

Wyo

**FATALITY NARRATIVE**  
**Joseph K. Laster**  
**Tyvo, LLC**  
**307814426/H01705**

**Date and Time of Accident:** February 21, 2005, approximately 12:13pm

**Notification:** Bookkeeper for Tyvo, LLC, Judy Kosola, reported the accident to Wyoming Workers' Safety Compliance Supervisor, Johnnie A. Hall, Jr., on February 21, 2005 at 3:15 pm.

**The Investigation:**

On February 21, 2005, Johnnie Hall, following notification of the accident/fatality, assigned Investigators Karen J. Godman and Wayne Dvorak to the fatality investigation. On February 22, 2005, Investigators Godman and Dvorak met with company personnel and employees onsite. At the time of the inspection, Investigators supplied Tim Barritt (Tyvo Owner) with the Employer Contact Sheet and conducted an opening conference. Taped interviews were conducted with owner and witnesses.

Prior to arrival at the site, the Investigators reviewed the Fatality/Accident/Catastrophe Worksheet supplied by Wyoming Workers' Safety Compliance Supervisor, Johnnie Hall. On the morning of February 23, 2005, Investigators, Tim Barritt, Edward Russell and David Counts traveled to the accident site, outside of Savageton, WY with Deputy Bill Ashton (Campbell County Sheriff's Office). Upon arrival at the site, the Investigators performed a visual inspection of the accident site and took photographs and a video. Deputy Bill Ashton informed Investigators that company personnel had preserved the accident site prior to the Investigators' arrival/preliminary inspection. After the site inspection, interviews were conducted with Tim Barritt (Tyvo, Owner) and Kerry Cooper (Rig Owner) in the Tyvo office in Gillette.

After the preliminary information was gathered, the site was released back to Tyvo, LLC personnel. The Investigators proceeded to Gillette to meet with the Campbell County Sheriff's Deputy Bill Ashton and Campbell County Coroner Thomas Eekhoff. Discussions were held with both Deputy Ashton and Coroner Eekhoff regarding their knowledge and observation of the accident scene and deceased. The Medical Examiner's Report from the Campbell County Coroner's Office and the Campbell County Sheriff's report will be forwarded to OSHA as soon as the toxicology report is acquired.

**Additional Information:**

**Deceased:** Joseph K. Laster

**Occupation:** Driller's Helper

**Employer:** Tyvo, LLC  
201 Lakeway, Ste 1000  
Gillette, WY 82718

**Accident Site:** Rig located off of Highway 50, in Savageton, WY.

**Personnel Present at the Time of the Accident:**

<b>Name</b>	<b>Firm</b>	<b>Job Title</b>
David Lewis Counts	Tyvo, LLC	Driller
Edward Robert Russell	Tyvo, LLC	Driller's Helper
Joseph Kenneth Laster	Tyvo, LLC	Driller's Helper

**Personnel Interviewed during the Investigation:**

<b>Name</b>	<b>Firm</b>	<b>Job Title</b>
David Lewis Counts	Tyvo, LLC	Driller
Edward Robert Russell	Tyvo, LLC	Driller's Helper
Timothy G. Barritt	Tyvo, LLC	Owner
Kerry Wayne Cooper	Rancher	Rig Owner

**General Company Information:** Tyvo, LLC business office is located at 201 Lakeway, Suite 1000, Gillette, Wyoming, telephone number (307) 686-1125; fax number (307) 686-1158. Tyvo, LLC also has a lot where rigs and other equipment are kept at 1401 HWY 16E Upton, WY 82730.

**Background/History:**

***Employee:***

Joseph Kenneth Laster (deceased) was a Driller's Helper for Tyvo, LLC. Joseph was hired by Tyvo on January 6, 2005. Joseph had only worked for the company for 53 days prior to the accident. Joseph and Edward Russell had been hired by Tyvo through the Volunteers of America (VOA). VOA is a national, nonprofit, spiritually based organization providing local human service programs, and opportunities for individual and community involvement. VOA is affiliated with the Community Corrections Center in Gillette which is a 43 bed facility housing both male and female offenders, offering comprehensive services to help ensure successful transition of recently released probation and parole residents back to the community.

