

Q. *State your name and business address*

R. Fennelle Miller. 713 East Bowers Road Ellensburg, Washington 98926

Q. *Where are you employed and what is your job title?*

R. I am an archaeologist with the Washington Department of Natural Resources.

Q. *What is your educational background?*

R. I have an A.B. (*Artem Baccalaureus*) in Anthropology from Bryn Mawr College (1989), an M.A. (Masters of Arts) in Anthropology from Temple University (1992), and completed my coursework for my Ph.D. (Doctorate of Philosophy) in Anthropology at Temple University (1993). My emphasis in all three degree programs was archaeological anthropology.

Q. *What is the subject matter of your testimony?*

R. I am testifying about cultural resources involved in the Olympic Pipeline project.

Q. *Under the statutory and regulatory scheme, what are “cultural resources”?*

R. Cultural resources include “archaeological and historic sites and artifacts and traditional religious, ceremonial and social uses and activities of affected Indian tribes” (WAC 222-16-010).

Q. *Under the statutory and regulatory scheme, what are “archaeological sites” and “isolates”?*

R. Archaeological sites are defined under RCW 27.53.030 (3) as “a geographical locality in Washington, including but not limited to, submerged and submersible lands and the bed of the sea within the state’s jurisdiction, that contains archaeological objects.” Archaeological objects are defined as objects “that comprise the physical evidence of an indigenous or subsequent culture including material remains of past human life including monuments, symbols, tools, facilities, and technological by-products.”

WAC 25-48-020(10) defines archaeological resources as “any material remains of human life or activities which are of archaeological interest...[including] all sites, objects, structures, artifacts, implements, and locations of prehistorical or archaeological interest, whether previously recorded or still unrecognized...”

There is no definition of “isolates” under state laws and rules, but this class of archaeological resource is often described as consisting of one or two artifacts in an isolated occurrence, and exhibits little complexity. Also, “isolates” are almost never considered to be significant.

Q. *Under the statutory and regulatory scheme, what are “historic resources”?*

R. Historic resources are defined under several laws: RCW 27.53.030(11) states that “Historic archaeological resources means those properties which are listed in or eligible for listing in the Washington State Register of Historic Places or the National Register of Historic Places.” The word “Historic” is defined under WAC25-48-020 as “peoples and cultures who are known through written documents in their own or other languages.”

RCW 84.26 defines historic properties that are NOT archaeological sites (structures). Basically, historic resources are the physical remains of human activity dating to the time period when people kept written records – in Washington, this period starts at around 1800.

Q. *Under what statute and rules are cultural resources, including archaeological and historical resources, regulated?*

R. Under RCW 27.44 (Indian Graves), RCW 27.53 (Antiquities), RCW 43.21C [State Environmental Policy Act (SEPA)] RCW 79 (Public Lands Act), WAC 25 (Archaeology and Historic Preservation), RCW 76.09 (Forest Practices Act), and WAC 222 (Forest Practices Rules).

In RCW 43.21C, cultural resources are regulated first under 43.21C.030, and then under the entire SEPA review process, as defined in this chapter. In RCW 79, cultural resources are regulated as materials of value (79.01.038), and then protected against theft, removal, or damage under RCW 79.01.748, 752, and

760). In RCW 76.09, cultural resources are regulated through the rules establishing classes of forest practices (RCW 76.09.50(1)). WAC's 25-48, 25-42-050, and 25-48-070 all regulate cultural resources, including the issuance of excavation permits, and the requirement for notification of a permit to affected Indian tribes. In WAC 222, cultural resources are regulated in several ways. First, WAC 222-16-050 (1) (g) states that forest practices applications involving cultural resources have a "potential for substantial impact on the environment," and requires an applicant to go through a review under SEPA. Second, WAC 222-20-120 establishes the need for meeting with affected Indian tribes when cultural resources are involved.

Q. *What is DNR's regulatory and real property management jurisdiction in the area of cultural resources?*

R. As a regulator, DNR must provide for the protection of cultural resources under the Forest Practices Act [WAC 222-16-050(1)(g), RCW 76.09.050(1), and WAC 43.21C.030].

