

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Chief Administrative Judge
B. Paul Cotter, Jr., Presiding Officer

Administrative Judge
Thomas D. Murphy, Special Assistant

In the Matter of)
)
)

HYDRO RESOURCES, INC.)

2929 Coors Road)

Suite 101)

Albuquerque, NM 87120)

Docket No. 40-8968-ML

ASLBP No. 95-706-01-ML

AFFIDAVIT OF LORRAINE HEARTFIELD

Lorraine Heartfield, being duly sworn, states:

1. My name is Lorraine Heartfield. I am of sound mind and body and am competent to make this declaration. The factual statements herein are true and correct to the best of my knowledge, and the opinions expressed herein are based on my best professional judgment and experience.
2. The purpose of this declaration is to respond to "ENDAUM's And SRIC's Motion For Stay, Request For Prior Hearing, And Request For Temporary Hearing," dated January 15, 1998. The response addresses the adequacy of the historic properties review.
3. The phased review of the proposed development by Hydro Resources, Inc. ("HRI") pursuant to Section 106 of the National Historic Preservation Act ("NHPA") was proposed by the

U.S. Nuclear Regulatory Commission ("NRC") and accepted by the New Mexico State Historic Preservation Division ("NMSHPD") and the Navajo Nation Historic Preservation Department ("NNHPD"). It is my professional belief and experience that, for long-term development projects such as mines, phased Section 106 review is a common practice. I strongly affirm that the cultural resources review of HRI's proposed development fully complies with NHPA § 106 and is proceeding in a proper manner as required by Condition 9.12 of the NRC operating license for HRI.

STATEMENT OF QUALIFICATIONS

4. I am a cultural resources specialist and archaeologist. I have been the cultural resources consultant for HRI since January 30, 1996. I hold an B.S. degree in biology from Lamar State College of Technology at Beaumont, Texas; an M.A. degree in anthropology from the University of Texas at Austin; and a Ph.D. in anthropology from Washington State University. My career began in 1968 in Arkansas where I served as the Registrar for the Arkansas Archaeological Survey. Later, I was a staff archaeologist for Gulf South Research Institute in Baton Rouge, Louisiana, and then directed archaeological investigations for the Research Institute of College of Pure and Applied Sciences at Northeast Louisiana University in Monroe, Louisiana. In 1978, I established the consulting firm of Heartfield, Price, and Greene, Inc. and served as its president until its sale in 1986. I have directed and managed both cultural resources and environmental projects throughout the South, the West (including Alaska), and New York. Since 1986, I have worked

as an independent consultant and have managed major cultural resources projects in several Western states including Arizona, California, Colorado, New Mexico, and Texas.

5. In my professional career, I have specialized in various cultural resources issues including regulatory affairs; project needs assessment, design and implementation; budget and cost analysis and controls; and management of cultural resources subcontractors and quality assurance. I have had extensive experience with multi-phased projects, primarily lignite mines and pipelines. I frequently work with federal, state, and Native American agencies to insure that all cultural resources investigations are of the highest quality.

RESPONSE TO CULTURAL RESOURCES ISSUES RAISED IN THE MOTION FOR STAY

6. The Motion for Stay asserts that the NRC violated Section 106 of NHPA, 16 U.S.C. § 470f, by issuing the operating license to HRI before the completion of the Section 106 review process.

7. This Motion fails to recognize that the phased review of the "undertaking" -- HRI's proposed development -- was proposed by the NRC and accepted by the NMSHPD and NNHPD. Thus, all applicable requirements for the NHPA § 106 process are currently being met. On January 22, 1998, I spoke with Dr. Lynn Sebastian, New Mexico State Historic Preservation Officer, who acknowledged that the Section 106 process is underway and proceeding in a lawful manner. Moreover, the NRC has imposed a condition -- Condition 9.12 -- on the operating license that

prohibits any surface disturbance on the mine properties until the Section 106 process is complete for that phase of the development.

8. Compliance with Section 106 of the NHPA is often accomplished in phases for projects that involve properties that will be developed in phases and over an extended period of time. This is particularly true for mining projects that often span decades.