***Equipment:***

Tyvo, LLC had bought drill bits from Mr. Kerry Cooper for years. Mr. Cooper had just acquired three older model water well drilling rigs. Mr. Cooper approached Mr. Barritt about possibly buying the rigs or putting them to use. They agreed to try and get the rigs working and put them

to work. Mr. Cooper and Mr. Barritt chose the best of the three rigs. The rig was a Gardner-Denver 500 rig, approximately 1962 model. The derrick height was 22-feet and the Kelly height was 15-feet. The rig was not functional when Mr. Cooper initially acquired it and it was estimated that the rig had been sitting for approximately three years. The rig was then moved from Riverton to the Tyvo office in Gillette. Mr. Barritt agreed to conduct some work on the rig to make it functional. Tyvo employees and the Cooper's had conducted some work on the rig to include welding cracks on the derrick, replacing the airline and hydraulic hoses, new tires, and an alternator. In the meantime, Mr. Barritt acquired a contract to drill some monitoring wells for States West Water Resources. States West Water Resources had been hired by a joint venture between XTO and CH4 Energy. The contract would require holes to be drilled to monitor ground water. The plan was to use the Gardner-Denver 500 rig to drill these wells. The core samples were to be drilled every 3-feet and would typically be 30-40 feet in depth. The wells would be drilled with air.

With regards to the functionality of the rig, Kerry Cooper stated, "we knew it was a project to do, we knew we still had some stuff that was going to break, and we would have some down time. It was fixed to the point where we thought it would drill holes". The rig had then been put to use approximately one to one and a half months prior to the accident.

#### **Events leading up to the Accident:**

The crew started their day at approximately 6:00 am. on Monday February 21, 2005. The Driller, Dave Counts, picked up Edward and Joseph at VOA and stopped at Mountain Mud, Wyoming Materials, got fuel and breakfast, and then headed to the field. The main goals for the day were to get the packing on the Kelly replaced and change the oil filter on the air compressor, as it was leaking. The packing in the Kelly was not sealing properly, which created an air leak. The air leak did not allow for full air pressure for drilling. Originally, the crew had planned to change the packing Saturday, February 19, 2005, but the parts did not arrive from Casper until Sunday night. Upon arriving at the site, Dave realized the wrench set they had was not the right size and went to another rig and retrieved proper size wrenches. The crew returned to the site and Dave lowered the Kelly, put the vehicle in neutral, and left the PTO engaged. It was thought this would take a very short period of time, as only four bolts needed to be removed. So, leaving the PTO engaged would allow them to pick up the top of the Kelly quickly with the hoist line to replace the Kelly packing. When the accident occurred, employees were removing the four hex head ½-inch fine-threaded bolts from the top of the Kelly.

#### **The Accident:**

On Monday, February 21, 2005, Joseph Laster had been tasked with removing two hex head ½-inch fine-threaded bolts from the top of the Kelly on the makeup side. Joseph had positioned himself on the bed of the rig and was standing next to the driveshaft that powers the drawworks (both the Kelly and the hoist line). It is not clear why Joseph would climb into this area. It is the consensus that he was most likely looking to see if he could get a better angle to wrench a bolt off. Joseph was last seen looking over the sandline. At some point, Joseph leaned or fell forward and got his right coat sleeve or glove hooked in the u-joint of the driveshaft. Edward saw Joseph try to pull his right arm free with his left arm, and then get sucked down into the driveshaft. The

driveshaft rotates clockwise and it is estimated that it was running between 800-1000 rotations per minute (rpm). Edward was working on the back of the rig, removing the other two bolts on the top of the Kelly when the accident occurred. Dave Counts was in the pickup truck, located at the back of the rig, talking on the phone to Casper regarding the Kelly packing to be installed.

Edward screamed for Dave to shut off the rig as Joseph was caught in the driveshaft. Dave ran to the front of the vehicle and shut down the rig completely. No kill switch was located on the back of the rig. Joseph's arms had been severed from his body and he was bleeding profusely. Dave immediately called 911 and XTO for help. Dave and Edward took apart the driveshaft to get Joseph out. They then tried not to move Joseph and stop the bleeding until the ambulance arrived.

The accident occurred at approximately 10:30 am. The Campbell County Memorial Ambulance was dispatched from Gillette to respond to the accident. An ambulance was also dispatched from the Wright substation. It should be noted that Flight for Life was on call to provide helicopter services from Casper. Campbell County Sheriff's Deputy Bill Ashton arrived first on scene. Vitals were taken by flight for life paramedic, and Joseph was pronounced dead.

