

Wyo

FATALITY NARRATIVE

James Albert Bates
Patterson UTI Drilling
305656720

AUG 18 2004

A-DIV

Date & Time of Accident:

Tuesday, December 23, 2003 at approximately 6:30am.

Notification:

Mr. David Cain, Patterson UTI Drilling notified Wyoming Workers' Safety (WWS) of the workplace accident on December 26, 2003 at approximately 10:30am.

The Investigation:

This fatality investigation was initially assigned to Wyoming Workers' Safety compliance officers (CSHOs) from the Casper and Rock Springs, Wyoming field offices. Due to unforeseen events, Wyoming Workers' Safety Administrator Stephen Foster assigned CSHOs Wayne Dvorak, from the Gillette office, and Daniel Bulkley, from the Cheyenne office, to investigate the fatality on December 30, 2003.

On December 30, 2003, CSHO Dvorak contacted Roger Schumate, attorney representing Halliburton Energy Services, and made arrangements to interview the Halliburton employees who were on site at the time of the accident. The interviews were set for 10:00 am on January 6, 2004 at the Gateway Center located at 79 Winston Drive in Rock Springs, Wyoming. Contact was made with Halliburton's Manager George York, located in the Denver, Colorado office. A copy of the company's policies and procedures in cementing operations were requested. Mr. York later informed the (CHSOs) all information pertaining to this fatal investigation was to be requested through attorney Roger Schumate.

January 5, 2004, CSHO Dvorak met with CSHO Bulkley in Rawlins, Wyoming and then proceeded to the Rock Springs field office. A copy of the Ambulance Report was obtained at the Rock Springs OSHA office. Contact was made with Mike Vanderlinden, Safety Supervisor for Patterson UTI Drilling at the Vernal Utah office, for directions to the accident site (Patterson Rig # 455). After a short meeting with the Rock Springs CSHO, we departed for the accident site which was located near Kemmerer, Wyoming.

CSHOs arrived at the accident site late afternoon on January 5, 2004. Contact was made with Bobby Blanchard, Pusher for Patterson UTI Drilling. An opening conference was conducted with Mr. Blanchard, Dale Miller representing DMIC and Scott Hawkins, Safety Supervisor for Inter-

Mountain Safety Inc. With permission from Mr. Blanchard, a partial walkaround inspection of the accident site was conducted. CSHOs talked briefly with the Patterson rig hands on site and took photos. Since it had been over 13 days since the accident, the site had not been preserved and the preliminary inspection was limited. A short phone conference was conducted with Bill Bruckner (Rawhide Western Consulting) regarding his written statement, which is contained in this casefile. A written statement by Leroy Sandberg (Bureau of Land Management employee) is also contained in this casefile. Arrangements were made with Mr. Blanchard to interview Patterson employees Kevin Colony and Larry Smith at 6:00 am on January 7, 2004.

On January 6, 2004, CSHOs met with George York, Roger Schumate, and employees for Halliburton Energy Services at the Gateway Center located at 79 Winston Drive in Rock Springs, Wyoming. After Mr. York completed the WOHS 001C and the opening conference was conducted, the interviewing process began with Halliburton employees Shane Copps, Gordon Conrad and T. J. McClure. Attorney Roger Schumate was also present. Arrangements were made for the morning of January 8, 2003 to view the pumping truck that was on site at the time of the accident.

CSHOs arrived at Patterson Rig #455 about 5:30 am the morning of January 7th, 2004. After making contact with Mr. Blanchard, it was discovered that employees Colony and Smith had departed the site. Interviews were conducted with Steve Hitschew (driller) and Ronald Tomasini (motorman). Since Colony and Smith were rotating to days off and both resided out of state, telephone interviews would be required.

On the morning of January 8, 2003, CSHOs Dvorak and Bulkley met with a Halliburton employee at the Halliburton yard in Rock Springs, Wyoming. An inspection took place and photos were taken of the Halliburton pumping unit that was on site at the time of the accident.

