

Strategic Workforce Investment Proposal:

Geoscience Technology Workforce Pathways (GeoPaths)

Partners: Uintah Basin Technical College and USU's Department of Geology

Partnership Type: Statewide

CTE Regions: Uintah Basin Region and Bear River Region

Funding Request: \$92,800 one-time and \$197,775 ongoing

GOED Strategic Industry Cluster addressed: Energy and Natural Resources

Abstract

Uintah Basin Technical College (UB Tech) and the Utah State University (USU) Department of Geology propose a workforce pathways program to train and place students in Geoscience Technology careers and meet the projected demand for workers in Utah's Energy and Natural Resources industry cluster. The proposed Geoscience Technology Workforce Pathways (GeoPaths) program is an integrated set of stackable credentials that starts by reaching secondary students, then offers post-secondary certifications, and culminates in a four-year degree and capstone certificate that blends online, classroom, and hands-on training. Regional industry partners have expressed a critical need for technically trained workers who can perform a range of geoscience tasks in the field, laboratory, and office. The unique GeoPaths curriculum will be crafted in consultation with an Advisory Council of industry partners, and will feature site visits and internship opportunities.

The first opportunity for students in the GeoPaths program is through concurrent enrollment in a new Environmental Geoscience course for secondary students. Students can then take a pathway to obtain Oil and Gas Technician and/or Automation Technician Certificates from UB Tech and follow this with employment or transition to a two-year Associate degree at USU's distance campuses. Students then have a head start down the path of a four-year degree in a new USU Geoscience Technology degree emphasis that integrates training modules at UB Tech. College students at other institutions can on-ramp to this training pathway because the core elements of the degree emphasis will constitute a new capstone Certificate in Geoscience Technology, which prepares students for the Fundamentals of Geology exam required for licensing in Utah and 38 other states.

To develop and deliver this integrated program, ongoing funds of \$197,775 are requested to support personnel at UB Tech and USU's Department of Geology who will instruct and advise students and act as a liaison between these institutions and industry

partners. We also request one-time funds of \$92,800 to purchase sampling and monitoring technology used in student training, as well as to support the cost of creating new online courses. The GeoPaths program represents student workforce training across multiple educational levels, and it is bolstered by UB Tech's and USU Geology's strong partnerships with local energy and environmental-science employers.

Purpose and Components of Program

Despite a pressing need for employees with key skills in the Energy & Natural Resources industry, a lack of practical, hands-on training for higher-education students has contributed to poor job placement. To better train students for Utah's increasing workforce needs, Uintah Basin Technical College and USU's Department of Geology will collaborate in a GeoPaths program of student training. This involves training across secondary, technical, associates and bachelor's education levels (Figure 1).

The GeoPaths program more specifically will include six stackable components that have off-ramps to employment:

- Secondary Students, starting initially with those in the Uintah Basin, may take the **Intro to Environmental Geoscience Course** and gain concurrent enrollment credits through Utah State University. This would transition the student into UB Tech's Oil and Gas Technician and Automation Technician Certificates.
- Students who obtain **Uintah Basin Technical College's Oil and Gas Technician and Automation Technician Certificates** may off-ramp to employment or continue on to complete a two-year Associate's degree, including at regional campuses such as USU-Uintah Basin.
- Students with a **two-year Associate of Science degree** focused on General Studies from Utah State University can continue on to complete a four-year Geology degree.
- Geology majors may enroll in the **Bachelor's degree Emphasis in Geoscience Technology**, including collaborative training at Uintah Basin Technical College, and with opportunities for summer internships with industry partners.
- Students from other college programs may obtain the core training of the degree emphasis through a **Certificate in Geoscience Technology** and they may also obtain UB Tech's Oil and Gas Technician and Automation Technician Certificates.
- The GeoPaths training will be designed to ultimately prepare students for **Professional Geologist licensure** through the national Fundamentals of Geology exam.

