

Wyo

# *Fatality Narrative*

**Brad Eugene Loberg  
Splicer Cable Service & Supply, Inc.  
Casefile 303666713/B4026**

## **Date & Time of the Accident:**

September 14, 2001 at approximately 1:10 p.m.

## **Notification:**

Mr. Ray Gonzales of J & R Well Service, Inc, notified Wyoming Workers' Safety Compliance Supervisor, Mr. Johnnie Hall, of the accident at 4:30 p.m. on September 14, 2001. Mr. Gonzales is the Safety Manager for the company who owns the well servicing rig where the victim was fatally injured. Mr. Gonzales reported that the decedent worked for Splicer Cable Service & Supply, Inc.

## **The Investigation:**

Mr. Johnnie Hall received notification of the mishap at 4:30 p.m., September 14, 2001. In turn he contacted Mr. Kenneth D. Lantta, CSHO Casper Field Office, to alert him of the mishap and to have him begin preliminary planning for conducting an investigation. Mr. Hall advised that Mr. Lenard Brewer, CSHO Casper Field Office, would be the lead investigator with Mr. Lantta assisting. Mr. Hall asked if the CSHOs could begin the investigation on Saturday, 09/15/01.

Through the evening of 09/14/01, Mr. Lantta contacted Mr. Brewer and representatives of both Splicer Cable Service and Supply, Inc. [Splicer] and J & R Well Service, Inc. [J & R]. Both Mr. Brewer and Mr. Lantta were available to begin the investigation on Saturday, 09/15/01. Mr. Gonzales of J & R said he would have all of his employees at the mishap location at 10:00 a.m. Saturday. Mr. Dave Whisler, President of Splicer, also advised that he and his employees would be at the site on Saturday morning.

The CSHOs met at the Wyoming Workers' Safety Casper Field Office at 7:30 a.m. on Saturday, 09/15/01. Investigation equipment was gathered and plans were made regarding the events for the day. Enroute to the mishap site, the CSHOs stopped at the Natrona County Sheriff's Office

to see if a written report was available (it was not). The CSHOs then drove the 50 miles to the mishap site.

The mishap occurred approximately one mile east of Midwest, WY at the location where J & R had completed a well servicing job. The site is identified as Howell Petroleum Corporation Federal Lease No. Chey. 036915B Well No. 11WC2 located on NW ¼ Sec 30-T40N-R78W (see **Photo #1**).

Upon arrival at the mishap site, the CSHOs conducted an opening conference jointly with Splicer and J & R. While at the mishap location, the CSHOs photographed the site and equipment using both videotape recording and digital camera equipment. The CSHOs interviewed one Splicer employee and two J & R employees using audio tape recording equipment. The CSHOs discussed the mishap with the Splicer President (Mr. Dave Whisler) and recorded this discussion on videotape. A videotaped discussion was conducted with the Howell Petroleum Corp. [Howell] Safety & Environmental Technician (Mr. John Farrell) who was an on scene EMT responder for the mishap. A closing conference was held with Splicer and J&R. The CSHOs left the mishap location at 3:30 p.m.

On Monday, 09/24/01, the CSHOs interviewed two additional Splicer employees at the Casper Field Office. These employees were not on scene at the time of the mishap, but were interviewed to gather background information.

The CSHOs sent letters to the Natrona County Coroner and the Natrona County Sheriff requesting copies of written reports and photographs. The last of these reports was received on October 1, 2001.

All documentary evidence, photographs, videotape, and interview audio recordings related to this investigation are on file at the Wyoming Workers' Safety office in Cheyenne, WY.

**Victim:** Mr. Brad Eugene Loberg

**Address:** 808 Silver Sage; Evansville, WY 82636  
(Mailing address is P.O. Box 50946; Casper, WY 82605-0946)

**Occupation:** Foreman

**Employer:** Splicer Cable Service & Supply, Inc.; P.O. Box 50928; Casper, WY 82605

**Accident Location:** Howell Well No. 11WC2; approximately 1 mile east of Midwest, WY

## Personnel Present at the Time of the Accident:

<u>Name</u>	<u>Company</u>	<u>Job Title</u>
Brad Loberg	Splicer Cable Service & Supply, Inc.	Foreman (decedent)
Clinton Arteta	Splicer Cable Service & Supply, Inc.	Driver/Hand
Frank Bringham	J & R Well Service, Inc.	Operator
Timothy Ryan	J & R Well Service, Inc.	Derrickman
Larry Johnson	J & R Well Service, Inc.	Hand

## Personnel Interviewed during the Investigation:

<u>Name</u>	<u>Company</u>	<u>Job Title</u>
Clinton Arteta	Splicer Cable Service & Supply, Inc.	Driver/Hand
Michael Scott	Splicer Cable Service & Supply, Inc.	Spooler/Splicer/Driver
Christopher Nave	Splicer Cable Service & Supply, Inc.	Wireline Tech.
Frank Bringham	J & R Well Service, Inc.	Operator
Timothy Ryan	J & R Well Service, Inc.	Derrickman

## Events leading up to the Accident:

J & R had completed a well servicing job on 09/13/01 at the mishap site. This job was performed under contract for Howell who owns the well at this location. As the work concluded on 09/13/01, J & R left the servicing rig with the mast in the upright position (**Photo #2**). J & R had contracted with Splicer to change out the rig's sand line – work scheduled for the following day.