#### **Findings:**

- None of the employees on the accident site were trained to render first aid. No first aid supplies were onsite.
- Joseph Kenneth Laster, the deceased, was a twenty-six year old white male.
- Joseph Kenneth Laster was working as a Driller's Helper for Tyvo, LLC; he was assigned to the rig for his entire employment (53 days) with Tyvo, LLC.
- All employees were performing tasks within the scope of their normal job responsibilities when the accident occurred.
- No Lockout/Tagout Program had been developed or implemented for Tyvo, LLC.
- Joseph Kenneth Laster had not received any training on energy control procedures from Tyvo, LLC. He had received on-the-job training as work tasks were performed.
- Joseph Kenneth Laster was working in an area where he was not expected or needed to be to remove the bolts from the Kelly head.
- Joseph Kenneth Laster was standing on the rig next to the unguarded driveshaft when he became entangled.
- Joseph Kenneth Laster's sunglasses were located on the ground directly under the rig/driveshaft without any marks or broken parts.
- Vehicle was in neutral, but the PTO was engaged. With the PTO engaged, the driveshaft was turning.
- Weather conditions did not create any hazardous conditions that contributed to the accident.
- Three of the four bolts from the Kelly had been removed. One bolt was still in place after the accident.
- The only fire extinguisher onsite had been discharged.
- There was no rated load marking (rating chart) on the 1962 Gardner-Denver 500 rig derrick.

- The derrick on the 1962 Gardner-Denver 500 rig had been idle for over 6 months and was not given a complete inspection before putting it back in service.
- All ropes in use on the 1962 Gardner-Denver 500 rig were not thoroughly inspected monthly.
- A certification record of rope inspections was not kept.
- No safety training had been conducted with any of the employees onsite

### **Analysis & Conclusions:**

The rig was a 1962 Gardner-Denver 500, and had not been in use for quite some time. It is speculated that the rig had not been used for three years. The rig had been acquired by a rancher (Kerry Cooper) who had gone into a merger to buy the three rigs and also some drill bits. His partner had died during the acquisition. The rig had some work that needed to be done to make it operational. The rig had some work conducted so that it would run, and then put into use. The rig was expected to "have things break that would require repair", it was said to be "a work in progress". The rig had never had any safety inspections or checks; the goal was "to get the rig running" and then perform other maintenance, checks, and inspections.

There are some items that may have contributed to the accident, and the possible scenarios are as follows:

Scenario 1: Joseph went onto the rig to see if he could get a better grip on the bolt he was trying to take out of the Kelly. He was looking over the sandline and then between the sandline and the drawworks when his sunglasses fell. He reached instinctively to grab them and his sleeve or glove got caught in the u-joint of the driveshaft. He tried to free his right arm with his left hand and was pulled into the rotating driveshaft.

Scenario 2: Joseph went onto the rig to see if he could get a better grip on a bolt he was trying to take out of the Kelly. He was looking over the sandline and then between the sandline and the drawworks when he fell. He reached to catch himself and his sleeve or glove got caught in the u-joint of the driveshaft. He then tried to free his right arm with his left hand and was pulled into the rotating driveshaft.

The above listed scenarios do not reflect this agency's belief in any particular sequence. It will never be known what exactly happened to cause Joseph to become entangled in the driveshaft. However, there are specific safety actions that may prevent this from occurring in the future. See "Recommendations" for specific details.

### **Recommendations:**

- Brief all employees on the facts and circumstances of this fatal mishap.
- Employees should not work in potentially hazardous locations without authorization/knowledge by management. Employees should not work in locations not required to perform the job task.

- Implement and maintain a Lockout/Tagout Program with specific procedures for maintenance on equipment/rigs. Train all employees on the company's Lockout/Tagout Program.
- Guard all rotating parts. Assure that all open driveshafts, pulleys and belts are completely guarded.
- Conduct complete inspections of the derrick/rig that has been out of service for 6 months or greater.
- Conduct safety inspections of all equipment prior to using the rig.
- Assure that load rating is marked on derrick.
- Inspect, repair and replace all wire rope and clamps to comply with proper clamp application for the size of wire rope. Document wire rope inspections.
- Assure that the proper number of fire extinguishers are onsite and in proper functional order.
- Train all employees on first aid. Provide first aid supplies for all rigs.
- Train all employees in the recognition, avoidance and prevention of unsafe conditions for the work they perform.
- Train all employees on the OSHA and company safety rules applicable to their work.

This report, together with its incorporated findings relate specifically to this particular incident. It is noted that "Recommendations" may not include all existing hazards. The employer and employees continue to have the responsibility for inspection and investigation towards compliance with safe operating practices as outlined in the applicable rules and regulations and nationally recognized industry organizations.

The above investigation and findings of the accident occurring to:

Joseph Kenneth Laster  
 1299 Raymond  
 Gillette, WY 82718

Is set down and attested to this date.

Karen J. Godman  
Karen J. Godman, Investigator

April 26, 2005  
Date

Wayne Dyorak  
Wayne Dyorak, Investigator

April 25, 2005  
Date