

Finding My Passion

Mechanical engineering is a very broad field with a lot of potential career options. This makes majoring in mechanical engineering a good place to start if you have no idea what you want to do with your career other than to be an engineer. This was certainly the case for me going into my internship this past summer. Since I really had no idea what industry I would like to work in, I thought I would give an industry that I knew very little about a chance, the oil refining industry. Because of this decision, I was able to work a valuable internship that allowed me to utilize my strengths and developed a passion in me that I would like to pursue for the rest of my life.

My summer internship involved working in the maintenance engineering department for Phillips 66 at their Borger refinery. One thing that is unique about the Borger refinery is how they approach their summer internship program. Right from the start I learned that this internship would not be spent getting coffee and filing papers. The refinery gives each intern a major project with no instruction, which allowed me to make all of the major decisions for the project. This forces the interns to find the solution to the project in the exact same way as a full-time engineer.

During my internship, my major project involved many different aspects of the engineering world. The project was to route the atmospheric vent line on a hydrocarbon storage tank to a refinery flare line. In English, my project kept harmful and potentially flammable chemical vapors that are used to make gasoline out of the atmosphere. This project was unique because it served a dual purpose of protecting the environment and saving the company money. Besides this main project, the interns are encouraged to take on other smaller projects that they feel they can handle. This really gives the interns a chance to show self-initiative on the job. This was the area that I was able to utilize my strengths the best. Through my involvement in the Roger's LEAD WT program, I learned that my top strength was being an achiever. I made sure that each smaller assignment that I picked up would be one that would

enhance my learning of the plant, and I always achieved some sort of benefit for the refinery with each project.

This internship was also great because all of the interns were able to give back to the community as well. Phillips 66 wanted all of their interns to interact with their community throughout the summer. They encouraged us to participate in the Borger Beach Bash, a community-wide social event, and to spend time at the Borger Country Club so that we could continue networking for ourselves and the company. Another way that I served the community of Borger this summer was to volunteer at a local youth center, working with their elementary kids.

However, the part of the internship that had the largest impact on me was being introduced to the consulting engineering world. Consulting engineering firms are companies that specialize in certain areas of each industry's needs. These companies can provide better work for less cost in these areas than an industry corporation could provide internally. For example, one consulting firm I met specialized in expanding concrete, which could be used to fix underground water leaks without digging the pipes up. I was able to spend time meeting with several consultants, and I really enjoyed their style of business. However, all of these companies had trouble growing their business because they could not specialize in more than one area. That portion struck home for me, and I started thinking that I would like to create a firm that could specialize in more than one area. That way, my business could connect different industries together and more people's strengths could be utilized.

Once my internship had concluded, I was set in this new passion. While I realized that this career path would require some extra schooling, I think that it will be worth it in the end to have a challenging career that I will enjoy for my entire life and for which I truly have a passion. This is why I have decided to further my education by pursuing a double major in business management along with my mechanical engineering degree, so that I may one day accomplish that task. Without this internship, I may have never realized where my career passions exist. Because of this, I am very thankful to Phillips 66 for the opportunity to complete this internship, as well as WTAMU for preparing me to take on the challenges of such a competitive industry.

Letter of Recommendation
on behalf of
Blake Washburn

Phillips 66 – 2015 Summer Internship
September 29, 2015

Mr. Blake Washburn successfully completed his summer internship with the Phillips 66 Borger Refinery Maintenance Engineering Team from May to August 2015. During his internship, Blake made significant contributions on behalf of the Maintenance Engineering Team and several of these contributions are discussed below.

Summer interns at the Borger Refinery are typically given a major project at the beginning of their internship and generally are given minimal direction on how to achieve the project goals. They are expected to meet with the persons inside and outside the refinery needed to develop their assigned projects. In addition to their main project, they are also given multiple day-to-day opportunities in which they use ASME codes, company standards and procedures as well as using sound engineering judgment. In short, summer interns at the Borger Refinery are “one of the engineers” during their tenure as interns.