As a state land manager, DNR must obey, at a minimum, the state laws and rules concerning cultural resources protection that I referred to earlier. In this context, the DNR requires entities requesting rights-of-way (easements) across our lands to protect cultural resources during any ground-disturbing activity.

When the DNR issues a right-of-way, the agency requires that cultural resources be protected by the applicant to state laws and rules, at a minimum.

Q. *What is the OAHP and what is its purpose concerning cultural resources?*

R. The OAHP is the Office of Archaeology and Historic Preservation, defined under RCW 27.34.020(7), and established under RCW 27.34.210. The purpose of the Office is to maintain records of all cultural resources, including archaeological sites and historic structures, in the State of Washington; to issue excavation and removal permits under RCW 27.53; to consult with affected Indian tribes in cases where proposed actions have the potential to impact cultural resources, and other lesser responsibilities.

Q. *What is the nrhp, and what is its purpose concerning cultural resources?*

R. The NRHP is the National Register of Historical Places, established and amended under P.L. 102-575 (16 USC 470), the National Historic Preservation Act. The NRHP is a list of significant cultural resources. Significance is assessed under four criteria (a-d) in 36 CFR 60. If a site is evaluated under these criteria and determined to be significant under federal law, that site must either be protected from disturbance, or the expected negative impacts to it must be mitigated.

Q. *How does federal law apply on state and private lands?*

R. Under the National Environmental Policy Act of 1969 (NEPA) (42 USC SS 4332), and Section 106 of the National Historic Preservation Act of 1966 (16 USC 470) (described in 36 CFR Part 800), Federal agencies with jurisdiction over an undertaking must consider the effects of such an undertaking upon cultural resources. The first step in this process is the defining of an Area of Potential Effects (APE). In the case of the Olympic Pipeline project, the United States Forest Service has determined that the APE for this project extends the entire length of the proposed pipeline route, regardless of land ownership. Thus, NEPA and NHPA apply to all lands in this undertaking, including state and private lands.

Q. *Describe the process used by DNR to identify and evaluate cultural resources.*

R. On state-managed lands, in order to identify archaeological resources, an initial review of a project is conducted in the office. Such a review consists of a project description, including a map, environmental information, and the nature of the proposed activity(ies). During this portion of review, an APE is defined. If areas of sensitivity within the APE are identified through this initial review, a field survey is conducted. Areas of sensitivity are defined as areas likely to contain cultural resources. A pedestrian field survey consists of an archaeologist or archaeologists walking linear transects (survey corridors) through the project area. DNR uses transects spaced about 20 meters apart. If there are areas of deep soil identified either through the pre-field review, or through field survey, and the

proposed impacts include substantial sub-surface ground disturbance, limited testing is required to identify potentially buried archaeological materials. Such testing often includes the excavation and screening of shovel tests. If a site is identified, it is recorded on an appropriate form.

In order to identify historical resources, a pre-field review is conducted as described above. Notes and plats from the Government Land Office (GLO), a federal agency within the Department of the Interior, are checked, as are the oldest available topographic quadrangles produced by the United States Geological Survey (USGS). Finally, field survey is conducted as I described previously.

Following the identification process, any identified cultural resources are evaluated for significance against the NRHP criteria I discussed above.

For Forest Practices, the process is similar. Pre-field investigation consists of a check of previously identified cultural resources through DNR's Total Resource Access Cross-Reference System (TRAXS). Frequently, a Forest Practices field forester has knowledge of extant cultural resources in the vicinity, and additional information is often received from outside reviewers, including affected Indian tribes. All of this information is used to determine whether a field survey is necessary. Should this be the case, the applicant is required to carry out a field survey of the proposed forest practice application area, as described above for state-managed lands.

Q. *During the identification and evaluation of cultural resources, is tribal consultation required? If so, state the basis for this requirement.*

R. Tribal consultation is only required under state law in certain circumstances, although it is required under the federal laws in all circumstances (NEPA, NHPA). Under WAC 222-20-120 (Forest Practices Rules), if an application involves cultural resources, the landowner must meet (consult) with the affected Indian Tribe(s) regarding identification and protection of the cultural resource. Under WAC 25-48-070, OAHP must consult with the affected Indian tribe(s) when issuing an excavation or removal permit.