9. In my experience with mining projects, the NHPA § 106 process is accomplished in phases. I worked on behalf of Phillips Coal Company from 1982 to 1988 and intermittently until 1994, managing the cultural resources compliance for its lignite mine development in Louisiana and conducting the cultural resources surveys and testing. On January 23, 1998, I spoke with Mr. Kenneth Ratliff, the former Environmental Manager for Phillips Coal Company, who confirmed that the NHPA § 106 review for all its lignite mines was phased through five-year mining plans. He also noted that the North American Coal Corporation also phases its Section 106 review.

10. Other cultural resources investigations are also commonly accomplished by phased or continuous investigations to insure compliance with Section 106 of the NHPA. Examples of these in my experience include:

1) The North-South Expressway (LA): Howard, Needles, Tammen and Bergendoff of Baton Rouge, LA, constructed an expressway that extended from southern Louisiana into parts of Arkansas, completing its Section 106 review in several phases over an extended time period.

2) All American Pipeline (AZ, CA, NM, TX): All American Pipeline likewise relied on phased Section 106 reviews in its projects in several Western states;

3) PGT Pipeline Expansion Project (CA, ID, OR, WA): Bechtel Corporation likewise used phased historical resources review in this project; and

4) Ozark Pipeline Project (AR): Texas Oil and Gas Corporation, based in Dallas, Texas, also used the same approach.

11. Based on my experience, I believe that the phased approach to Section 106 of the NHPA provides the highest level of cultural resources compliance. It insures that subsequent investigations take into account information and knowledge gained from previous phases of the project. The cultural resources regional knowledge base accrues through time, and this information is incorporated as well.

12. The phased approach insures accuracy in the cultural resources investigations and prevents error that might occur when project boundaries are modified. When extended periods of time elapse between the completion of cultural resources investigations and project impacts, surface changes may reveal previously unidentified archaeological sites and erosion may degrade existing sites so that treatment plans must be modified. The phased Section 106 review not only avoids such problems but also permits effective incorporation of information obtained from previous investigations into survey techniques utilized or management decisions to enhance the accuracy of the investigations conducted.

13. The Motion for Stay asserts that the cultural resources information is inadequate. The Museum of New Mexico, Office of Archeological Studies ("OAS") conducted intensive and thorough cultural resources studies for the first phase of the project as defined by the NRC and accepted by the New Mexico State Historical Preservation Officer ("NMSHPO") and the NNHPD. These studies covered portions of Sections 8 and 17 and Section 12 in its entirety.

14. The report prepared by the OAS ("Blinman 1997 or the OAS Report") meets or exceeds current standards for recording and evaluating cultural resources including archaeological sites and traditional cultural properties ("TCP's"). Blinman 1997 and supportive documentation such as that prepared by Mr. Earnest C. Becenti fully comply with the Section 106 reporting standards, the National Park Service Bulletin 38, the Navajo Nation requirements and professional standards.

15. No TCP's were identified in any of the Sections, but archaeological sites eligible for inclusion in the National Register of Historic Places (in Sections 8 and 12), an unpermitted cemetery on the Federal Bureau of Land Management ("BLM") property (Section 8), and the possible location of two modern graves within the boundaries of an eligible archaeological site (Section 12) were recorded.

16. In its letter dated November 20, 1997, the NMSHPO notified the NRC of its concurrence with the above findings of eligibility for the National Register of Historic Places outlined in Blinman 1987, thus concluding the identification phase of the Section 106 review for the first phase of the HRI project and confirming that the quality of investigation performed thus far on Sections 8, 12, and 17 was sufficient.

17. Although the unpermitted cemetery in Section 8 does not meet the definition of a traditional cultural property under the land-use definitions used by the BLM, it is protected by other regulations. Moreover, the possible graves located within the boundaries of an eligible archaeological site in Section 12 will be fully protected by the implementation of procedures for avoidance under Section 106 of the NHPA.

18. It is my professional opinion that compliance with Section 106 of NHPA is progressing in an ordered and appropriate manner. Pursuant to the phased approach to Section 106, the NMSHPO will soon be asked to comment on the effects to the eligible archaeological properties identified in Blinman 1997.

19. Because of HRI's policy of avoidance of cultural resources, the proposed development will not impact any of the eligible archaeological properties. Measures to be taken by HRI to insure protection during construction and operation include: 1) installation of exclusionary fencing and erosion control features for eligible archaeological sites; 2) monitoring of surface disturbance in the vicinity of cultural resources sites, particularly in the lowland areas of Section 8, and continuous monitoring at mine sites and other areas of potential surface disturbance during construction and operation. A qualified archaeologist will conduct the required monitoring.

