

Filed via e-mail to: RRCconference@rrc.texas.gov

Chairman Wayne Christian
Commissioner Christi Craddick
Commissioner Ryan Sitton
Railroad Commission of Texas
1701 North Congress Avenue
Austin, Texas 78711

April 7, 2020

Dear Chairman Christian, Commissioner Craddick and Commissioner Sitton,

We are writing to submit comments to the Texas Railroad Commission for the upcoming virtual conference on Tuesday, April 14, 2020, related to the recently filed Verified Complaint of Pioneer Natural Resources and Parsley Energy. We want to state that we are also available to answer questions and provide analysis on the data attached hereto if requested by the commission at the April 14 meeting.

As our remarks below will demonstrate in more detail, we recommend that the Commission issue a proration order to help remedy the wasteful overproduction of oil and to add certainty as to how a curtailment of production should occur. Without leadership from the Commission, waste will occur, and the inevitable shut-down in the oil fields of Texas will likely be chaotic. This could result in losing the next generation of petroleum professionals as well as university research and technology development, both of which are so necessary to our energy independence.

As requested, our identifying information is:

1. Jon E. Olson, Department Chair, Hildebrand Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering, The University of Texas at Austin
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 3. 512-587-3168 (cell, preferred)
 4. I represent myself.
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1. Jeff Spath, Stephen A. Holditch Department Head Chair, Harold Vance Department of Petroleum Engineering, Texas A&M University
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As the leaders of the #1 and #2 ranked undergraduate and graduate petroleum engineering programs in the United States, both residing in the great state of Texas, we want to share our perspectives on the impact of the current COVID-19 pandemic on the future oil and gas industry workforce and petroleum technology research. As UT's Hildebrand Department chair for the

past 5 years, Dr. Jon Olson has 25 years of academic experience at UT-Austin preceded by 6 years of industry experience at Mobil Oil Corporation's Dallas Research Lab. He is a Distinguished Member of the Society of Petroleum Engineers. Before becoming A&M's Vance Department head in 2017, Dr. Jeff Spath spent 35 years in industry - thirty three years with Schlumberger, retiring as Executive Vice President, and two years as CEO of the Texas Oil and Gas Institute, a former department of the UT System. He is an Honorary Member of the Society of Petroleum Engineers, but more importantly, served as president of the society in 2014. He is an active member of US Secretary of Energy Brouillette's National Petroleum Council. We hope this brief recounting of our biographies demonstrates that we are engaged, accomplished and dedicated members of the oil and gas community, and we freely offer our services for the betterment of Texas through our energy-related expertise.

Universities have the responsibility of training engineers for careers of technical service to society. In the oil business, many engineering disciplines contribute to the workforce, but petroleum engineering plays a central and leading role in grooming young people for the technical demands encountered in assuring the safe, reliable, sustainable and affordable production of oil to satisfy society's energy needs. Universities are also focal points of technology development, often in collaboration with industry, looking for new and better ways to reduce costs, increase recovery factors, and minimize and mitigate environmental impact. A healthy industry requires a robust and thriving higher education community to provide ideas and maintain the workforce pipeline for the future.

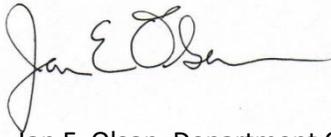
The current public health crisis is unprecedented in its impact on the personal welfare of each and every citizen of not just the great state of Texas but also of every American and people throughout the world. The question for the Railroad Commission, however, is how to prevent undue harm to the energy infrastructure of Texas caused by the drastic reduction in demand caused by government imposed stay at home orders intended to protect public health. This decline in demand, which could last for a prolonged period, has resulted in excess oil production in Texas and throughout the world, constituting the wasteful production of our valuable petroleum reserves. This wasteful production threatens the viability of numerous companies in the industry, through not only historically low prices, but also the uncertainty of how current production can be curtailed in an organized, efficient process. This negative impact on industry threatens university petroleum engineering programs by discouraging students, faculty and researchers from considering careers in a field that is too volatile for long term occupation. Without a robust influx of new, well-trained engineers, and innovative technological ideas, the longevity of the very petroleum industry is threatened.