Also, when a cultural resource is of interest to an affected tribe (prehistoric archaeological sites, historic archaeological sites and structures associated with Native American use), any finding of non-significance needs to be made in consultation with the affected tribe.

Q. *Does the proposal address tribal consultation regarding cultural resources?*

R. Yes, it does. It mentions that tribal consultation was initiated, but has not been completed. There is no information regarding the nature or quantity of information received from any of the tribes as part of this process.

- Q. *Was a field investigation conducted of the entire length of the proposed pipeline route, to identify archaeological and historic resources?*
- R. No, not at this time. There are portions of the route which have not yet been surveyed (3% of the route has not been surveyed, according to the Draft Environmental Impact Statement (DEIS), page 3-208). Also, only one option has been surveyed for most of the route, so neither of the other “options” (through the Yakima Training Center) were considered under the cultural resources investigation (DEIS, Table S-2, page S-8).
- A. *What field methods were employed to identify archaeological and historic resources?*
- B. Pre-field research and pedestrian field survey were both conducted on portions of the route as described above.
- Q. *In your opinion, were the methods identified in the preceding question adequate? If not, why not?*
- R. No, in my opinion, the methods were not adequate. The pedestrian field survey was conducted so that there were two surveyors covering the corridor. The APE was defined by OPL as 200 feet wide, so each surveyor was expected to cover 100 feet (30 meters), which is not realistic in many areas. The DNR would have used 15- to 20-meter transects in order to improve the likelihood that smaller sites

would not be missed, particularly in areas deemed as “High Sensitivity.” High Sensitivity areas are those portions of the landscape most likely to contain archaeological sites. Also, in my opinion, the APE should have been defined as wider for the following reason: the DEIS states that, in addition to the 30 meter-wide APE for a majority of the pipeline route, there are anticipated to be “four to five staging areas measuring approximately 15 to 30 acres each”, and “construction crew staging yards measuring 10 to 20 acres each” (DEIS, page S-11). There is no mention in either the DEIS or the Cultural Resources Technical report that any of these proposed staging areas were investigated (either field-surveyed or archivally reviewed) for cultural resources.

Furthermore, on page 4-9 of the Cultural Resources Report (technical report by HRA, dated June 20, 1997), there is mention made of subsurface testing, but there is no record of where that was conducted. Thus, there is no way to assess whether the subsurface testing was adequate. There should have been substantial subsurface testing conducted along large portions of the route in the Columbia Basin, where the corridor is characterized by deep pockets of loess, and the pipeline is expected to be excavated to a depth exceeding four feet. The loess deposits date to the modern geological epoch, called the Holocene. The beginning of the Holocene is marked by the end of the last ice age, and the arrival of the first people into North America. Where there are deep deposits of loess, there is a good

chance that the loess has buried and preserved archaeological sites, some of which could date to the early Holocene, and thus would be significant.

There are several areas in which there are documented prehistoric archaeological sites in the vicinity of the proposed pipeline corridor I have personally investigated that do not appear to have been adequately investigated in the field. In at least one of these areas, subsurface testing should have been conducted to determine whether buried cultural deposits extend into the project area for the reasons I just explained. I was unable to locate any evidence of subsurface testing in this area. There are several sites listed as “isolates” in Table 5-3 of the Cultural Resources Technical report (June 20, 1997) that should have been tested if there was any possibility of additional subsurface cultural deposits: IN12-9, IN12-16, IN12-23, and IN36-2 should have been tested, but there is no indication that they were. This testing should have been done to determine whether what was observed on the surface was in fact the full extent of the materials. Often, there may be just a few artifacts sitting on the surface of the site, while many more lie buried beneath the surface.

Q. *Have you been able to determine whether the proposed pipeline route traverses any presently identified cultural resource areas? If so, how were you able to determine this?*

R. Yes, OPL states that there are 34 (archaeological and historic structure) sites and 188 isolates located within the corridor. OPL has stated that they “may be able to adjust the construction alignment to avoid all or most sites within the 61 m (200-foot) wide corridor (DEIS, page 3-212)” but the maps provided both in the DEIS and the June 20, 1997 Cultural Resources Technical report do not reflect avoidance. I have field verified several of these resources, as well as additional resources which were not identified by the HRA/Dames & Moore surveyors. Such resources – those apparently missed by HRA – include a segment of the early Chicago, Milwaukee, St. Paul, and Pacific Railroad in Section 8 of T15N-R28E, a small lithic scatter in Section 16 of T17N-R20E, and a continuation of lithic scatter 45GR600 (prehistoric archaeological site) in Section 36 of T16N-R27E.

