

STATEMENT OF CONSIDERATIONS

PETITION FOR ADVANCE WAIVER OF PATENT RIGHTS BY BAKER HUGHES OILFIELD OPERATIONS INC ("BAKER HUGHES") UNDER DOE AWARD NO. DE-FG36-08GO18186 BETWEEN BAKER HUGHES AND DOE; W(A)2009-009; CH-1487

The Petitioner, Baker Hughes, has requested a waiver of domestic and certain foreign patent rights for all subject inventions that may be conceived or first actually reduced to practice by Baker Hughes arising from its participation under the above referenced DOE Award entitled "Geothermal Ultrasonic Fracture Imager."

The objective of the project is development of an ultrasonic borehole televiewer that can operate at temperatures as high as 300°C and in depths as great as 10,000 meters. The proposed tool will provide a means to detect fractures in subsurface areas to aid in the development of geothermal resources. This project will be completed in two phases. The first phase consists of the evaluation and the development of an ultrasonic sensor element that will withstand and operate at the desired temperature level. This design will include the associated packaging around the sensor along with the electronics necessary to operate a transducer. In addition, it will include the necessary high temperature testing and performance monitoring for the sensor to ensure it meets the required operational envelope. The second phase will include the development of two field prototype tools. The Petitioner plans to utilize its expertise in the development and application of formation evaluation technology and high pressure/high temperature ("HPHT") systems which are rated to 30,000 PSI and 260°C as part of the effort to develop downhole electronics and sensors which will be packaged for the geothermal environment.

The total cost of the project is approximately \$3.9 million with the Petitioner providing about 20% cost sharing for Phases I and II. This waiver is contingent upon the Petitioner maintaining, in aggregate, the above cost sharing percentages over the course of the Award.

As noted in its waiver petition, Petitioner is a pioneer and leader in providing HPHT equipment and geologic formation evaluation services. Baker Hughes and its predecessor companies have invested over \$30 million and countless hours of research in recent years developing state-of-the-art high temperature components and technologies and methodologies to advance technology in this area of science. Currently, Baker Hughes has a significant amount of HPHT equipment that can be used for formation evaluation in the geothermal environment. Baker Hughes will use the funds from the Award to develop technologies to extend the operating range of wireline logging tools for high temperature geothermal wells.

Considering Petitioner's technical expertise and significant investment in this technology including sizable cost sharing in this Award, it is reasonable to conclude that Petitioner will continue to develop and ultimately commercialize the technology and products which may arise from this Award.

Petitioner has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the attached U.S. Competitiveness provision paragraph (t). In brief, Petitioner has agreed that products embodying a waived invention or produced through the use of a waived invention will be manufactured substantially in the United States unless the Petitioner can show to the satisfaction of the DOE that is not commercially feasible to do so.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. If anything, the technology forming the subject matter of the collaboration can be expected to enhance competition. The industry of evaluating geologic formations in HPHT environments is comprised of several leading companies, including the Petitioner. To meet the demands of their respective customers, each company has brought advances in technology to market as expeditiously as possible. Participation in the Geothermal Ultrasonic Fracture Imager project may produce one or more advances of which will provide the Petitioner incentive to bring the product to market to meet commercial competitive forces. This will likely foster additional competition in the geothermal formation evaluation services.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the Award in a fashion which will make the above technology available to the public in the shortest practicable time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted.


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Date: March 11, 2009

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of the Award, where through such modification or extension, the purpose, scope or cost of the Award has been substantially altered.

CONCURRENCE:


Edward James Wall
Program Manager
Office of the Geothermal
Technology Program
EE-2C

Date: 6/5/09

APPROVAL:


Paul A. Gottlieb
Assistant General Counsel
for Technology Transfer and
Intellectual Property

Date: 6-8-09

WAIVER ACTION - ABSTRACT
W(A)2009-009

REQUESTOR
Baker Hughes
Oilfield
Operations, Inc.

CONTRACT SCOPE
The objective of the project is
development of high pressure, high
temperature wireline logging
instruments for geologic formation
evaluation measurements.

RATIONALE FOR DECISION
> 20% Cost Sharing

(t) U. S. Competitiveness

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.