Action now by the Railroad Commission to prevent wasteful production would demonstrate to the world the leadership that is needed to encourage acts to preserve our energy infrastructure. In response to this unprecedented public health calamity, collective action coordinated by governmental agencies is a necessity to protect the future of all aspects of our society. Young people watching events unfold in the coming days are being inspired to study medicine and epidemiology, seeing how these fields are saving lives and protecting the public good, with collaborations between industry and government. They should also be inspired to

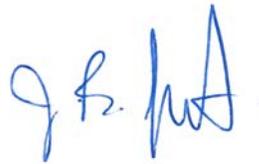
pursue engineering in energy-related fields as they watch the petroleum business deliver an affordable and reliable flow of energy supply for the economic recovery that will certainly follow this current crisis. The success of that recovery lies partly in effective action and planning that can best be administered through government-led stewardship to protect our energy infrastructure.

Thank you for your time and consideration of these remarks. Attached please find statistics, facts and figures that demonstrate how prolonged unsustainable oil prices can harm our university programs and the future of petroleum engineering in Texas.

Sincerely,



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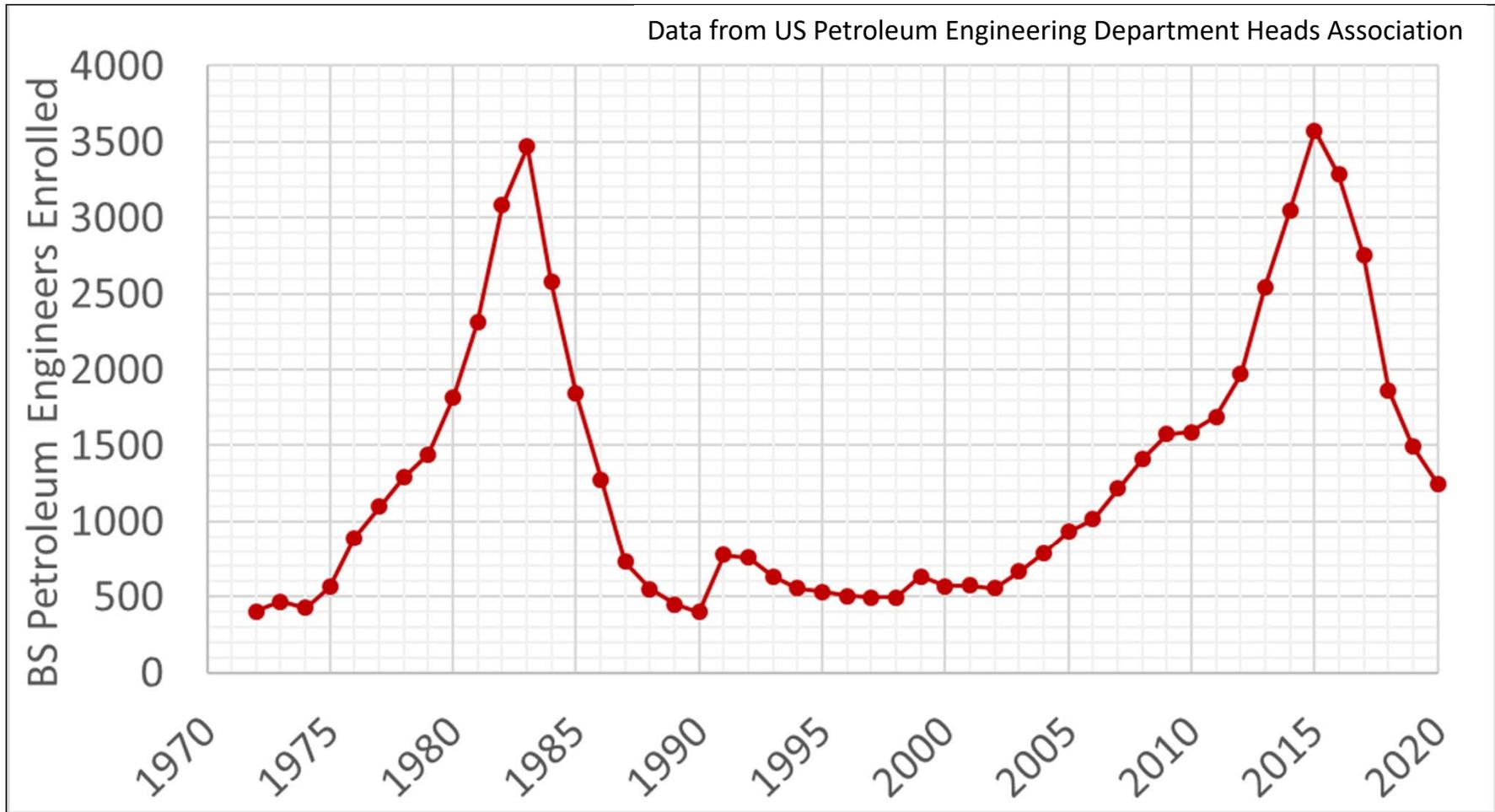
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Addendum Slides