Deceased:

James Albert Bates

Address:

1187 Mctee Street
Rock Springs, Wyoming 82901

Occupation:

Motorman

Employer:

Patterson UTI Drilling

Accident Site:

Sec35 T22N R115W
Kemmerer, Wyoming 83101

Employees Present at the Time of the Accident:

Name	Firm	JobTitle
Scott Hawkins	Inter-Mountain Safety	Supervisor
Bill Ryan	Rocky Mountain Facilities	Consultant
Bill Bruckner	Rawhide Western	Consultant
Shane Copps	Halliburton Energy Services	Cementer
Gordon Conrad	Halliburton Energy Services	Pumper
T.J. McClure	Halliburton Energy Services	Service Leader
LeRoy Sandberg	BLM	Consultant
Kevin Colony	Patterson UTI Drilling	Driller
Larry Smith	Patterson UTI Drilling	Derrickman
James Albert Bates (deceased)	Patterson UTI Drilling	Motorman

Employees Interviewed during the Investigation:

Name	Firm	JobTitle
Shane Copps	Halliburton Energy Services	Cementer
Gordon Conrad	Halliburton Energy Services	Cement Pumper
T.J. McClure	Halliburton Energy Services	Service Leader
Richard Duginski	Halliburton Energy Services	Safety & Health
Steve Hitshew	Patterson UTI Drilling	Driller
Ronald Tomasini	Patterson UTI Drilling	Motorman
Larry Smith	Patterson UTI Drilling	Derrickman
Kevin Colony	Patterson UTI Drilling	Driller
LeRoy Sandberg	BLM	Consultant

Events Leading up to the Accident:

On December 22, 2003, a Halliburton crew consisting of cementer Shane Copps, pumper Gordon Conrad, and service leader TJ McClure, who operated the bulk truck, arrived at the Patterson Rig #455 to cement in the surface casing. The evening tour for Patterson Drilling was present during the cementing of the surface casing string. The surface casing was set at approximately 3500 feet. After setting the bulk and pumping trucks, the crew began rigging up the cement line that normally takes between one and two hours. The cement line extended from the pumper, along the ground to the base of the rig floor adjacent the beaver slide stairs. At this point, the cement line was then suspended up to the rig floor, positioned across the floor (using chitsans) and attached to the cement

head that was located on the 13 3/8 well casing. It was then discovered that the water tanks were frozen. Before the cementing process could begin, the water tanks were thawed out. This took between five and six hours.

After the water was thawed, the Halliburton crew started cementing the 3500 feet string of casing. After pumping the required amount of cement down hole, a plug was set in the casing and bumped to approximately 3500 feet. On the morning of December 23, 2003 at approximately 6:00 am, the morning tour drilling crew arrived. At this time, Kevin Colony took over the rig operations from the evening tour driller Steve Hitsheew.

Prior to commencing the top/surface cementing, Bill Bruckner, consultant for Rawhide Western, met with cementer Shane Copps and pumper Gordon Conrad. Mr. Bruckner stated about 2-3% calcium chloride (this accelerates the setting time of the cement) was used in the cement for the top/surface cementing job. According to Mr. Bruckner, when performing a top job it is common practice to pump slow. He gave verbal instruction to Shane and Gordon to pump between 1/4 and 1/2 bpm (barrels per minute).

The Accident:

When Kevin took over the rig operations on the morning of December 23, 2003, the plug had been previously bumped to approximately 3500 feet. It was discovered that circulation had been lost, and the top job was just beginning. To complete the top job (cementing the top section of the casing), a six foot long one inch diameter pipe was attached to the chitsan and placed between the well casing down to the annulus of the hole. Cement was then pumped through the cement line down the one-inch pipe to bring the cement to the surface casing. During the cement process, Kevin, Shane, and Leroy Sandberg (BLM representative) were looking down the well bore to verify cement was coming to the surface. The casing was full of water and Shane asked if one of the rig crew could siphon the water off the top of the casing. Kevin asked Larry Smith to complete this task. Prior to instructing Larry to siphon the water, Kevin had instructed James Bates to repair a one-inch line to the Kelly spinner.