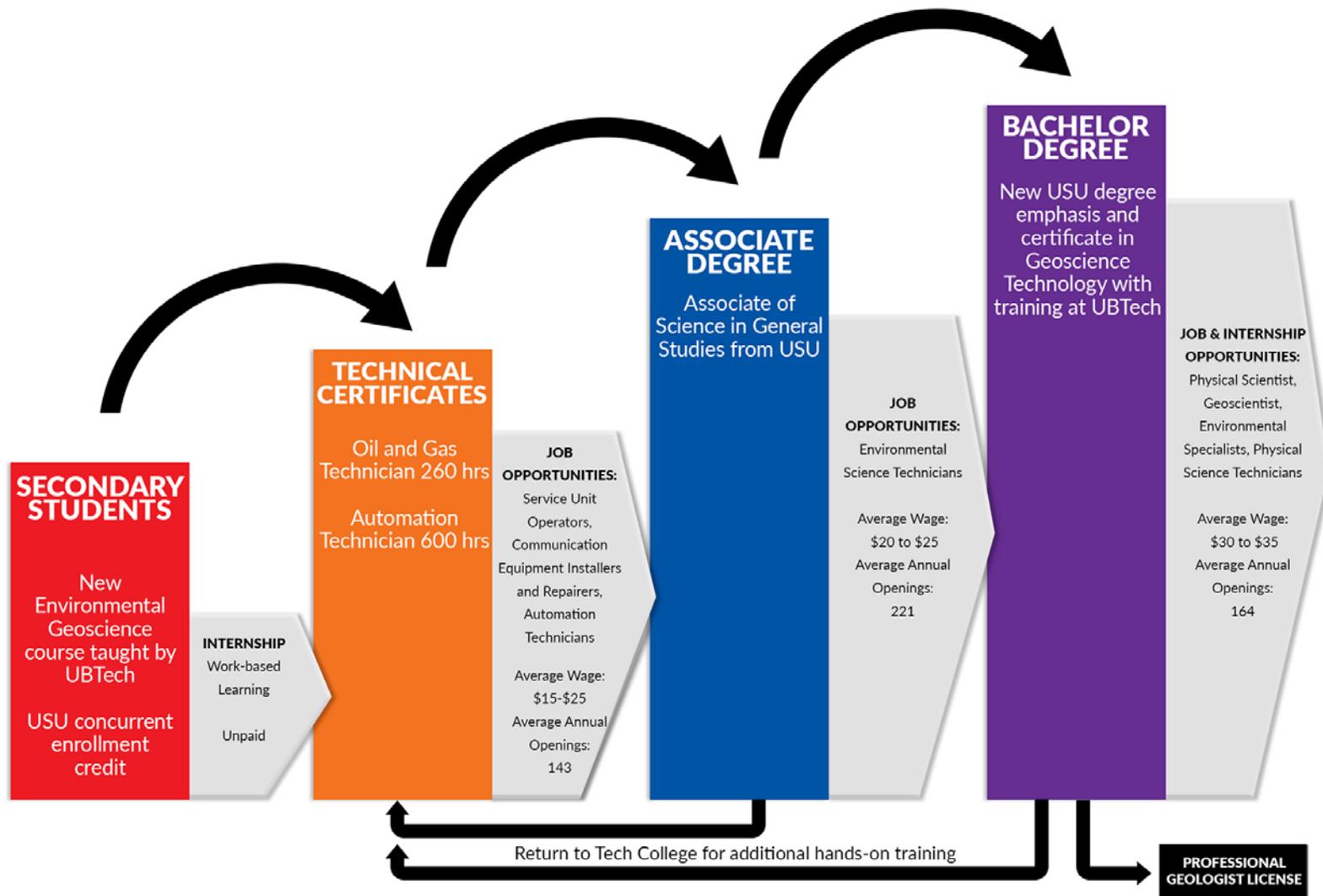


Figure 1. Stackable credentials and job and internship opportunities at steps within the proposed GeoPaths program. Students will be able to start in high school with concurrent enrollment in a new course, progress through technical certificates and college degrees, culminating in a Certificate in Geoscience Technology and training for Professional Geologist licensure.

Industry and Workforce Needs

Economic conditions in significant parts of Utah, especially the Uintah Basin CTE Region, are greatly affected by the operations of oil and natural gas extraction companies in these areas. Petroleum companies are frequently the largest employers in the regions. Likewise, energy and all other types of development involve complex regulatory, land-management and environmental issues, creating numerous jobs for environmental scientists and technicians. Energy and Natural Resource jobs constitute some of the highest-wage jobs in the state, including key occupations like Well Control Technicians, Geoscientists, Hydrogeologists, and Environmental Scientists.

A 2016 report from the U.S. Bureau of Labor Statistics lists Service Unit Operators for Oil, Gas, and Mining as one of the fastest growing occupations in the nation. Between 2016 and 2026, the report projects the number of job openings for this occupation will increase by 23.4%, a rate much faster than the average for all occupations. Additionally, according to the Utah Department of Workforce Services, the majority of current mining and geological engineers will reach retirement age by 2024, and trained workers will be needed to replace them. Further, the Utah Department of Workforce Services reports that over the next decade, the need for replacements for current Environmental Science Technicians will increase due to heightened public interest in natural hazards and environmental quality, as well as the increasing demands placed on the environment by population growth.