20. In addition, the mining personnel will receive orientations concerning the importance of cultural resources and prohibitions for the collection, excavation or defacement of cultural properties. Workers and visitors will not be allowed access to areas outside the immediate work area.

21. The Motion for Stay asserts that the NRC Staff has failed to consult the Navajo Nation Historic Preservation Officer ("NNHPO"). At the outset, I note that the NNHPO's role in the current Section 106 review of the HRI project is limited to that of an interested party, not that of a consulting party with a more active role. While the NMSHPO exercises the primary responsibility for review of undertakings on private and Federal lands in New Mexico, the NNHPO reviews all undertakings on lands administered by the Navajo Nation under a substitution agreement. Although the NNHPO has asserted review responsibilities for undertakings on private, state and Federal lands within "dependent Indian communities" (including Crownpoint and Section 17), such claims have never been accepted by the NMSHPO or the Advisory Council on Historic Preservation and may be subject to litigation in the near future. Until this issue is resolved, the NNHPO cannot exercise any primary review authority as to such lands and must participate in the Section 106 review process as an interested party. Thus, contrary to claims made by Petitioners (Dodge Affidavit at section 30), the NRC Staff must consult the NMSHPO rather than the NNHPO in identifying eligible cultural properties and reviewing effects, if any. As an interested party, the NNHPO's role is limited to review and comment.

22. Moreover, HRI has made diligent efforts to seek the views of the Navajo Nation regarding protection of historical properties located in the proposed development areas. Whether the Navajo Nation participates in the current Section 106 review for the HRI project under the auspices of the NNHPD or the NNHPO, the point is moot. On June 19, 1997 the NRC transmitted the OAS Report to Alan Downer, Director of the NNHPD, requesting comment and review by Peter Noyes and Rolf J. Nabahe. To date, the OAS has received no comments.

23. Prior to the transmittal of the OAS Report, I had contacted the Navajo Nation regarding HRI's plans. On February 9, 1996 I met with Rolf J. Nabahe, an archaeologist for the NNHPD, Cultural Resources Compliance Section, who would be the cultural resource contact for both archaeological and traditional issues regarding HRI's proposed development. We discussed previous archaeological work that had been conducted on the development properties and HRI's firm commitment to confirm site boundaries, identify any undiscovered sites, and implement a plan of avoidance. I also discussed the project with Mr. Nabahe on several other occasions to seek his advice and direction until he left the NNHPD in 1997.

24. Petitioners' assertion that all appropriate tribes -- other than the Navajo Nation -- have not been appropriately consulted during the current Section 106 review (Dodge Affidavit at section 31) is false and not grounded in fact. Throughout the current Section 106 review, HRI has made every effort to consult all appropriate tribes regarding any potential impact of its proposed project on cultural properties. On February 22, 1996, HRI submitted letters to the Acoma, Hopi, Laguna and Zuni Pueblos and the All Indian Council, notifying them that HRI plans to construct and operate three in-situ uranium recovery facilities in McKinley County, New Mexico. These locations included the Crownpoint, Unit 1, and Church Rock parcels. The letter included a map, a reiteration of HRI's plans to avoid all cultural resources, and a request for information on any traditional cultural properties that might be located in or near the parcels. On February 28, 1996, a second letter was sent by HRI to correct an error in the township designation in the land description.

25. Having received no response by March 26, 1996, HRI conducted follow-up telephone calls on that day to each Pueblo to confirm that the letters had been received. HRI also made inquiries to insure that appropriate individuals had had an opportunity to comment.

26. On March 26, 1996, I spoke with Gilbert Petuuche, Land Coordinator for Acoma Pueblo. He remarked that Acoma Pueblo expects compliance with the Native American Graves Protection and Repatriation Act ("NAGPRA") if human remains are found but did not express any NHPA concerns.

27. On the same day, I also spoke with Clay Hamilton, Research Assistant for the Hopi Cultural Preservation Office ("HCPO"). He requested that the letters be faxed directly to him, and this was done. On April 25, 1996, HRI received a letter from Mr. Leigh Jenkins, Director of the HCPO, which acknowledged the receipt of the letters from HRI and requested a copy of the cultural resources management plan prepared by HRI. The plan was subsequently mailed to Mr. Jenkins.

