12 December 2006

Price Field Office
Bureau of Land Management
Attn: Don Stephens
125 South 600 West
Price, Utah 84501

Re: Dawson Geophysical Company's Proposed San Rafael Saddle 3-D Geophysical Exploration Project, Emery County, Utah. (UT-070-06-046)

My name is Jerry D. Spangler and I am a registered professional archaeologist and executive director of the Colorado Plateau Archaeological Alliance, an organization that works collaboratively with governments, private entities and conservation organizations to develop strategies that will further the protection and preservation of historic and archaeological sites on public lands to ensure their scientific and aesthetic values are retained for future generations. CPAA advocates for the preservation of cultural resources through sound scientific research, analyses of potential adverse effects that are independent of government or private interests, and active participation in the Section 106 process of the National Historic Preservation Act. At the request of the Southern Utah Wilderness Alliance, I have conducted a technical review of the Environmental Assessment (UT-070-06-046) referenced above, and have identified several concerns and recommendations.

Incomplete Cultural Resource Data. The Class III cultural resource inventory, if completed, has not been forwarded to the State Historic Preservation Officer, and could not be evaluated by CPAA for either content or quality of work performed. The absence of such baseline data makes it impossible for CPAA, BLM, tribes, or the interested public to conduct a thorough evaluation of the potential adverse effects, the efficacy of survey techniques used or the relationship of known cultural sites to their surrounding environment. Yet it is acknowledged in the San Rafael Saddle EA (BLM 2006) that 11 National Register-eligible sites are located in the project area, although "only a small portion of the project area subjected to intensive class III surveys" and that "The high occurrence of sites and these features are indicative of high site densities in the project

area, particularly in the vicinity of ephemeral and perennial water sources," of which there are many in the project area (3.3.1 Cultural Historic Resources).

Archaeologists familiar with the San Rafael Desert have long recognized the exceptionally high density of archaeological sites in the project area, as well as the unusual size and complexity of the sites. BLM archaeologist Blaine Miller noted that "it has been suggested that the desert as a whole just be given one site number because it is hard to tell where one site stops and the next one starts," and that sites have been recorded more than a mile long and a quarter mile wide (BLM 2005a). The exceptional size and complexity of such sites is not acknowledged in the San Rafael Saddle EA, yet adverse effects to such sites through surface disturbance must be considered unavoidable. The potential that seismic activities could damage subsurface cultural deposits is certainly implied (see Mitigation Measures for Cultural Resources page 4.3), although there is no direct acknowledgment that seismic buggies could cause irreparable destruction of subsurface deposits, in particular the spatial relationships that are inherent to an understanding of past human behavior. Damage to such sites, whether or not mitigation occurs, is an adverse effect that must be fully considered within the context of Section 106 of the National Historic Preservation Act and 36CFR800 (see also King 2000a, 2000b).

The San Rafael Saddle EA clearly states that a Class III inventory of seismic corridors and staging areas will be conducted, and that all identified sites would be avoided. The narrow focus of such an inventory, as implied in the EA, ignores the potential for adverse effects to National Register-eligible properties located adjacent to or visible from a seismic route. Sites that become accessible by vehicle could be damaged by intentional or inadvertent off-route vehicular activities, whereas sites that become visible from such routes are much more susceptible to vandalism, illegal collection of surface artifacts and damage from increased public visitation (cf. Spangler 2006; Spangler, Arnold and Boomgarden 2006). To properly assess the potential for adverse effects on historic properties, the Class III inventory should include all areas within and adjacent to the seismic routes, as well as prominent areas visible from the seismic routes that have a high probability of significant cultural remains (e.g., rockshelters, cliff faces, ridges and knolls).

Given the absence of baseline data available for technical review, the recognized potential for significant numbers of National Register-eligible sites within the project area, the implied potential for damage to surface and subsurface cultural deposits, and the BLM's meager mitigation plan, the BLM analysis, as represented in 2.2 Alternative A, is clearly inadequate and fails to acknowledge adverse effects that could result from surface activities within the project area, as well as the potential adverse effects to historic properties outside of the seismic corridors.