While a variety of careers in the Energy and Natural Resources Industry are available to students in the Bear River and Uintah Basin CTE Regions, the ability to fill these positions is frequently limited by education and licensing requirements. Many of these targeted jobs require a Bachelor's degree in a geoscience-related field, but a four-year, classroom-focused degree does not include the practical experience necessary on the job. Additionally, job preference is frequently given to candidates who have a Professional Geologist License or have OSHA/HAZWOPER safety certification.

Our proposed GeoPaths program fills this gap in training not otherwise offered in Utah. It connects students with high-growth, high-wage occupations, and ultimately prepares them for the national Fundamentals of Geology Examination. This standard exam is administered by the National Association of State Boards of Geology (ASBOG) and is required in 38 states, including Utah, to become a licensed Professional Geologist. Many job openings state a preference for candidates who have a Professional Geologist License. The GeoPaths program will be designed with industry partners to instill the competencies needed in Energy and Natural Resources jobs that are not covered in a traditional course of study for a two- or four-year degree. Based on input received thus far from industry partners, such skill-sets include field exploration, drilling, core logging, construction-materials testing, soil and water sampling, field chemical screening, data management, and laboratory and safety protocols.

Regional Industry Guidance

The following entities currently keep Uintah Basin Technical College and Utah State University up to date on economic and employment trends and will partner in the GeoPaths program (see Appendix with support letters):

Uintah Basin Technical College Oil and Gas Technician Advisory Board – Made up of local employers, experts in the field, and business owners, this Advisory Board meets twice annually to discuss the program content, student assessment, and programmatic equipment and makes recommendations based on industry trends.

Uintah Basin Technical College Automation Technician Advisory Board – Representing the Oil and Gas industry in the Uintah and Duchesne regions, this Advisory Board meets twice annually to discuss the program content, student assessment, and programmatic equipment. The Board also makes recommendations based on industry trends.

USU Geoscience Technology Advisory Council – The USU Geology department has an active alumni Advisory Board that spans all employment fields and meets annually in Logan. At their last meeting in April of 2018, the Board agreed to form a sub-council of industry and agency members to help craft and participate in the GeoPaths program. Members represent regional exploration and development, groundwater and geotechnical companies, as well as state and federal agencies. Advisory Council members will also serve as liaisons to internship opportunities and provide workshops for students to learn about employment trends and skills.

Ute Tribal Enterprises – This business arm of the Ute Indian Tribe will provide resources to students in the Geopaths program and serve on Uintah Basin Technical College's Advisory Board.

Uintah County School District – This public school system serves residents of Uintah County. The District will allow students to participate in the concurrent enrollment course taught by Uintah Basin Technical College and USU Geology.

Duchesne County School District - This public school system serves residents of Duchesne County. The District will allow students to participate in the concurrent enrollment course taught by Uintah Basin Technical College and USU Geology.

Anadarko – Oil and gas company serving the residents of Daggett, Duchesne, and Uintah Counties in rural, northeastern Utah. They welcome participation in the proposed program, which will help create and sustain a workforce within the oil and gas industry.

Andeavor Logistics – This is a petroleum-services company in the Uintah Basin. They will support field study opportunities that will help students learn about increasing technological advances in the industry.

Enervest Operating LLC – This is an oil and gas production company that has voiced support for the creation and implementation of the proposed program.

Savage Services – This is an oil and gas production company in the Uintah Basin that will allow students participating in the proposed program to perform externship hours within their facility under the direction of UB Tech staff.

Utah Department of Workforce Services – This local government agency will: educate students on job preparation skills; assist customers in identifying potential sources of funding; partner with industry in identifying job sites and providing training; and provide relevant sources of data, labor market information, and other applicable resources to customers, UB Tech, USU, and participating partners.

Projected Student Enrollments

- 10 to 15 secondary students per year in the new Environmental Geoscience course (10% of total enrolled in initial years) will subsequently enroll in either the Oil and Gas Technician Certificate program or the Automation Technician Certificate program at UB Tech.
- 5 to 10 students per year (25% of total enrolled) with certificates from Uintah Basin Technical College will enroll in a two-year degree from Utah State University or the new Bachelor's Emphasis in Geoscience Technology.
- 25 to 35 of USU Geology majors at a given time (50% of total majors) will enroll in the new Emphasis in Geoscience Technology.
- 10 to 15 students per year with degrees from other institutions will enroll in the new Certificate in Geoscience Technology.