Q. *Have these cultural resources been evaluated for significance vis-a-vis NRHP eligibility?*

R. No, almost none of the sites have been evaluated for NRHP eligibility. Of the 34 sites I mentioned in my last question, one historic site is listed on the NRHP, and one has been determined to be ineligible for inclusion on the NRHP,. The remaining 32 sites and 188 isolates have not been evaluated. Perhaps the most inappropriate portion of the identification and evaluation process is the fact that HRA recorded numerous cultural resources as “isolates” when they should have been properly documented as sites (Cultural Resources technical report June 20,

1997). Such examples include but are not limited to the stripped cedar trees (22-1 and 22-2, page 5-81), the old roads (33-1 and 33-2, page 5-81), the railroad grade (53-6, page 5-82), and the more-than-80 irrigation ditches listed in Table 5-3. Segments of roads, railroad grades, and irrigation ditches are not isolated occurrences, because by their very nature they are each part of a larger system. Furthermore, some of them may in fact be found to be significant enough to be eligible for the NRHP. Stripped cedar trees are considered by most archaeologists to be evidence of ongoing use by tribal people, and thus are generally considered to be traditional cultural places.

Q. *Can effects to resources be determined if evaluations have not been completed? If not, why not?*

R. Since no evaluation work has been conducted, it seems that none of the sites have been tested. There has been no subsurface testing in areas where resources were not identified. Therefore, there is no possible way to determine effects/impacts to cultural resources. There may be buried deposits (are likely to be in some instances) which the pipeline is not currently planned to avoid.

Q. *What are the general and specific impacts to be expected from the construction and operation of the pipeline upon cultural resources identified in the preceding questions?*

R. General impacts include a disturbance of the cultural resources through a variety of activities: construction of the pipeline has the potential to disturb or destroy cultural resources located from the ground surface to a depth of at least 6 feet (1.8 meters), within a 60 foot (18 meter) wide construction corridor. The greatest impacts to potentially buried cultural resources is likely to be at the pump stations, where it does not appear that any subsurface testing has been conducted. In fact, The Kittitas pump station/terminal, the Beverly-Burke pump station, and the Othello pump station are all located in areas where there are deep loess-derived soils, and a possibility exists that there are buried cultural deposits in these areas, as I testified to earlier. Because until recently, Native Americans buried their dead in unmarked graves, there is always a possibility that unmarked historic graves (Native American and others) exist within the project area. If such a burial were discovered by trenching, the damage to the burial would likely be severe.

There will also be impacts within the 200 foot (61 meter) wide study corridor, though the nature of these impacts is more speculative at this point. Such impacts may come from unofficial equipment turn-arounds, casual crew parking, and simply moving the actual construction corridor within the study corridor to avoid significant resources. As I mentioned earlier, there is also a very strong likelihood that any cultural resources located within the proposed staging areas (pipe and construction crew) would be negatively impacted during construction.

Once construction is completed, normal operation of the pipeline is not expected to cause any damage to cultural resources. However, as stated on page 3-213 of the DEIS, “leakage, fire, or other emergencies and control or cleanup procedures could affect cultural resources.” Such impacts could range from minor ground disturbances, to complete destruction of cultural resources. Minor ground disturbances might be expected from clean-up of a small leak in the vicinity of a cultural resource that is located on or below the ground surface near the pipeline, but which was avoided during construction. Contamination of charcoal and other organic material which might produce radiocarbon dates in a prehistoric site might become contaminated by leaking petroleum products. Complete destruction of a standing historic structure through incineration might occur if a pipeline fire occurs in the vicinity. These are just a few examples.