Blake’s primary project for the summer of 2015 was to route an atmospheric vent on a light hydrocarbon storage tank to a refinery flare line. The scope of this project included piping, civil/structural and instrumentation. This was a multiple-discipline project that required Blake to interact with several other technical and construction departments within the refinery. Blake was given the basic premise for the project and it was up to him at that point to drive the project to completion. Blake took the required initiative to research the process, visit with instrument engineers and construction representatives as well as the other engineers and designers within his team. Blake also had to study and apply the ASME Boiler and Pressure Vessel Code, ASME B31.3 Piping Code, API 510 code as well as the Refining Engineering Practices (REPs) to which all design and construction work within the refinery must comply. Blake

performed very well in the development of this project and worked relatively independently. Once design was completed, Blake led the effort on pushing the project through our Management of Change Process (MOC) and acquired capital funding for construction. This project is currently close to being completed in the field and will be in operation before the end of the year (2015).

In addition to developing his primary project, Blake also completed day-to-day assignments in the maintenance of the refinery including equipment repair plans and completion of code required repair documents.

The final major requirement of any of our summer interns is the end of summer presentation that is made before our refinery management. Blake assembled his PowerPoint presentation and outlined his project successes in front of the Refinery Leadership Team. Blake's presentation was professional and very well organized and resulted in his being offered a second internship for the summer of 2016.

In addition to his assigned engineering duties, Blake also participated in several community service and social activities and was a positive influence on the other interns in the summer program. Blake always acted professionally, was not afraid to ask questions and solved a long standing environmental emissions problem with his project. Blake was a pleasure to work with and I look forward to what he does during his next internship in 2016.

A handwritten signature in black ink, reading "Michael C. Massey". The signature is fluid and cursive, with the first name "Michael" and last name "Massey" being more prominent than the middle initial "C".

Michael C. Massey, P.E.
Maintenance Engineering Team Lead
Borger Refinery
Phillips 66 – Cenovus
806-275-1523
michael.c.massey@p66.com

September 29, 2015

Dear Intern of the Year Committee,

It is my pleasure to support the nomination of Mr. Blake Washburn for WTAMU 4014-15 Intern of the Year. My familiarity with Blake is only fairly recent, as I teach primarily upper level courses in engineering. However, my involvement with Blake has been extensive.

Blake's academic performance is exceptional, and is evidenced well by his 3.97 GPA. As such it is obvious that he routinely makes the President's List and has received numerous scholarships. While it would be easy to list all of his academic, GPA based, accomplishments and recognitions, it would be rather unnecessary. Suffice it to say that when there is a maximum on the scale, Blake achieves it. Consistently. What is less obvious about his academic performance is the degree to which learning motivates him. Although clearly, and easily, having an A in my classes, he will drop in from time to time with a technical question on the course subject matter for Fluid Mechanics or Heat Transfer. Inevitably the question will be at the most challenging level of the material covered for the class. Often the questions are more suited to graduate level courses and research. What is most unusual is his ability to formulate and present a subject inquiry. This is far different from the typical, "I don't understand (blank)," and just one example of how distinctive his skills are.

Not being solely involved in academics, Blake is a member of the West Texas A&M University baseball team, a part of the Fellowship of Christian Athletes Leadership Team, and a LEAD WT Scholar. These activities not only consume much of his time, occasionally cause him to miss a class meeting. However, this never deters him from obtaining and completing his assignments, correctly, and on time.

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While my interactions with Blake are limited to the academic environment, there are many aspects of his character that are evident from that interaction. He is always prepared for lectures and laboratories before arriving at them. Once there he demonstrates a willingness to work diligently and can do so independently, or in groups. He has participated in lab activities of sizes from three students up to twenty. In each of those Blake is willing and able to lead, assist, or participate in whatever role will best suit the needs of the whole. Many others with similar academic skills shy away to a corner, or become aggressive and dominant. This is not so with Blake, who any and all are anxious to have as a contributor on their activities. He is decisive and confident, without being rude or overbearing. He is knowledgeable and insightful, without being presumptuous or arrogant.

In summation, Blake Washburn achieves the highest academic standards, has outstanding character, and is an active young man, with a variety of experiences and interests. He is well deserving of recognition and represents himself, his family, friends, and colleagues, and West Texas A&M University in the best possible manner.

You may feel free to contact me for any additional information.

Sincerely,

A handwritten signature in cursive script, appearing to read "Freddie J. Davis".

Freddie J. Davis, Ph.D, P.E.
Associate Professor, Engineering and Computer Science
West Texas A&M University
Canyon, Texas 79016
fdavis@wtamu.edu
(806)651-3530