Projected Workforce Impacts

The following outcomes are projected for the GeoPaths program after its first 5 years:

- A minimum of 15 to 20 students per year (70% of total enrolled) who complete the Oil and Gas Technician and Automation Technician Certificate programs at UB Tech will continue their education at USU and/or obtain employment in the Energy and Natural Resources industry.

- 6 to 7 students per year (67% of total enrolled) who complete the Geoscience Technology degree emphasis and capstone Certificate Program at USU will pass the Fundamentals of Geology examination.
- 7 to 8 students per year (75% of total enrolled) who complete the Geoscience Technology degree emphasis and Certificate Program at USU will obtain employment in the Energy and Natural Resources Strategic Industry Cluster.

Program Design

Uintah Basin Technical College will spearhead the teaching of an Environmental Geoscience course focused on natural resources, available to secondary students seeking concurrent enrollment credits as USU’s 3-credit GEO 1060 (Intro to Environmental Geoscience) (Table 1). To start, the Uintah County School District has agreed to grant secondary students 3rd-year science credit for the Environmental Geoscience course. The concurrent model enables delivery across Utah via broadcast technology as the program builds. The instructor will promote both Uintah Basin Technical College’s existing Oil and Gas Technician and Automation Technician certificate programs and Utah State University’s Associate and Bachelor degrees.

TABLE 1. Geoscience Technology Pathways -- Program of Study

Component	Training	Hours/Credits	
UB Tech secondary/ concurrent enrollment	<i>new</i> : Intro to Env. Geoscience	60 hrs/3 cr	
UB Tech Oil & Gas Certificate		260 hrs	
UB Tech Automation Certificate		600 hrs	
USU Certificate in Geoscience Technology (18 credits)			
Requirements	<i>new</i> : Geo Industry Techniques	3 cr	
	<i>new</i> : Geo Techniques Practicum	1 cr	
	GEO 5660 Applied Geophysics	3 cr	
	<i>Well Control Techniques*</i>	1 cr	
	<i>OSHA-40-hr HAZWOPER*</i>	1 cr	
Options	<i>Energy Emphasis</i>	GEO 3150 Energy in 21 st Century	3 cr
		GEO 5420 Ore Deposits	3 cr
		GEO 5530 Petroleum Systems	3 cr
		-or-	
<i>Environmental Emphasis</i>	GEO 5510 Groundwater	3 cr	
	GEO 5520 Grndwater Techniques	3 cr	
	GEO 5600 Geochemistry	4 cr	

**provided at UB Tech*

The new USU Geology degree Emphasis will necessarily include the core undergraduate-major courses, but then will offer specializations in Energy and Environmental Geoscience at the junior-senior elective levels (Table 1). The Emphasis will involve new, online sections of established geology courses at Utah State University (Petroleum, Groundwater Geology, and Applied Geophysics) and in-person training modules developed in collaboration with Uintah Basin Technical College, including a Geo Industry Techniques course and a capstone Geo Techniques Practicum tailored specifically for the energy and natural resources fields. Trainings will be conducted by existing Oil and Gas Technician program, Automation program, and OSHA instructors at UB Tech. Uintah Basin Technical College's Vernal campus houses one of only a few well control simulators in the country. Industry professionals from supporting community partner organizations will be invited to serve as guest instructors for modules in the USU courses.

For students at other regional universities or with a BS in hand, the junior-senior-level 18 credits of the training courses will be available as a new Certificate Program in Geoscience Technology (Table 1). This could be completed in one academic year due to the online component. For practical hands-on training, the non-USU-resident students enrolled in the Certificate Program will need to attend the summer Geo Techniques Practicum. As a result, students will receive technical training not otherwise offered in B.S. Geology programs and will be well-prepared for the ASBOG Fundamentals of Geology Examination.

Jobs and Internships at off-ramps

Internship opportunities will be available with industry and agency partners, especially as students off-ramp from the GeoPaths program either with UB Tech certificates complete or as summer internships as students near completion of the Bachelor's emphasis in Geoscience Technology at USU (see support letters in Appendix). Part of the goal of the GeoPath program's Advisory Councils at UB Tech and USU Geology will be to garner such opportunities.

In terms of regular employment, the Utah Department of Workforce Services lists several positions for our GeoPaths graduates in the state (Table 2). These jobs are associated with median annual wages that are well above the 2016 median per capita annual income of \$26,993.