After Larry had siphoned the water from the casing, he started to wash down the rig floor to remove the cement that had accumulated on the floor. James offered to help. At the time of the accident, both James and Larry were standing in front of the V-door. The Halliburton surface graph indicated approximately 4 bpm were being pumped. The cementer called for an increase in the bpm to be pumped down hole. According to the Halliburton surface graph, the bpm rate was increased immediately from 4 bpm to 8 bpm and the pump pressure went from free flowing (about 50 psi) to 800 psi. At the time, Kevin, Shane, and LeRoy were entering the doghouse. There was a sudden increase of rpm (revolutions per minute) of the pump truck engine. At that instant, the six foot long one inch diameter pipe that was positioned between the well casing to the annulus rose out of the well casing, whipping and spraying cement over the rig floor. The whipping action of the cement line continued to rise from the rig floor, folding back over itself toward the V-door. The whipping action of the cement line struck Larry knocking him between the stacked drill pipe and the drill

collars. It then struck James Bates knocking him from the rig floor through the V-door opening approximately 35 feet to the ground.

The Halliburton cementing operation was immediately shut down and medical assistance was administered to James Bates. An emergency call was also immediately placed to the South Lincoln County Medical Facility in Kemmerer, Wyoming.

Emergency assistance was dispatched to the accident site. Arriving on site with the ambulance medical team was Scott Miller, Deputy from the Lincoln County Sheriff's Department. The medical team took over primary care of the victim and transported him to the South Lincoln County Medical Facility in Kemmerer, Wyoming. James was later life-flighted to the LDS Hospital in Salt Lake City, Utah. He passed away there on December 25, 2003.

Findings:

- Well owners are Zinke & Trumbo. Lease Waterfall Fed 2-35.
- James Albert Bates, the deceased, was 48 years old.
- James Albert Bates passed away on December 25, 2003.
- Patterson UTI Drilling employed James Bates as a motorman.
- Lincoln County Sheriffs' Department and the Kemmerer Ambulance responded to this industrial accident.
- Accident site located on US Hwy 189 at milepost 46.
- Halliburton Energy Services was performing the cementing operations.
- A spider gear was positioned on the cement line by the evening tour Patterson driller.
- Shane Copps instructed the Patterson driller Steve Hitshew to remove the spider gear positioned on the cement line.
- The cement line was not secured at the well casing or at any point(s) along the rig floor.
- Bobby Blanchard, pusher, was not present when the accident occurred.
- The 2 inch cement line struck both James Bates & Larry Smith who were on the rig floor.
- Rig floor to the ground was approximately 35 feet.
- Both V-doors on the rig floor to the beaver slide were open. The V-door opening was not fitted with a safety chain.
- Neither employee, Larry Smith or James Bates was protected from falling while standing in front of the V-door opening.
- Patterson-UTI employee handbook addresses guardrails on pg 21 Decks, Floors, and Walkways (C).
- The 2 inch cement line was not secured to the rig floor or at the well casing.
- The chitsan that supported the 6 foot stinger was not secured at the well casing.
- Common industry practice is to use at least a 20 feet stinger for top jobs. Depending on the circumstances, a longer stinger may be required.
- Patterson-UTI employee handbook addresses pressure lines on pg 30 High Pressure Lines, Hoses and Fittings (G).
- Halliburton crews are available for 24-hour call.

- According to Halliburton employees, pressure on the cement line was assumed to be pressured to 3000psi at all times.
- With the weather being extremely cold and the water being frozen, additional time was required for this cementing job.
- Lack of communication between shift change employees. A safety meeting was not conducted with the Patterson morning tour crew.
- Halliburton employee Shane Copps stated he assumed all Patterson UTI drilling personnel were aware not to be on the rig floor during pumping operations.
- Shane Copps called for an increase in bpm being pumped.
- Employees from Halliburton and Patterson stated the pumper truck caught a gear, which increased the pressure in the one-inch stinger pipe.
- The stinger and union could not be located during the investigation.
- Consultant Bill Bruckner is employed with Rawhide Western.
- Consultant Bill Ryan is employed with Rocky Mtn. Facilities.
- DMIC was hired to replace consultant Bruckner and Ryan by well owner Zinke & Trumbo.
- The statement received from Bruckner and Ryan is hearsay evidence. The information was received, handed-down from the Patterson driller and the BLM representative. Neither Bruckner nor Ryan witnessed the accident.
- Weather conditions were not a contributing factor in this accident, once the cementing operation started.