Avoidance Does Not Eliminate Adverse Effects. The San Rafael Saddle EA states that known cultural sites and those identified during Class III inventories would be avoided, with the inherent assumption that avoidance would eliminate adverse effects. Such a finding could result in a determination that no consultation would be needed under

provisions of 36CFR800.3. This assumption on the part of the BLM that site avoidance results in no adverse effects is inherently flawed, and any attempt to avoid public participation through a finding of no adverse effect undermines the spirit and intent of Section 106 of the National Historic Preservation Act. Avoidance of cultural sites evident on the ground surface *may* avoid direct damage to the surface evidence. However, there is a potential for damage to archaeological sites not clearly evident on the site surface, as well as adverse effects to sites outside the seismic corridor (see discussion above).

Particularly relevant is 36CFR800.5(1) that states "an adverse effect is found when an undertaking may alter, directly or *indirectly*, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. Consideration shall be give to *all* qualifying characteristics of a historic property …" (emphasis added). See also 65 Fed. Reg. 77698, 77720 (Dec. 12, 2000) (discussing indirect effects). This section of the Federal Code clearly states that federal agencies shall consider the indirect effects of undertakings on eligible properties. There is no indication that such effects were considered by the BLM, nor were efforts identified to avoid, minimize or mitigate those indirect effects. Based on the EA data available, the project under consideration has the potential to result in an adverse effect as defined in 36CFR800(2)(v) that states "introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features" is an adverse effect that must to taken into consideration.

The unwillingness of the BLM to acknowledge indirect adverse effects could, through a narrow interpretation of 36CRF800.3(a)(1), result in a *de facto* finding of "no potential to cause effects" and thereby preclude public participation in the Section 106 process. The Section 106 process is intended to provide opportunities for public input: "the views of the public are essential to informed Federal decisionmaking." Indeed, such a finding would allow the BLM to circumvent the federal agency's responsibility to "seek and consider the views of the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties," as defined in 36CFR800(2)(d)(1). The current EA, while allowing for public comment under the National Environmental Policy Act (NEPA), appears to ignore the unique provisions of the National Historic Preservation Act and its clearly stated intent to seek public participation whenever historic properties may be affected by undertakings on federal land.

The San Rafael Saddle EA also states that "cumulative effects would be negligible" (4.3.3 Cumulative Impacts). However, this assessment fails to acknowledge any cumulative effect on cultural resources from a project involving 61 square miles with an exceptionally high archaeological site density, nor does it recognize the cumulative effects of subsequent energy development. BLM archaeologist Blaine Miller determined that "since no oil and gas facilities presently exist in the San Rafael Desert, it is very unlikely that oil and gas could be developed without affecting archaeology in this area. Long lineal facilities such as roads and pipeline(s) are extremely unlikely to be places without crossing a site either known or unknown." (BLM 2005a). CPAA concurs with

this assessment, and agrees with the findings of the Draft Vernal Resource Management Plan (BLM 2005b) that adverse effects include degradation to site setting and integrity. This interpretation is entirely consistent with the Section 106 regulations. See 36CFR800.5(a)(2)(v). The San Rafael Saddle EA fails to acknowledge any cumulative effects of site degradation throughout the entire project area.

Vehicular Access Increases the Likelihood of Vandalism. The EA acknowledges that "If the seismic lines were subsequently used for ORV use, opportunities for vandalism may increase to an unknown level, depending on volume of traffic" (4.2.1.1 Direct Impacts to Cultural/Historic Sites). However, the document cites evidence from different compliance inspections in northeastern Utah to suggest this would not be a problem. This assessment is naïve and not supported by recent research in eastern and southeastern Utah. In the Range Creek area just east of the project area considered here, researchers found a direct correlation between uncontrolled vehicular access and the occurrence of vandalism. In those areas with controlled access, evidence of vandalism was generally minimal and restricted to areas around the controlled access point accessible to pedestrians. In areas with unrestricted vehicular access, a majority of sites have been vandalized, many of them to the point little scientific information or aesthetic value remains. This research found that factors contributing to the protection of cultural sites included (1) restrictions on vehicular access to administration and educational purposes only, and (2) a consistent law enforcement presence (Spangler, Arnold and Boomgarden 2006). The San Rafael Saddle EA states only that public use of the seismic routes is not likely to occur, but it offers no strategies to actually deter public use of the seismic routes, nor does it offer any strategies to enforce cultural resource protection laws should public access occur.