TABLE 2. 2014-2024 Projections for Geoscience Technology Jobs in Utah

Occupation	# Openings	Education Required	Median Annual Wage
Physical Scientist	12	Bachelors	\$91,258
Geoscientist	99	Bachelors	\$68,555
Petroleum Engineer	110	Bachelors	\$119,260
Environmental Science Techs	221	Associates	\$43,310
Physical Science Technicians	227	Associates	\$50,127
Environmental Specialists	319	Bachelors	\$64,977
Petroleum Systems Operators	902	Automation Tech; Oil and Gas Certificates	\$55,390

Source: Utah Department of Workforce Services

Program Budget / Funding Justification

Uintah Basin Technical College and Utah State University's Department of Geology request support to develop and maintain the GeoPaths program and meet the staffing needs of local Energy and Natural Resources employers (Table 3). Funding will be used for direct costs of instructors and equipment only.

TABLE 3. Program Budget

	One-time funds	Ongoing funding
Instructor (Uintah Basin Technical College)		
9-mo. Salary		\$60,000
Benefits (46.5%)		\$27,900
Faculty of Professional Practice (USU)		
12-mo. salary		\$75,000
Benefits (46.5%)		\$34,875
Course Development (USU)		
Online sections of 3 existing courses	\$13,500	
New Geo Industry Techniques course	\$ 4,500	
Technology for training (USU)		
Field gas chromatograph	\$34,400	
Equip. for sampling/monitoring	\$25,500	
Core logging tools	\$14,900	
Total	\$92,800	\$197,775

Uintah Basin Technical College will use ongoing funds to hire a 9-month instructor to develop and teach the tailored educational modules at UB Tech for the USU Geoscience Technology Certificate program. Mostly, this instructor will teach the Intro to

Environmental Geoscience concurrent enrollment course for secondary students. After the pilot course is successfully implemented in the Roosevelt County school district, UB Tech and USU Geology anticipate growing this program to serve secondary students in Duchesne County and then elsewhere in the state through broadcast delivery.

With one-time funds, USU's Department of Geology will develop online sections for three existing face-to-face courses at Utah State University (Petroleum, Groundwater Geology, and Applied Geophysics), plus develop with industry partners the new Geoscience Industry Techniques online course. USU's Academic and Instructional Services has a standard cost of \$4,500 for assistance in developing a new, cutting-edge online course in tandem with instructors.

One-time funds will also allow Utah State University to purchase key technology that students in this program must become proficient with, including a Defiant Technologies FROG-5000 field gas chromatograph for soil and air quality monitoring, as well as pumps, soil probes, multi-parameter meters, and field spectrophotometers for water sampling and monitoring (Table 3). Finally, a hydraulic core splitter, portable core saw, and other core-sampling tools are necessary for teaching students how to record rock and soil core during drilling activities.

Utah State University's Department of Geology will use ongoing funding for the salary and benefits of a 12-month, full-time Faculty of Professional Practice critical for developing and overseeing the new program. This faculty member will collaborate with the industry Advisory Council, develop and teach the new courses, and advise students in the program.



Ute Tribal Enterprises, LLC

7074 East 900 South
P. O. Box 769
Fort Duchesne, UT 84026
www.utellc.com

December 8, 2018

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

Ute Tribal Enterprises is the business arm of the Ute Indian Tribe serving the residents of Daggett, Duchesne, and Uintah counties in rural, northeastern Utah. We are privileged to partner with, and support, Uintah Basin Technical College and Utah State University in the development of a Certificate Program in Geoscience Technology.

Graduates of Uintah Basin Tech College and Utah State University currently make up a large portion of Ute Tribal Enterprises' workforce. The proposed Certificate Program will help grow the statewide pool of skilled, well-trained professionals needed to fill urgently needed positions.

As an active Partner on this project, we will provide resources for students and staff of Uintah Basin Technical College and Utah State University Department of Geology as needed.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application. Please do not hesitate to contact me at (435) 725-7066 or marketing@utetribe.com with any questions you may have.

Sincerely,

A handwritten signature in black ink that reads 'V. Sireech'.

Valentina Sireech
Ute Tribal Enterprises CEO



Board of Education

Kevin Dickson, President • **Kurt Case**, Vice President
Resha Bartlett, Member • **Mark Caldwell**, Member • **Sarah Lamb**, Member

December 5, 2018

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

Uintah County School District is a public school system serving the residents of Uintah County in rural, northeastern Utah. We are privileged to partner with, and support, Uintah Basin Technical College and Utah State University in the development of a Certificate Program in Geoscience Technology.

Graduates of Utah State University make up a large portion of Uintah County School District's teachers. The proposed Certificate Program will help grow the statewide pool of skilled, well-trained professionals needed to fill urgently needed positions.

As an active partner on this project, we will allow students to participate concurrently in Uintah Basin Technical College and Utah State University Department of Geology as needed.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application. Please do not hesitate to contact me at 435-781-3100 or mark.dockins@uintah.net with any questions you may have.