Analysis & Conclusions:

The set up for a cementing operation is a routine procedure and surface/top cementing is also common practice. It is also common practice to position the bulk and pumper trucks along side the drilling rig, and position the cement line from the pumper along the ground then up to the rig floor, and across the floor to the well casing.

Contributing factors that could have played a role in this work-related death:

- *Fatigue:* With the cementing crews being on call, and moving from drilling rig to drilling rig, it is unknown how much rest, if any, the crew received before being assigned to this cementing job. Operating the pumping unit is a relatively easy task, but one must be constantly alert. Fatigue may have caused a momentary lapse of judgment.
- *Employee training:* Although being employed for about 2.5 months at the time of the accident, the pumper operator had about 4 weeks experience on a pumping unit.
- *Industry practice:* To be a qualified cement pumper normally takes up to six months. This depends on an individual's learning skills and training. An Applied Skills Test may also be required. This test assures an individual has the required skills, knowledge, and ability to operate the pumping unit safely. Gordon has been a cement pumper operator for about one month but has yet to be given an Applied Skills Test. Prior to this assignment, he was a

cement bulk truck operator for about one month.

- *Six-foot stinger:* The 6 foot long one inch diameter section of pipe attached to a 2 inch cement line is referred to as a "stinger". The stinger pipe, normally schedule 40 or 80 pipe, is positioned between the floor and the well casing down into the annulus. During top/surface cementing operations, it is industry practice to typically use a 20 foot stinger, and depending on the circumstances longer sections may be required to ensure the cement line and stinger are secured to prevent accidental displacement. Located on the bulk truck units are different lengths of stinger pipe.
- *Lack of Communication:* The hazards of cement pumping operations were not communicated to oncoming drilling rig employees at shift change. Lack of communication and coordination between employees on the rig resulted in unauthorized employees being on the rig floor during cementing operations.

Since this fatal investigation was conducted after James Bates died, which was about thirteen days after the accident, the site was not secured and work continued as usual. However, there are specific safety measures that may be implemented, which may prevent this mishap from occurring in the future.

Recommendations:

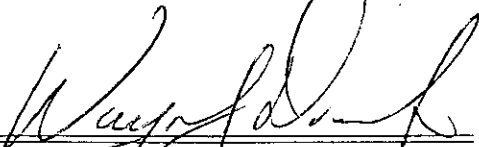
- Brief all employees on the facts and circumstances of this fatal mishap.
- Brief/retrain all employees on the hazards of working around cement pumping operations and not to be working on rig floors while pumping operations are being conducted unless authorized by the cement pumping company.
- During shift changes, ensure all contractors brief their employees on potential hazards of the operation in progress.
- Assure employees have received adequate training, rest, and are not being rushed.
- Assure policies/procedures are in place and implemented to secure cement lines.
- Assure that fall protection is in place across V-doors when material is not being passed through the doors.
- Only authorized personnel are allowed on the rig floor during cementing operations.
- Use at least one twenty foot section of one-inch pipe for cement jobs.

This report and incorporated findings relate specifically to this particular incident. 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.

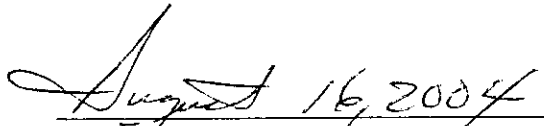
The above investigation and findings of the accident occurring to:

James Albert Bates.


Is set down and attested to this date.



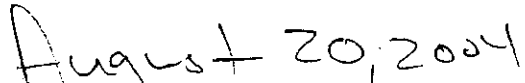
Wayne J. Dyorak, Investigator



Date



Dan Bulkley, Investigator



Date