28. On the same day, the Governor's Office of Laguna Pueblo confirmed that the letters had reached the appropriate persons and indicated that they would respond. However, they have thus far failed to do so.

29. On the same day, at the request of Joe Dishpa of the Zuni Heritage and Historic Preservation Office ("ZHHPO"), HRI faxed the letters to that office to the attention of Roger Anyon, Director. HRI received a response from the ZHHPO on March 28, 1996.

30. On July 12, 1996, letters were again sent to the Acoma, Hopi, Laguna and Zuni Pueblos and the All Indian Council, notifying them that Section 12 (T17N R13 W) had been added to the project and asking them to identify ongoing cultural practices that might be performed on any of the Crownpoint properties.

31. Later, on July 24, 1996, follow-up telephone calls were made to each group to confirm that the letters had been received. On that day, I spoke with Gilbert Petuuche of the Acoma Pueblo. He had received the letter and stated that Acoma had no cultural properties in the project areas. He approved of the HRI plan for avoidance of recorded cultural resources and, in keeping with the previous responses to our February 22, and 28, 1996 letters, he reiterated that if human remains are found, the Acoma Pueblo should be notified immediately.

32. On July 25, 1996, I spoke with Leigh Jenkins of Hopi Pueblo who confirmed that he had received the cultural resources plan and the letter of July 12, 1996. While he indicated that he may respond to the letter, he has thus far failed to do so.

33. On July 29, 1996, HRI confirmed that the July 12, 1996 letter to Laguna Pueblo had been correctly routed to Stan Lucero. However, Laguna Pueblo has thus far failed to respond.

34. On August 4, 1996, I spoke with Joe Dishda of Zuni Pueblo. He said that he would check with the cultural advisory committee to determine if members of Zuni traverse or use any of the Crownpoint properties. There were no further communications between myself and the Zuni Pueblo.

35. On July 24, 1996, I spoke with Terrill Muller of the All Indian Pueblo Council. She stated that she would look into the project and may have comments. We discussed the project and the Native American groups that had been notified. She agreed that HRI made all the proper contacts.

36. HRI has also transmitted copies of the OAS Report to Acoma, Hopi, Laguna and Zuni Pueblos for review and comment. The letter of transmittal noted that pursuant to Section 106 of the NHPA the report would serve as the basis for determination of effect. No responses have been received from any of the Pueblos.

37. Since January 30, 1996, HRI has expended in excess of \$150,000 on cultural resources investigations involving its proposed development. This figure does not include previously accrued costs.

I declare the foregoing under penalty of perjury on this 23rd day
of January, 1998, at SANTA FE, New Mexico

Lorraine Heartfield
Lorraine Heartfield

The foregoing instrument was acknowledge before me this 23rd day of
January, 1998 by Lorraine Heartfield. Notary Public in and for the
County of Santa Fe, State of New Mexico.

[Signature]
Notary Public
My Commission Expires: March 6, 2001

RESUME

LORRAINE HEARTFIELD

EDUCATION

B.S. Lamar State College of Technology, Biology, minor
Chemistry

M.A. University of Texas at Austin, Anthropology,
minor Environmental Sciences

Ph. D. Washington State University, Anthropology

PROFESSIONAL SOCIETIES

American Society for Conservation Archeology, past
secretary

Louisiana Archeological Survey and Antiquities
Commission, past chair

Louisiana Archeological Conservancy, past treasurer

Louisiana Archeological Society

Louisiana Environmental Professional Association, past
member

New Mexico Archeological Council

Texas Archeological Society, past regional vice president

Society for American Archeology, past finance committee

PROFESSIONAL EXPERIENCE

- 1997-1998 Santa Fe National Forest Special Use Permit heritage resources survey and site inventory. Consulting Cultural Resources Specialist: California; Santa Fe Pacific Pipeline, and New Mexico; HRI proposed in-situ leachfield mine Crown Point/Church Rock, cultural resources regulatory issues (in progress). Conducted two cultural resources surveys in the upper Pecos River Valley, New Mexico.
- 1993-1996 Consulting Cultural Resources Specialist: California; Santa Fe Pacific Pipeline, and New Mexico; HRI proposed in-situ leachfield mine Crown Point/Church Rock, cultural resources regulatory issues.
- 1992-93 Cultural Resources Supervisor of PGT-PG&E Pipeline Expansion Project for Bechtel Corp.
- 1991 - 93 President, B and H Environmental Services, Inc.
- 1987-1990 Cultural Resources Consultant for All American Pipeline Company
- 1986 Environmental Consultant/ Techstaff Inc. for All American Pipeline Company
- 1986 Heartfield Price and Greene, Inc., sold to Techstaff Inc. of Houston, Texas. Jan. 3, 1986.
- 1978-1986 President, Heartfield Price and Greene Inc.. Directed numerous environmental and cultural resources projects throughout the United States.
- 1978 Established private Environmental consulting and cultural resources firm, Heartfield Price and Greene, Inc.