Q. *Are there potential cumulative impacts to cultural resources from the construction and operation of the pipeline?*

R. Yes, if the pipeline is constructed so that it crosses land which has not previously been accessible, it will provide easier access to cultural resources which might be harmed by people taking artifacts, digging sites, and/or vandalizing sites. If traditional cultural resources are identified by any of the tribal groups involved in consultation, these resources could be negatively impacted by increased visibility and accessibility as well.

Also, during construction, there will be an increased opportunity through increased access for vandalism and/or looting of sites. Lastly, the effect of the removal of vegetation from swaths of ground along the APE may, particularly in the windy Columbia Basin, exacerbate erosion, and result in the deflation of sites that may be presently buried. Deflation is the collapse of a stratified (or layered) site, and often is the result of fine soils being removed (eroded) from a site, leaving all the strata (layers) of a site stacked one on top of the other. Much information is lost when this happens.

Q. *Does the proposal address any monitoring plans concerning the general, specific and cumulative impacts on cultural resources?*

R. No, at this time there is no specific plan to address this. There is a discussion of development of a Programmatic Agreement (PA) to address such issues as monitoring to reduce the impacts to cultural resources (DEIS, page 3-206, C-41 and 42). In fact, a Draft PA is included in the latest technical report; however, I have not seen a Monitoring Plan, as referred to in the draft PA (Appendix D, Cultural Resources Technical Report, June 20, 1997). A Monitoring Plan is necessary because, as I have previously testified, it is likely that additional, as-yet unidentified archaeological sites may be encountered during construction, and there needs to be a specific plan developed to look for and identify such sites.

Q. *Could the proposed pipeline route potentially traverse presently unidentified cultural resources -- specifically archaeological sites or burials?*

R. Yes, there is a strong likelihood that the pipeline route does traverse as-yet unidentified cultural resources, as I have previously testified. This is because the pipeline crosses areas of deep soil, and these areas have not been subsurface tested.

Q. *Does the proposal address the accidental discovery of cultural resources?*

R. No, not at this time. However, the draft PA I referred to earlier is reportedly going to address accidental discovery situations (referred to as “discovery situations” but not expanded upon in a mention of a “Monitoring Plan,” referred to but not expanded upon, in the Draft PA, Appendix D, Cultural Resources Technical report, June 20, 1997).

Q. *Does the proposal address how cultural resources will be protected during emergency situations? If so, in your opinion is the plan adequate to negate or sufficiently abate the impact to those resources?*

R. No, as I just testified, the draft PA refers to a lot of other plans that have yet to be developed, so I would say that at this point I have seen nothing that leads me to believe that cultural resource protection in emergency situations has really been dealt with, and certainly not adequately. As I previously testified, there are several

emergency scenarios in which cultural resources might be in jeopardy. If there is no plan in place to address cultural resource protection during emergencies, sites may be damaged or destroyed by emergency response personnel, during containment or clean-up.

Q. *What is DNR's role in creating a protection agreement (PA) for cultural resources?*

R. As a state land manager, DNR is involved in the development of a PA when it allows a use of state land that may impact cultural resources. The DNR generally is a signatory to such as PA, if easement is granted across DNR-managed lands, In this way, DNR is assured that cultural resources have been/are/will be identified, evaluated, protected, and/or mitigated in a manner that is consistent with state laws and DNR policy. At this time, DNR has not been contacted by OPL, Dames & Moore, or HRA to request our involvement in the creation of such as PA.

Q. *Have protection or mitigation measures been identified for impacts on cultural resources within the proposed pipeline corridor?*

R. Both in the Cultural Resources Technical Report (June 20, 1997) and in the DEIS, the applicant states that "OPL may be able to adjust the construction alignment to avoid all or most sites within the 61 m (200 foot) wide corridor" and that "OPL

will identify which properties will likely be impacted and consult with the USFS to finalize a scope of work for testing and evaluation of properties should avoidance not be an option” (DEIS, page 3-212).

In Appendix D of the Cultural Resources Technical Report (June 20, 1997), Section 4 Treatment of Adverse Project Effects on Historic Properties also mentions mitigation measures. Such measures are referred to in this document as a “Treatment Plan.” There are no specific measures presented in the “Treatment Plan,” as is the case throughout the Appendix.