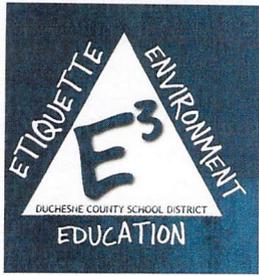
Sincerely,

Mark Dockins
Superintendent
Uintah School District

Mark Dockins, Superintendent • **Derek Anderson, CPA**, Business Administrator
635 West 200 South • Vernal, UT 84078-3099
435.781.3100 • 435.781.3107 fax
www.uintah.net



"Success for Every Student"



Duchesne County School District

1010 East 200 North
Roosevelt, Utah 84066

J. David Brotherson Jr.
Superintendent

December 5, 2018

Dee E. Miles
Business Administrator

Jason Young
Curriculum Director

Scott Forsyth
Director of Student
Services

Bart Morrill
Board President

Bruce Timothy
Board Vice President

Newell Richens
Board Member

Mark Thacker
Board Member

Gordon Moon
Board Member

District Office
435-738-1240
435-738-1254 Fax
435-725-4500
435-725-4511 Fax

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

Duchesne County School District is a public school district serving the residents of Duchesne and Uintah counties in rural, northeastern Utah. We are privileged to support Uintah Basin Technical College and Utah State University in the development of a Certificate Program in Geoscience Technology.

Graduates of Uintah Basin Technical College and Utah State University currently make up a large portion of Duchesne County's workforce. The proposed Certificate Program will help grow the statewide pool of skilled, well-trained professionals needed to fill urgently needed positions.

As an active supporting partner on this project, we understand that an Environmental Science class will be offered for secondary students, which could count as science credit toward graduation.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application. Please do not hesitate to contact me at 435-725-4500 or dbrotherson@dcsd.org with any questions you may have.

Sincerely,

J. David Brotherson
Superintendent

JDB/jf



December 17, 2018

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

Anadarko Petroleum Company is an Oil and Gas Company serving the residents of Daggett, Duchesne, and Uintah counties in rural, northeastern Utah. We are privileged to partner with, and support, Uintah Basin Technical College and Utah State University in the development of a Certificate Program in Geoscience Technology.

Graduates of Uintah Basin Technical College and Utah State University currently make up a portion of our workforce. The proposed Certificate Program will help grow the statewide pool of skilled, well-trained professionals needed to fill urgently needed positions, such as reservoir engineers, petro geologist, and completions engineers.

As an active Partner on this project, we welcome the participation in the field of study which will help create and sustain a workforce within the oil and gas industry here in the Uintah Basin.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application. Please do not hesitate to contact me at (435) 781-7046 or Jeff.Samuels@anadarko.com with any questions you may have.

Sincerely,

Jeff Samuels
USON Operations Supt

A handwritten signature in black ink that reads "Jeff Samuels". The signature is written in a cursive, flowing style.



1680 West HWY 40, Suite 203
Vernal, 84078
Telephone- 435-781-7470

4 December, 2018

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

Andeavor Logistics is a midstream gathering and processing company serving the residents of Daggett, Duchesne, and Uintah counties in rural, northeastern Utah. We are privileged to support, Uintah Basin Technical College and Utah State University in the development of a Certificate Program in Geoscience Technology.

Graduates of UINTAH BASIN TECHNICAL COLLEGE or UTAH STATE UNIVERSITY currently make up a portion of Andeavor's workforce. I would agree that the proposed Certificate Program will help grow the statewide pool of skilled, well-trained professionals needed to fill needed positions, going into the future of the Uintah Basin.

As an active supporter on this project, we welcome participation in this field of study which will help create and sustain a workforce within the oil and gas industry here in the Uintah Basin for Andeavor Logistics and many others. With ever increasing technological advances future recruits would benefit from the various programs of study these new funds would help deliver, including those taught during high school that would lead them to other certificate programs at UBTech as well as Associates and Bachelor's degrees at USU in the field of Geoscience Technology.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application. Please do not hesitate to contact me at (360) 349-0040 or joseph.m.fraley@andeavor.com with any questions you may have.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joe Fraley".

Joe Fraley

District Manager, Andeavor



ENERVEST

December 4, 2018

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

Everest Operating LLC is an Oil & Gas production company which provides employment opportunities in the Uintah, Duchesne and Carbon county areas. Our company has worked with and helped in the promotion/development of petroleum centered programs to support and improve the quality of employees working in the oil & gas fields of the above mentioned counties. We are privileged to partner with, and support, Uintah Basin Technical College and Utah State University in the development of a Certificate Program in Geoscience Technology.