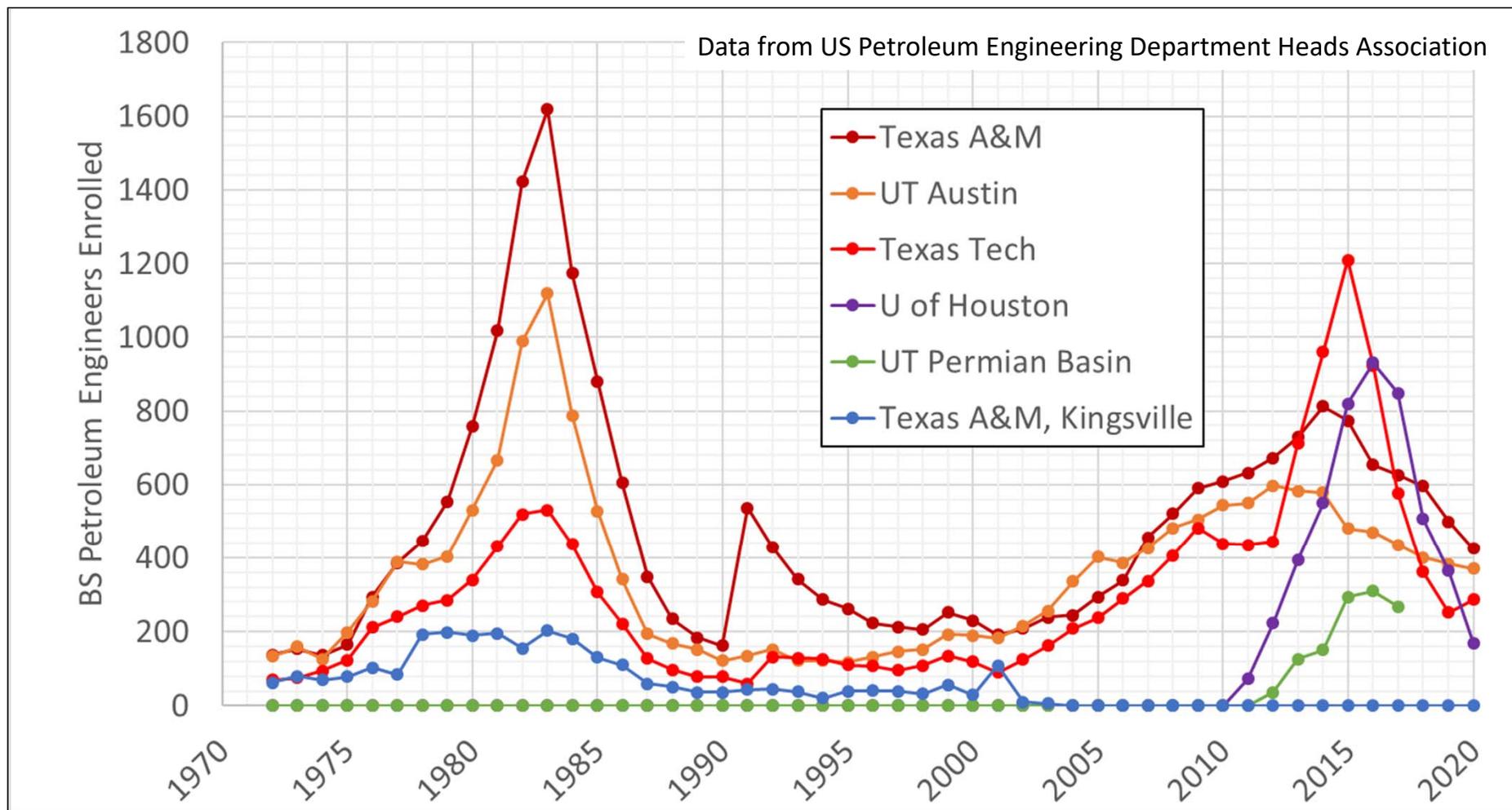
for Jon E. Olson and Jeffrey B. Spath

1. Overall BS petroleum engineering enrollment in Texas.
2. BS petroleum engineering enrollment in Texas by school.
3. Overall BS petroleum engineer degrees granted in Texas.
4. BS petroleum engineer degrees granted in Texas by school.
5. Recent petroleum engineering research funding at UT-Austin and Texas A&M, showing increasing dependence on industry funding.
6. List of companies, including majors, independents and service companies, who hire petroleum engineers and support research are petroleum engineering departments.

