off site sedimentation or erosion. The proposed operation would not impact groundwater or any surface water sources.
5. <u>AIR:</u> quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Air quality would be degraded, but the proponent must comply with air quality standards and have Air Quality Permits from the Air Resources Management Bureau of the Montana Dept. of

						Environmental Quality for the crusher and asphalt plant. To control dust, spray bars would be utilized on the crusher and a water truck on the haul road and the mine and facility area.
6. <u>UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None identified.
<b>BIOLOGICAL ENVIRONMENT</b>						
1. <u>TERRESTRIAL, AVIAN, AND AQUATIC SPECIES AND HABITATS</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Montana Natural Heritage Program reports two species of concern, the Bald Eagle and Gray Wolf. The site does not contain the type of habitat that would promote Bald Eagles or Gray Wolves frequenting the site. The open cut operation would disturb a relatively small area. Abundant similar habitat exists in the area.
2. <u>VEGETATION</u> : quantity, quality, species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The vegetation on the mine site consists mainly of native grasses. A mixture of native grasses would be seeded on the mine site after recontouring and retopsoiling. The Montana National Heritage Program did a literature search and the annual Indian paintbrush was reported in the same section as the proposed operation. The plant grows in a wetland environment and the proposed operation does not have the type of environment necessary for the species. No rare plants or cover types were observed during a ground search. Spotted Knapweed was identified onsite during the inspection and was present mainly next to the irrigation ditch. The site has a current weed plan.
3. <u>AGRICULTURE</u> : grazing, crops, production	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A small area of grassland would be temporarily out of production. This would not substantially impact local agriculture. The site would be reclaimed to rangeland/pasture.
<b>HUMAN ENVIRONMENT</b>						
1. <u>SOCIAL</u> : structures, mores	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2. <u>CULTURAL</u> : uniqueness, diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. <u>POPULATION</u> : quantity, diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. <u>HOUSING</u> : quantity, distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. <u>HUMAN HEALTH &amp; SAFETY</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There would be increased hazards because of equipment activity and hauling of the sand and gravel. The applicant must comply with OSHA and MSHA regulations. There is a power line on the west edge of the site and the proponent has contacted the power company. There is also a high-pressure natural gas line to the east, just outside the east boundary of the proposed pit area. The gas line is well marked. The gas line would not be impacted by the proposed operation.
6. <u>COMMUNITY &amp; PERSONAL INCOME</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. <u>EMPLOYMENT</u> : quantity, distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8. <u>TAX BASE</u> : local, state tax revenue	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

9. <u>GOVERNMENT SERVICES:</u> demand	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The site would require periodic site evaluations, but these would be done in conjunction with other operations in the area.
10. <u>INDUSTRIAL, COMMERCIAL, &amp; AGRICULTURAL ACTIVITIES</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11. <u>HISTORICAL AND ARCHAEOLOGICAL</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No resources were identified during the Department of Environmental Quality's premine inspection. The State Historic Preservation Office reports no previously recorded historic or archaeological sites in the area.
12. <u>AESTHETICS:</u> noise, visual	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The site is in a rural location. There are no nearby residences or public use areas.
13. <u>ENVIRONMENTAL PLANS AND GOALS:</u> local, regional	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proponent contacted the local zoning authority about the proposed operation and is in compliance with local zoning regulations.
14. <u>DEMANDS ON ENVIRON- MENTAL RESOURCES:</u> land, water, air, energy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
15. <u>TRANSPORTATION:</u> networks, traffic flows	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proponent would use a rural highway and county roads to transport mine material to project sites. This activity would not substantially affect local traffic.

**ALTERNATIVES CONSIDERED:** Denial

**PUBLIC INVOLVEMENT:** Agencies and individuals involved in the process included the Montana Natural Heritage Program, State Historic Preservation Office, local zoning authority, county weed control board, and landowner

**OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION:**

Air Resources Management Bureau, Mining Safety and Health, MT Dept. of Transportation, Madison County Commissioners, Madison County Weed Board

**REGULATORY IMPACT ON PRIVATE PROPERTY:** The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

**RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS:** No further analysis

**INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA:** None

References: October 1991. Jim Gilman Excavating, Bayers Pit EA, Jerry Burke DEQ

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

Prepared by: J.J.Conner