- 1974-78 Archeologist, Research Institute, Northeast Louisiana University, Monroe, Louisiana. Directed contract archeological research.
- 1973-1974 Staff Archeologist for Gulf South Research Institute, Baton Rouge, Louisiana.
- 1968 -69 Registrar for the Arkansas Archeological Survey, Fayetteville, Arkansas.

SELECTED PROJECTS

- 1994 Managed Cultural Resources program for the Santa Fe Pacific Pipeline; Concord to Colton Project for William Self Associates, Orinda California. The proposed products line extends from Fresno to San Bernardino. Managed all cultural resources phases of the project including coordination of studies and field investigations and coordination with Federal and State agencies, Bechtel Corporation and Santa Fe Pacific.
- 1992-93 Managed Cultural Resources program for the PGT-PG&E Pipeline Expansion Project for Bechtel Corp. Joined project after construction underway, shut downs by FERC in response to cultural resources problems threatened continuation of project. Immediate task was to place construction on schedule and within compliance relative to cultural resources issues. Project Responsibilities: 1) Managed archeological subcontractors; INFOTEC and Heritage. 2) Managed Native American subcontractor WCRI, Inc. 3) Managed construction monitoring program as part of Bechtel's compliance process. 4) Cost and budget responsibilities. 5) Partial responsibility for monitoring and compliance. 6) Interfaced with owner (PGT-PG&E) and Federal and State agencies including FERC, Advisory Council, BLM, NFS, SHPO for California, Idaho, Oregon and Washington.
- 1987 - 91 Managed two cultural resources projects for the All American Pipeline Company. Tasks: 1) managed contract for all cultural resources work conducted by the

University of Texas at Austin on the Northern Alternative, 2) Directed curation of all archeological materials recovered from the Original Route, California to Midland, Texas; Ca. Az. N.M. Tx.. Opened, staffed and operated temporary laboratory facility in Austin, Texas to accomplish this task.

- 1986 Developed Environmental Compliance Program for Construction of the All American Pipeline in Santa Barbara, California. Monitored environmental compliance during construction. No cultural resources involvement
- 1986 Directed an archeological assessment of the IBM Poughkeepsie North 100 location, Poughkeepsie, New York for Envirosciences, New Jersey.
- 1985 Directed preparation of archeological overviews and management summaries for eight DARCOM military installations including McAlester Army Ammunition Plant, Oklahoma for Woodward-Clyde Consultants and the National Park Service.
- 1979- 80 Directed preparation of a BLM Class I Cultural Resources study of the proposed ETSI Coal Slurry Pipeline: Gillette, Wyoming to Ponton, Mississippi and Lake Charles, Louisiana. Proposed line crossed Wyoming, Colorado, Kansas. Oklahoma, Arkansas and Louisiana.
- 1979 Developed environmental program and verified permits and easements needed for the proposed Pilot Knob Strategic Petroleum Reserve Project, Ironton, Missouri. Conducted with Techstaff, Inc. (Houston) for Fenix and Sisson (Tulsa).
- 1979 -85 Directed cultural resources project along the Ozark Pipeline System, Arkansas and Oklahoma. Texas Oil and Gas Corp.
- 1976 - early 1980's Consultant for Gulf Interstate Engineering Company of Houston, Texas. Counseled the firm about their environmental obligations along a proposed gas pipeline route in Alaska, Washington and Oregon. Contacted environmental specialists and archeologists in

three states, solicited their aid in preparation of a draft environmental report and prepared written testimony. Continued the project as manager for the cultural resources program (work performed by the University of Alaska at Fairbanks) for Northwest Alaskan Pipeline Company and Fluor Engineers and Consultants.

1974-85 Directed cultural resources investigations along the proposed Louisiana North-South Expressway for Howard Needles, Tammen and Bergendoff, Baton Rouge.

ATTACHMENT C