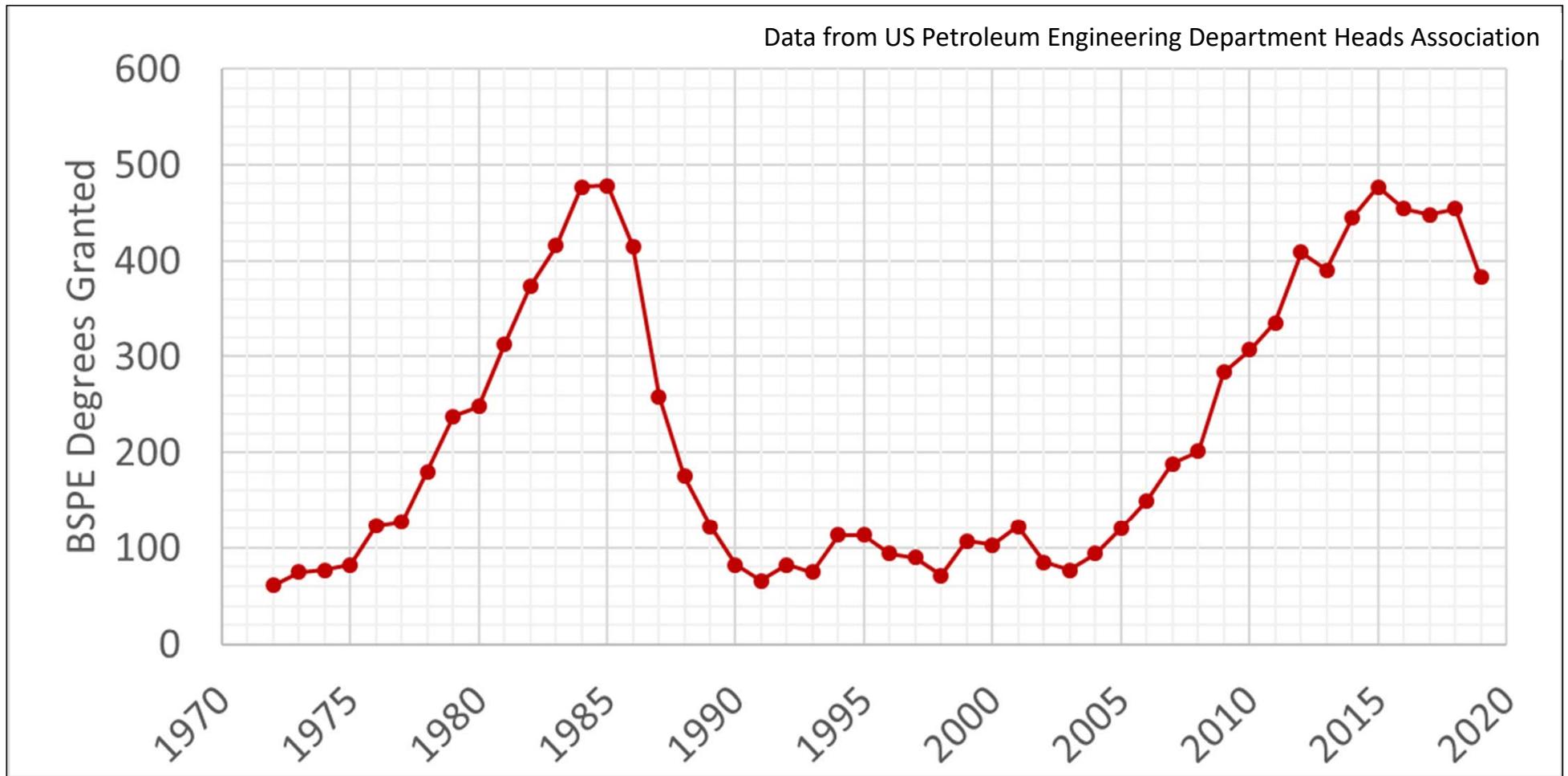
BS Petroleum Engineering Enrollment in Texas



