

## Governor – Legislature

### Technical Advisory Committee

Robie Vaughn - Chair

Dan Hill	Hal Macartney	Brian Stump
Chris Hillman	Kris Nygaard	Scott W. Tinker
Dana Jurick	Craig Pearson	

## Bureau Directorship

Scott Tinker, Michael Young

### TexNet Network and Research\*

PIs: Peter Hennings, Ellen Rathje, Alexandros Savvaidis

#### TexNet Seismic Network

Alexandros Savvaidis<sup>B</sup>  
Tania Murkherjee<sup>B</sup>  
Bissett Young<sup>B</sup>

#### Seismology

Cliff Frohlich<sup>I</sup>  
Jake Walter<sup>I</sup>  
Taylor Borgfeldt<sup>I,3</sup>  
Alexandros Savvaidis<sup>B</sup>  
Heather DeShon<sup>S</sup>  
Kevin Kwong<sup>S,2</sup>  
Oner Sufri<sup>S,1</sup>

#### Hydrology, Faults, Geomodels

Peter Hennings<sup>B</sup>  
Julia Gale<sup>B</sup>  
Chris Zahm<sup>B</sup>  
Casee Lemons<sup>B</sup>  
Fault Interpretation Tech<sup>B</sup>  
Bridget Scanlon & Hydro Gp<sup>B</sup>  
Geomodeling Gp<sup>B</sup>

#### Geomechanics and Reservoir Modeling

Jon Olson<sup>P</sup>  
Rich Schultz<sup>P</sup>  
Peter Eichhubl<sup>B</sup>  
Mohsen Babazadeh<sup>P,2</sup>  
Valerie Gono<sup>P,2</sup>  
Zhiqiang Fan<sup>B,1</sup>  
Akhil Datta-Gupta<sup>T</sup>  
Michael King<sup>T</sup>  
Jihoon Kim<sup>T</sup>

*\*petroleum operators provide supplemental funding through BEG IA membership*

<sup>B</sup> Bureau of Economic Geology

<sup>I</sup> UT Institute for Geophysics

<sup>P</sup> UT-Petroleum Geosystems and Engineering

<sup>T</sup> Texas A&M-Petroleum Engineering

<sup>S</sup> SMU Seismology

<sup>1</sup>Post Doc <sup>2</sup>PhD student <sup>3</sup>MS student

# TexNet Proposed Funding: Synopsis

*House Bill 2 Supplemental Appropriation accelerated funding to the Bureau of Economic Geology (BEG) to manage the TexNet program.*

*Program design, project commitments and work efforts began in the summer of 2015, with the goal to deliver an initial report to the Governor, the House Energy Resources Committee, and the Senate Natural Resources and Economic Development Committee in December, 2016.*

*The Governor's Technical Advisory Committee (TAC) to the BEG's TexNet program was appointed in March, 2016.*

<b>TexNet Seismic Network</b> Equipment \$1,701,500  Deployment and Operations \$1,181,362	<b>Seismology</b> UTIG and BEG \$265,827  SMU \$201,343	<b>Hydrology, Faults, Geomodels</b> BEG \$190,906 & \$179,835	<b>Geomechanics and Reservoir Modeling</b> UT-PGE & BEG \$190,530 & \$192,251 TAMU TEES TBD \$300,000
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# TexNet Proposed Budget: Detail

TexNet Seismic Network	Equipment		Deployment and Operations						SubTotals by Cost
	Seismic Stations and Installation	TexNet HUB Hardware	Software	Borehole Subcontract	Materials & Services	Personnel	Computer Usage	Travel	
Nanometrics (one time cost)	\$1,636,500		\$23,420	\$317,900	\$18,700				\$1,996,520
TexNet (one time cost)		\$65,000							\$65,000
TexNet Year 1 Cost					\$61,500	\$210,875	\$8,700	\$41,100	\$322,175
TexNet Year 2 Cost					\$128,100	\$312,867	\$13,200	\$45,000	\$499,167
<b>SubTotals by Category</b>	<b>\$1,636,500</b>	<b>\$65,000</b>	<b>\$23,420</b>	<b>\$317,900</b>	<b>\$208,300</b>	<b>\$523,742</b>	<b>\$21,900</b>	<b>\$86,100</b>	
<b>Totals</b>	<b>\$1,701,500</b>		<b>\$1,181,362</b>						<b>\$2,882,862</b>

## TexNet Research Projects

Fiscal Biennium 2016-2017

Theme	Project Title	Institution/Unit	PI	Personnel	Materials and Services	Computer Charges	Tuition	Equipment	Travel	Total
Seismic Network	TexNet Deployment and Operations	UT-BEG	Sawaidis	\$ 523,742	\$ 549,620	\$ 21,900	\$ -	\$ 1,701,500	\$ 86,100	\$ 2,882,862
Seismology	Texas Seismologic Studies	UT-IG	Walter	\$ 236,930	\$ 4,200	\$ 4,800	\$ 11,425	\$ -	\$ 8,472	\$ 265,827
Seismology	Ft Worth Basin Earthquake Characterization	SMU	DeShon	\$ 180,909	\$ 2,900	\$ -	\$ 6,912	\$ 1,000	\$ 9,622	\$ 201,343
Hydrology	Hydrology: Fluid Budget Protocols, Data and Analysis	UT-BEG	Scanlon	\$ 162,486	\$ 3,100	\$ 22,920	\$ -	\$ -	\$ 2,400	\$ 190,906
Faults and Geomodels	Fault Characterization and Reservoir Model Inputs	UT-BEG	Hennings	\$ 166,735	\$ 2,500	\$ 6,600	\$ -	\$ -	\$ 4,000	\$ 179,835
Geomechanics	Geomechanics of Fault Reactivation	UT-BEG	Eichhubl	\$ 165,931	\$ 1,400	\$ 16,920	\$ -	\$ -	\$ 8,000	\$ 192,251
Reservoir Modeling and Geomechanics	Pore Pressure Estimation and Fault Rupture Modeling	UT-PGE	Olson	\$ 134,130	\$ 400	\$ -	\$ 48,000	\$ -	\$ 8,000	\$ 190,530
Reservoir Modeling and Geomechanics	Coupled Fluid Flow and Geomechanical Modeling	TAMU-TEES	Datta-Gupta	\$ 259,033	\$ 6,000	\$ 3,000	\$ 22,967	\$ -	\$ 9,000	\$ 300,000
									<b>Total</b>	<b>\$ 4,403,554</b>
									<b>HB2 Budget</b>	<b>\$ 4,471,800</b>
									<b>Contingency</b>	<b>\$ 68,246</b>
									<b>Contingency</b>	<b>2%</b>