Q. *In your opinion, are these measures adequate to negate or sufficiently mitigate the expected impacts to cultural resources?*

R. No, as I just testified to, the work is incomplete at best. If the decision is made to avoid cultural resources, I would suggest that the corridor cannot be moved, because any potential realignments have not been investigated for cultural resources. This is a Catch-22 situation, and has not been addressed in either document (DEIS or Technical Report). Also, no specific mitigation measures have been proposed. There has been only the identification of a need for such measures to be developed, and this in and of itself is not sufficient to allow analysis of potential effects to cultural resources.

Q. *Identify which measures are adequate and explain why they are adequate.*

R. In the PA, there are fourteen stipulations made (Appendix D, Cultural Resources Technical Report, June 20, 1997). Of these fourteen stipulations, I find that #7, the Treatment of American Indian Burials, Human Remains, Associated Artifacts, and Cultural Items to be an adequate means of addressing protection of this type of resource. Although they are not strictly mitigation measures, I also agree with #8, 9, 10, 11, 12, and 13 as well. They are all less germane to the question posed, however.

Q. *Identify which measures are inadequate and explain why they are inadequate.*

R. Stipulation #1 -- Consultation -- is inadequate, because there is no discussion of how, specifically, OPL will address any concerns raised by consulted Indian Tribes.

Stipulation #2 – Additional Identification of Historic Properties – does not mention subsurface testing as a strategy. This is a problem, because 2.2 states “the inventory will be conducted in a manner consistent with the *Secretary of Interior’s Standards and Guidelines for Identification of Historic Properties.*”

This document does not identify specific field methods, and specific field methods should be specified, including and especially subsurface testing. The reason for this is that specific field methods are appropriate to identify cultural resources in specific situations and settings.

Stipulation #3 – Assessment of Project Effects on Historic Properties – this is inadequate because it allows construction to proceed on portions of the pipeline that are determined to have no effect on historic properties. This could be a problem if a portion of pipeline was constructed up to a site that could not -- but should -- be avoided. DNR would rather see avoidance (and thus protection) over mitigation, but this would not be feasible if the pipeline were permitted to be constructed in segments, before identification/evaluation were completed on adjacent sections.

Stipulation #4 – Treatment of Adverse Project Effects on Historic Properties – this portion of the draft PA is also inadequate, in that it refers to such things as a “Treatment Plan” and “Data Recovery Plans,” neither of which has been developed yet. Thus, there is no basis to evaluate its usefulness/effectiveness.

Stipulation #5 – Monitoring During Construction and Operation of the Project – this stipulation is unclear. It does not state that monitoring will be conducted in areas where there are likely to be buried cultural deposits, nor in areas where there was no ground visibility. That should be part of this PA.

Stipulation #6 – Emergency Plan – This contains two sentences, simply stating that an Emergency Treatment Plan will be prepared. This is not sufficient to ensure that negative impacts to cultural resources during emergency situations are negated or mitigated.

*Q. What additional measures would you propose to address the unmitigated or*

*insufficiently mitigated impacts you identified earlier in your testimony?*

I would make the following recommendations: that prior to final review (for approval or denial) of this project, OPL provides all the plans and documents referred to in their draft PA; that OPL representatives meet with DNR representatives on the ground to discuss potential cultural resource conflicts on state lands, so that DNR can evaluate impacts to cultural resources and how to avoid or mitigate resources on state lands; and that HRA revisit some of the fieldwork and reporting portion of their work. Specifically, I would recommend that HRA return to several segments of the pipeline to document or re-document archaeological and/or historic resources, because some resources were missed, and others were inadequately defined and/or recorded. I would also recommend that OPL redouble its efforts to complete tribal consultation, and state how information gathered as a result of that consultation will be incorporated into the final pipeline route. At this point, with parallel processes underway (the DEIS and consultation), OPL has not stated how information gathered during tribal consultation will be incorporated. After plans are finalized, it is my experience that information received from tribes and others is often impossible to integrate.

I certify and declare under the penalty of perjury under the laws of the State of Washington that the foregoing is true and correct to the best of my knowledge and belief.

Signed at \_\_\_\_\_ Washington on this \_\_\_\_\_ day of February, 1999.

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Fennelle Miller