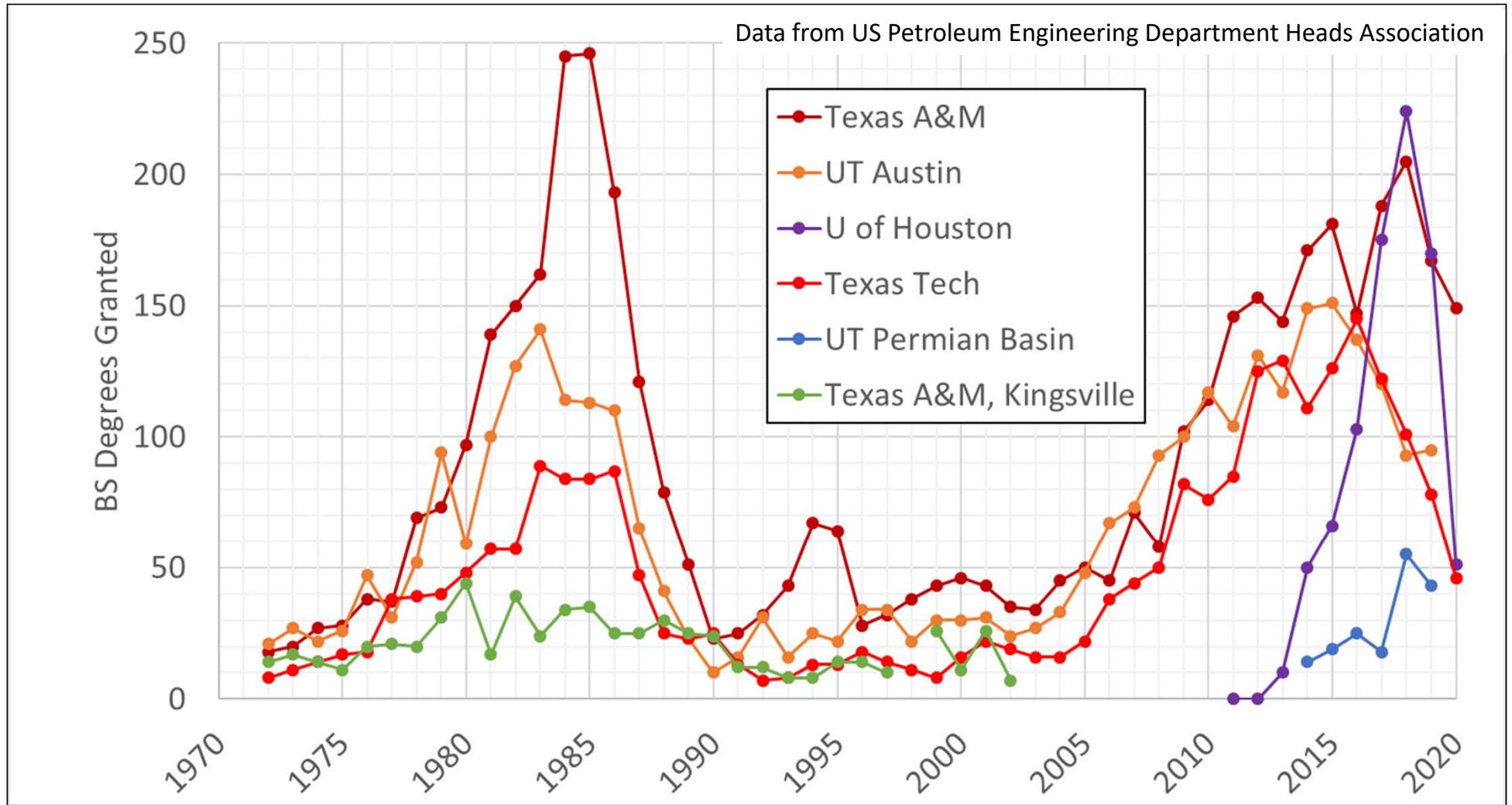
Texas BS Petroleum Engineering Enrollment by School