We welcome graduates of UTech or USU to apply for positions within our company. The proposed Certificate Program will help grow the statewide pool of skilled, well-trained professionals needed to fill positions, such as reservoir engineers, petro geologist & completion engineers.

As an active Partner on this project, we welcome participation in this field of study which will help create and sustain a workforce within the oil and gas industry here in the Uintah Basin for Everest Operating and many others. With ever increasing technological advances future recruits would benefit from the various programs of study these new funds would help deliver, including those taught during high school that would lead them to other certificate programs at UBTech as well as Associates and Bachelor's degrees at USU in the field of Geoscience Technology.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application. Please do not hesitate to contact me at 435-724-8016 or mangus@enervest.net with any questions you may have.

Sincerely,

Mike Angus

Superintendent

ENERVEST, LTD.

1001 FANNIN STREET, SUITE 800 • HOUSTON, TEXAS 77002-6707 • 713.659.3500 • FAX 713.659.3556 • WWW.ENERVEST.NET

Gary Anglesey

Director Transportation Logistics
PO Box 1250 • Roosevelt, UT. 84066
435-709-3413 • 435-671-1491

November 13, 2018

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

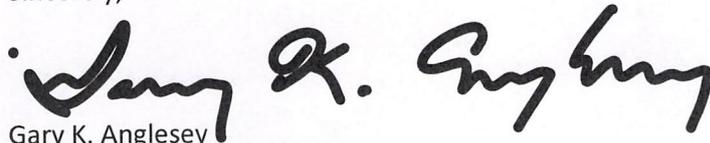
Savage Services is a Logistics and Oil & Gas service company serving the residents of Daggett, Duchesne, and Uintah counties in rural, northeastern Utah. We are privileged to partner with, and support, Uintah Basin Technical College and Utah State University in the development of a Certificate Program in Geoscience Technology.

Graduates of UINTAH BASIN TECHNICAL COLLEGE have the opportunity to make up a large portion of Savage Service's workforce here in the Vernal basin, throughout the USA and abroad. The proposed Certificate Program will help grow the statewide pool of skilled, well-trained professionals needed to fill urgently needed positions, such as drivers, mechanics, IT support and business professionals.

As an active Partner on this project, we will allow students participating in the Certificate Program in Diesel Mechanic Technology to perform externship hours within our facility under the direction of our staff. Additionally, we will make company staff available to lead trainings and classes, as well as provide other resources, for students and staff of Uintah Basin Technical College and Utah State University Department of Maintenance as needed.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application. Please do not hesitate to contact me at 435-671-1491 or garyanglesey@savageservices.com with any questions you may have.

Sincerely,



Gary K. Anglesey
Director Transportation Logistics



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of Workforce Services

JON S. PIERPONT
Executive Director

CASEY R. CAMERON
Deputy Director

GREG PARAS
Deputy Director

December 6, 2018

Strategic Workforce Investment (SWI) Fund
c/o Kimberlee Carlile
Director of Industry and Talent Initiatives
Utah Governor's Office of Economic Development
60 E S Temple, Salt Lake City, UT 84111

Dear Ms. Carlile:

The Department of Workforce Services (DWS) is pleased to commit as a partner with Uintah Basin Technical College (UBTech) and Utah State University (USU) with the development of the Certificate Program in Geoscience Technology. DWS, for many years, has had a strong working partnership with UBTech and USU. We support this project and will work as an ongoing partner to achieve successful outcomes.

The Uintah Basin economy has a strong economic reliance on the energy and mining sector with a need for geoscience technicians within these energy and natural resource industries. The Certificate Program in Geoscience Technology that the Uintah Basin Technical College and Utah State University is proposing will assist in developing the pipeline and talent pool of skill, well-trained professionals needed to fill urgently needed positions.

As a partner, DWS will be responsible for the following:

- Educate students on the job preparation skills as requested to include job networking, resumes, and interviewing skills
- Assist customers in identifying potential sources of funding to pay for skills training and post-high school certificates
- Partner with industry in identifying job sites and providing skill-based training
- Provide relevant sources of data, labor market information, and other applicable resources to customers, UBTech, USU, and participating partners.

We are grateful to the Strategic Workforce Investment (SWI) for making this funding opportunity possible to Uintah Basin Technical College and Utah State University, and we encourage the review committee's favorable consideration of their application.

