# 中-美页岩油气藏孔喉分布对油气相态与分布的基础研究

## SPONSORED RESEARCH AGREEMENT FY17-ORA5-31

THIS AGREEMENT is entered into by and between the Board of Regents of the University of Oklahoma, a constitutional entity of the State of Oklahoma (hereinafter referred to as "University") and Yangtze University with principal offices at No. 1, Daxue Rd, Caidian District Wuhan, Hubei Province, China 430100 (hereinafter referred to as "Sponsor").

#### WITNESSETH

WHEREAS, the research program contemplated by this Agreement is of mutual interest and benefit to University and to Sponsor, will further the instructional and research objectives of University in a manner consistent with its status as a non-profit, state, educational institution, and may derive benefits for both Sponsor and University through the advancement of knowledge through discovery and the creation of new technologies;

NOW, THEREFORE, in consideration of the mutual promises contained herein, the parties agree to the following:

#### SECTION 1. DEFINITIONS

- 1.1 "Invention" shall mean any invention, discovery, improvement, concept, product, or idea made during the Project whether or not patentable or copyrightable, including but not limited to processes, machines, methods, computer software, formulas, and know-how directly relating thereto. An Invention is "made during the Project" if it arises from work performed pursuant to the Project conducted under this Agreement and is made during the Period of Performance.
- 1.2 "Joint Invention" shall mean all Inventions conceived and/or made jointly by one or more employees of University and by one or more employees of Sponsor.
- 1.3 "Period of Performance" is the term of this Agreement as set forth in **Section 3** below, unless earlier terminated as provided for in **Section 5**.
- 1.4 "Project" shall mean the research project entitled <u>"Using Molecular Dynamics Simulation to Study Gas Phase and Flow Behaviors in Shale Formations"</u> as described in **Appendix A**, under the direction of Dr. Xingru Wu as Principal Investigator.
- 1.5 "Sponsor Invention" shall mean all Inventions conceived and/or made solely by one or more employees of Sponsor.
- 1.6 "University Invention" shall mean all Inventions conceived and/or made solely by one or more employees of University.

### SECTION 2. RESEARCH WORK

- 2.1 University does not guarantee specific research results but will exercise good faith efforts to perform the Project substantially in accordance with the terms and conditions of this Agreement. Sponsor understands that University's primary mission is education and advancement of knowledge and consequently the Project will be designed to carry out that mission.
- 2.2 The manner of performance of the Project shall be determined solely by the Principal Investigator. In the event the Principal Investigator becomes unable or unwilling to continue the Project and a mutually acceptable substitute is not available, either party shall have the option to terminate the Project.

identity, national origin, disability, political beliefs, or veteran's status; they do not maintain nor provide for their employees any segregated facilities, nor will the parties permit their employees to perform their services at any location where segregated facilities are maintained. In addition, the parties agree to comply with the applicable provisions of Section 504 of the Rehabilitation Act and the Vietnam Era Veteran's Readjustment Assistance Act of 1974, 38 U.S.C. § 4212.

11.13 The terms of this Agreement shall not be binding upon either of the parties hereto until it has been properly executed on behalf of each party to the Agreement in the spaces provided below. It is then effective as of the starting date of the period of performance.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate by their duly authorized representatives on the dates set forth below.

	YANGTZE UNIVERSITY	THE BOARD OF REGENTS OF THE		
		UNIVERSITY OF OKLAHOMA		
BY:	Lin Detwa	BY:		
TITLE: DATE:	12/9/2016	DATE:  Andrea Deaton, CRA  Associate Vice President for Resear	ch	
READ A	AND UNDERSTOOD:			
BY:	Xingru Wu	DATE: 12/9/2016		
Principa	1			

Investigator

University of Oklahoma Norman Campus Office of Research Services Standard Invoice OU Department No.

105425300



Invoice to:	Invoice Number	Amount Requested
Liu Dehua	105425300-1	\$40,000.00
Petroleum Engineering College of Yangtze University No. 1, Daxue Rd., Caidian District	Agency Reference Number	BIF Agency
Wuhan, Hubei Province, China 430100	Agency reference Number	- Dir rigenty
	FY17-ORA5-31	YANGTZE
Send Payment to:	Product Amount	Amount Received to Date
University of Oklahoma	Budget Amount	Amount Received to Date
Office of Research Services	\$40,000.00	\$0.00
201 Stephenson Parkway, Ste. 3100, Five Partners Place		
Norman, OK 73019	Invoice Period	Project Period
TIN 73-1377584	01/01/17 - 12/31/17	01/01/17 - 12/31/17
Title Using Molecular Dynamics Simulation to Stu	dy Gas Phase and Flow Behaviors ir	n Shale Formations
Principal Investigator Dr. Xingru Wu		*
For the services, reports, and other itmes to b	e delivered hereunder the Universit	y of Oklahoma is now
For the services, reports, and other itmes to be requesting payment in the amount of Forty T and payable unpon execution of this agreement AMOUNT NOW DUE	housand Dollars and Zero Cents (\$4	
requesting payment in the amount of Forty T and payable unpon execution of this agreement	housand Dollars and Zero Cents (\$4	
requesting payment in the amount of Forty T and payable unpon execution of this agreeme AMOUNT NOW DUE  International Wire Transfer Information Chase Bank, N.A. (405) 231-7146 P. O. Box 25848 Oklahoma City, Oklahoma 73125-0848 Transit (ABA) Routing: 0210 0002 1 Account: 621012038 SWIFT CODE: CHASUS 33  By signing this report, I certify to the best of my knowledge and belief tha receipts are for the purposes and objectives set forth in the terms and cond or the omission of any material fact, may subject me to criminal, civil or additional control of the complex control of the control of the omission of any material fact, may subject me to criminal, civil or additional control of the contr	housand Dollars and Zero Cents (\$4 ent. \$40,000.00  It the report is true, complete, and accurate, a	and the expenditures, disbursements and cash any false, fictitious, or fraudulent information
requesting payment in the amount of Forty T and payable unpon execution of this agreeme AMOUNT NOW DUE  International Wire Transfer Information Chase Bank, N.A. (405) 231-7146 P. O. Box 25848 Oklahoma City, Oklahoma 73125-0848 Transit (ABA) Routing: 0210 0002 1 Account: 621012038 SWIFT CODE: CHASUS 33  By signing this report, I certify to the best of my knowledge and belief tha receipts are for the purposes and objectives set forth in the terms and cond or the omission of any material fact, may subject me to criminal, civil or additional control of the complex control of the control of the omission of any material fact, may subject me to criminal, civil or additional control of the contr	the report is true, complete, and accurate, a title report is true aware that ministrative penalties for fraud, false statem	and the expenditures, disbursements and cash any false, fictitious, or fraudulent information,
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requesting payment in the amount of Forty T and payable unpon execution of this agreemed AMOUNT NOW DUE  International Wire Transfer Information Chase Bank, N.A. (405) 231-7146 P. O. Box 25848 Oklahoma City, Oklahoma 73125-0848 Transit (ABA) Routing: 0210 0002 1 Account: 621012038 SWIFT CODE: CHASUS 33  By signing this report, I certify to the best of my knowledge and belief the receipts are for the purposes and objectives set forth in the terms and cond or the omission of any material fact, may subject me to criminal, civil or adults. Section 1001 and Tit	the report is true, complete, and accurate, a title report is true aware that ministrative penalties for fraud, false statem	and the expenditures, disbursements and cash any false, fictitious, or fraudulent information,