The San Rafael Saddle EA emphasizes that compliance inspections elsewhere in Utah had failed to document any evidence that seismic routes were used by OHVs or that they resulted in adverse impacts to cultural resources (4.2.1.1 Cultural/Historic Resources). These determinations were made a short time after the undertakings were initiated (or completed). The Range Creek research, however, found the vandalism is an activity that occurs periodically over many decades, and that it occurs mostly along routes accessible to vehicles. This evidence suggests that short-term assessments of no increased OHV use or consequent vandalism does not preclude the possibility that archaeological sites will be vandalized in the future by individuals accessing these sites via the seismic routes. See also Jayne Belnap, USGS, Draft, Recovery Time of Soils and Vegetation from Historical Geophysical Exploration (2006) (discussing use of seismic lines by OHVs). Given that the EA offers no strategies to deter OHV use of seismic routes, the possibility that sites will be vandalized in the future is clearly under-emphasized in the EA.

The San Rafael Desert has long been recognized by the BLM as a popular destination for recreational OHV use. As demonstrated by recent research in Arch Canyon in southeastern Utah, another popular OHV destination, OHVs facilitate public access to archaeological sites and have a significant potential to cause direct and indirect impacts to the integrity of sites eligible for the National Register. This research found

considerable evidence of OHV "spur" routes that divert from the main trail, usually to provide easier access to archaeological sites (Spangler 2006). The San Rafael Saddle EA acknowledges the potential that seismic routes could be used by OHVs, but it does not address the likelihood that such routes could facilitate a spider web of spur trails that facilitate direct access to and result in adverse effects to historic properties.

Evidence also suggests that employees of energy companies have engaged in vandalism of archaeological sites in the past, and that the potential for illegal employee activity is significant in the absence of clearly stated and enforced company policy. This was particularly evident in Jack Canyon, located northeast of the project area considered here, where several National Register-eligible sites were vandalized by company employees. See BLM 2005a. The San Rafael Saddle EA states that Dawson would conduct briefings to inform personnel regarding the Archaeological Resources Protection Act (ARPA) and the National Historic Preservation Act (NHPA), and that violations would be treated as law enforcement/administrative issues (2.2.6.10: Cultural Resources). However, no information was offered to demonstrate that Dawson Geophysical is qualified to instruct their employees on federal historic preservation laws, nor does it indicate the company has specific policies in place regarding employees who engage in violations of those laws.

Jerry D. Spangler, MA RPA

CPAA Recommendations:

Based on the above findings, CPAA offers the following recommendations:

1) Because the proposed action has the potential to result in adverse effects to historic properties within and adjacent to the seismic routes and staging areas – e.g., a diminishment of the integrity of the property's location, design, setting, materials, workmanship, feeling or association – the BLM should acknowledge these adverse effects in its planning documents and proceed with all subsequent provisions of 36CFR800 that allow for full participation of interested consulting parties.
2) BLM planning documents should clearly reflect the direct and indirect effects of the undertaking on cultural resources throughout the project area. This should include strategies to militate the effects of increased accessibility, diminished aesthetic qualities and impacts to site integrity.
3) Class III surveys should not be limited to only transportation corridors and staging areas, but should also include all areas of indirect impact (e.g., expand the APE). This should include particular focus on localities known or suspected to have significant cultural resources that could be affected by the project and subsequent development of energy resources. In particular, an expanded Class III inventory should include the identification of rockshelters, rock art and architectural sites visible from the seismic corridors, and the identification of less obtrusive sites

(e.g., campsites, lithic scatters and special-use locales) that could be impacted by subsequent OHV traffic, illegal surface collection of artifacts and vandalism.

4) Because the seismic routes will be visible from existing roads and trails, Dawson Geophysical should be required to immediately eliminate all surface evidence of seismic buggy activity that is visible from an existing roadway or trail to deter subsequent use of the routes by OHV traffic. It should be clearly stated in the BLM planning documents that such routes are not public OHV routes, and that the seismic routes will be consistently monitored during and subsequent to the undertaking to ensure that OHV use of these routes does not occur, and to vigorously enforce the closures.
5) Given that the proposed project has the potential to open vast areas with archaeological sites now protected by their inaccessibility, the BLM planning documents should clearly state the intent of the federal agency to patrol and enforce cultural resource protection laws. The documents should clearly reflect the commitment of the federal agency to an enhanced law enforcement presence during and subsequent to the undertaking, and its intent to vigorously prosecute violations of the laws.
6) Dawson Geophysical should be required to have a clearly stated company policy regarding employees who violate state and federal laws protecting cultural resources and historic properties, and training of company employees should be conducted by individuals qualified in all aspects of ARPA, NHPA and NAGPRA. Company policies and training requirements should be clearly stated in the BLM planning documents.

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