Sincerely,

Zac Whitwell

Service Area Director, Castle Country, Southeast, Uintah Basin
Assistant Director, Workforce Development Division
Utah Department of Workforce Services
zwhitwell@utah.gov
(435) 630-1891
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Dear Legislative Committee Members,

Crescent Point Energy is an oil and gas operator that is very active in the Uinta Basin in both Uintah and Duchesne counties producing over 20,000 barrels of oil equivalent per day. The Uinta Basin has been identified as an area of significant potential growth for Crescent Point Energy.

I am pleased to hear about the USU-Geology and UB Tech SWI Proposal in Geoscience Technology that will help provide additional industry related training to Utah's students. This initiative has my full support. Presently, the oil and gas industry is recovering from a downturn. Many people that left the industry took knowledge and skills with them. This has left a skills gap as we continue to recover, and need qualified individuals to replace those workers.

Beyond the typical knowledge acquired during academic studies, there are many skills that can be acquired in a school setting that will make Utah's student more competitive as they complete their degrees. Core and well cuttings analysis, specialized software skills, data management and various safety requirements are skills needed by many petroleum operators. The proposed program has a lot of potential to give a competitive edge to students who take advantage of it.

Presently many of Utah's oil fields are being run by people from out of state where training for these skills are readily available. On a personal level, I'd like to see more Utah's operating and exploring the resources within the state. Nobody will manage the states's resources in a more responsible way than those that call it home. As a Weber State Alumni (class of 2006), had this program been available to me during my education, I would have had a significant advantage finding employment after graduation, and would have helped me in the early days of my Master's Thesis research, which involved describing over 1,000' of core.

I hope the committee will give the initiative its full support and funding to accomplish its goals. This could have a very positive impact for individuals and companies that work and operate within Utah's border.

Thank you,



Cameron Thompson
Team Lead- Geology

Date: 31 December 2018

Subject: Letter of support for the USU-Geology and UB Tech SWI proposal in Geoscience Technology

Parsons is a 70-year-old technology-driven firm that provides environmental, engineering, construction, and management support throughout the world to federal, regional, and local government agencies, as well as private industries. We have more than 10,000 employees in 100 offices worldwide in 26 countries. In our office, we perform environmental engineering, geological investigations, geophysical investigations, hazardous waste remediation, bridge design, tunnel design, and highway design, among other services. To perform these services, we need highly educated, skilled, and innovative employees with critical thinking/analytical capabilities. When we advertise such positions, we often find it very difficult to find candidates that meet our needs.

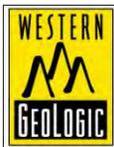
In the past, we have offered paid 10-week internships for university students at Parsons' expense. Some years, we are not able to do this because of the costs involved, and the number of internships that we provide across the whole company is small. Parsons staff believe that the proposed program at Utah State University (USU) would help us to not only continue to offer internships (and possibly more and longer internships), but to help us find skilled employees in the future, bring in new ideas that would foster innovation, and provide our staff with additional growth opportunities. The Parsons office in Salt Lake City has hired several of our previous USU interns who are now working full time. Lastly, Parsons staff, including myself, would be happy to sit on an advisory board for the Strategic Workforce Initiative.

Overall, Parsons staff believe that the Strategic Workforce Initiative would be a valuable program, and would be made even more so if funding were available to not only provide internships, but also visits to interesting field sites.

Sincerely,

Dr. Mark Rigby, Project Scientist at Parsons Government Services
David Shank, PG, Sr. Project Manager, Vice Chairman Utah Association of Engineering Geologists.





WESTERN GEOLOGIC, LLC

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January 3, 2018

Prof. Joel Pederson
Department of Geology
Utah State University
4505 Old Main Hill
Utah State University
Logan UT 84322-4505

Dear Joel:

I am pleased to write a letter in support of the Strategic Workforce Initiative Proposal: Certificate Program in Geoscience Technology.

As a Utah-based employer of students graduating in geology, I can verify that it has been an ongoing challenge for my company to find qualified/well trained entry-level employees. My experience with past new hires from the various geology programs in Utah has been that although they come well versed in understanding of geological processes and theory, they typically lack the basic skills needed in the “nuts and bolts” working environment and usually require a substantial bit of on-the-job-training before they become productive employees (drill rig operations, core logging, sampling, health and safety training, for example).

I believe that the Strategic Workforce Initiative Proposal: Certificate Program in Geoscience Technology program would provide valuable supplemental technology training to geology students from Utah schools that would help fill this need and make these graduates much better prepared to succeed in industry as well as more attractive employee candidates.

I would strongly recommend that this initiative be funded. Please let me know if there is anything else I can do to help support this much needed program. If needed, I would be happy to sit on an advisory board for this program.

Sincerely,

Western GeoLogic, LLC

Craig V Nelson, P.G., C.E.G.
Principal Engineering Geologist

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