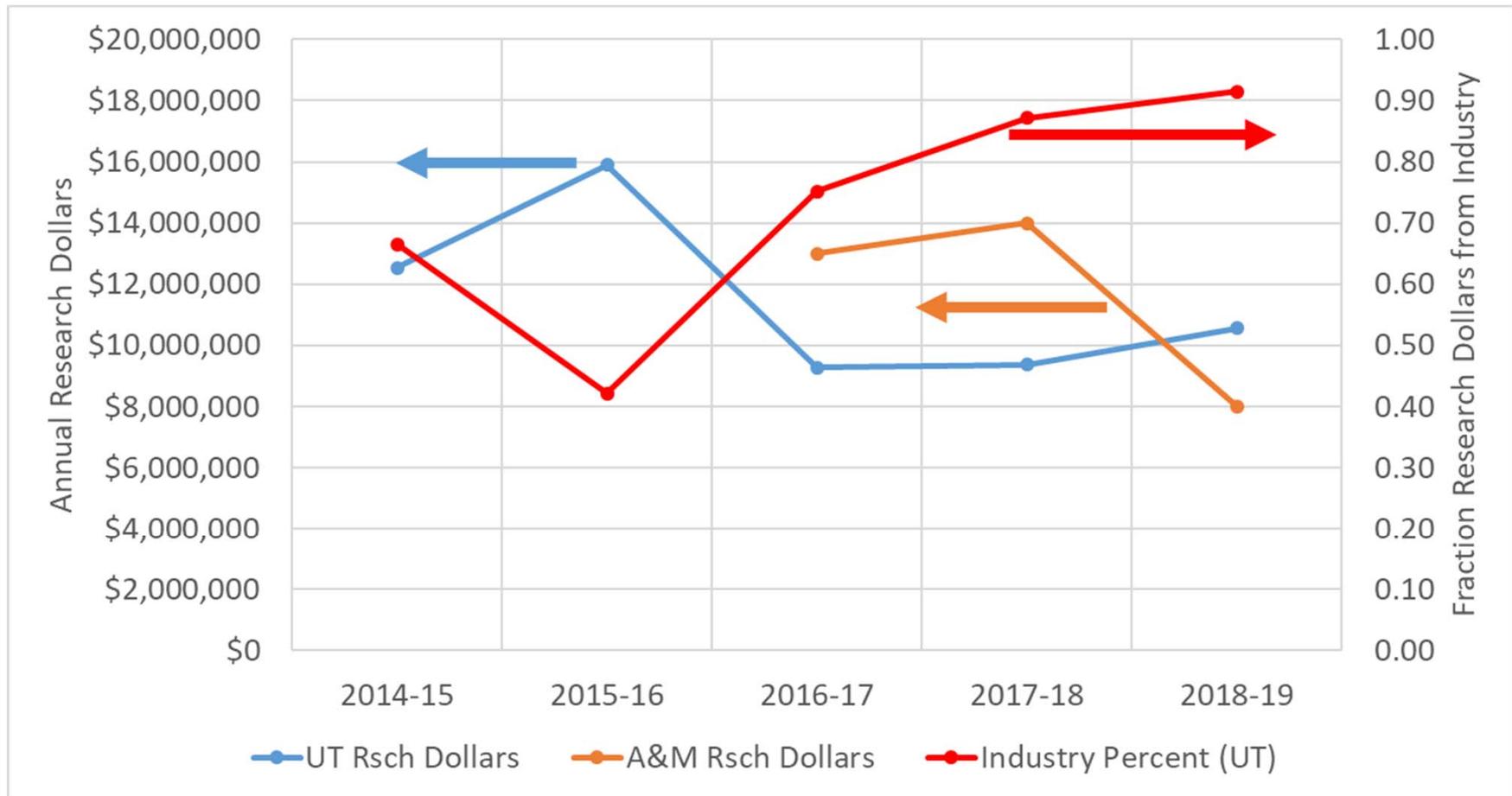
BS Petroleum Engineer Degrees Granted in Texas



Texas BS Petroleum Engineer Degrees Granted by School



University Research Funding and Increasing Dependence on Industry



A list of companies that recently supported our research and/or hired our students, most of whom operate in Texas

Baker Hughes	Intera	PDO
BASF	JACOS	Petrobras
BP	Japan Oil, Gas and Metals	Petrochina
Cargill	JOGMEC	Pluspetrol
Chevron	JOGMEC (Japan Oil consortia type)	Repsol
CNOOC	JXNippon (US division in Houston)	Sasol
ConocoPhillips	KAO industries	Saudi Aramco
DeGolyer & McNaughton	Kinder Morgan	Schlumberger
Devon Energy	Kuwait Oil	Shell
ENI	Messer (formerly Linde)	Sinopec
Equinor	MOL	SNF
ExxonMobil	NCS Multistage (Canadian)	Southwestern Energy
Hilcorp	Nippon Oil & Gas	Total
IHS Markit	OMV	Vedanta Limited
Inpex Corporation	Oxy	YPF