On Friday, 09/14/01, the J & R crew arrived at the rig location about 7:00 a.m. and the Splicer crew arrived about 8:00 a.m. The J & R crew was available to provide assistance to the Splicer crew as they changed out the sand line. The Splicer foreman was overall in charge of the work effort.

To change out the sand line, the old wire rope must be removed from the steel drum on the servicing rig and then the new wire rope wrapped onto the drum. As the old wire rope is pulled off the rig, it is wrapped onto a wooden spool. The receiving spool is mounted in an "A" frame on a flat bed semi-trailer (**Photo #3**). The "A" frame mechanism includes a hydraulic motor to turn the spool while pulling the old wire rope from the rig and wrapping it onto the spool. The old wire rope is pulled off the sand line drum and wrapped onto the wooden spool until three wraps of old wire rope are left on the sand line drum. The old wire rope is then cut near the end of the semi-trailer. The wooden spool of old wire rope is set off to the side and a spool of new

wire rope is positioned in the "A" frame. The new wire rope is reeved into the tensioning mechanism (**Photo #4**) and temporarily spliced into the cut end of the old sand line. The rig's drawworks engine is then used to wrap the short section of old wire rope back onto the sand line drum. This action pulls the new wire rope up and over the crown and down to the sand line drum. When the new wire rope end arrives at the drum, the wrapping is stopped. The temporary splice is taken apart and the short section of old wire rope is manually pulled off the drum and discarded.

The crew is now ready to begin wrapping the new wire rope onto the sand line drum. The Splicer foreman is positioned next to the sand line drum, the Splicer hand is positioned near the tensioning mechanism controls, and the J & R rig operator is positioned at the rig's operating station.

The first step in installing the new wire rope onto the sand line drum is to "set the bed wrap". The bed wrap is the first (bottom) layer of wire rope that is wound onto the drum. The drum on this J & R rig is smooth. It does not have any grooves to position the wire rope as it is wound onto the drum. The Splicer foreman must therefore ensure each individual wrap of this bed layer is properly positioned and tensioned. This critical positioning is needed to assure that each subsequent layer wraps onto the drum evenly and smoothly.

The end of the new wire rope is clamped onto the drum and the drum slowly turned a part of a revolution at a time. The tensioning mechanism is set to apply about 1400 lbs. tension on the new sand line at this stage. The Splicer foreman uses a hammer and chisel to slide the bed layer wraps closer together or further apart to achieve proper spacing. The drum is rotated a portion of a revolution, the wire rope is positioned laterally, and the drum is then rotated a bit more. During this work, the Splicer foreman signals to the rig operator when to rotate and when to stop rotating the drum. This process continues until the bed layer is fully wrapped onto the drum.

Once the bed layer is wrapped satisfactorily, the next layer is slowly wrapped onto the drum. As this second layer is being wrapped, the Splicer foreman must occasionally use a hammer to position the individual wraps. As the second layer is being wrapped onto the drum, it is marked with spray paint to indicate that it is the second layer. The rig operator observes this indicator during well servicing operations to sense that the sand line is nearing its end.

The third layer of wire rope is then slowly wrapped onto the drum. The Splicer foreman must evaluate whether it is spooling onto the drum smoothly and evenly. Tension on the new wire rope is raised to about 3500 lbs. during this stage. This layer is also uniquely marked to provide an indicator to the rig operator that the third layer has been reached while conducting well servicing operations. **Photo #5** shows the sand line drum with several layers of cable wrapped.

Once the foreman judges the third layer satisfactory, he is to depart the drum area. The drum rotation speed is then increased to accept all remaining layers.

## **The Accident:**

The Splicer foreman (Mr. Loberg) and the Splicer hand (Mr. Arteta) arrived at the rig location approximately 8:00 a.m. on Friday, 09/14/01, to begin the work of changing out the sand line on the well servicing rig owned by J & R.

The old sand line wire rope was removed and the new wire rope was clamped onto the sand line drum. During this work, the J & R hands (Mr. Ryan and Mr. Johnson) assisted with moving the wooden spools of cable and provided general labor assistance. The J & R rig operator (Mr. Bringham) was stationed at the rig controls and rotated the sand line drum as directed by Mr. Loberg.

The Splicer employees began setting the bed wrap. Mr. Loberg directed Mr. Bringham when and how much to rotate the sand line drum. Mr. Loberg directed Mr. Arteta to set the tension on the new line using the mechanism on the back of the semi-trailer. While the bed layer was wrapping onto the sand line drum, Mr. Loberg made hammer and chisel adjustments to set the spacing between individual wraps. The second and third layers were wrapped onto the sand line drum and all looked satisfactory. As the fourth layer started going on, Mr. Loberg could see that the bed wrap was not set exactly right since the fourth layer was not spooling smoothly. Mr. Loberg stopped the spooling operation and directed that all new layers be pulled back off the sand line drum. By engaging the hydraulic motor for the wooden wire rope spool on the semi-trailer mounted "A" frame, the new wire rope was pulled off the sand line drum and rewound on the wooden spool. All new wire rope down to the final three wraps of the bed layer were pulled off the sand line drum.

With the new wire rope again at the "starting point", Mr. Loberg directed the operations to begin setting the bed layer for the second time. Mr. Loberg added one extra wrap of wire rope to the bed layer to alter the spacing. On this attempt, the transition from the second to third layers did not spool correctly.

Directing the operations, Mr. Loberg pulled the new wire rope off the sand line drum to prepare for a third attempt at setting the bed layer. The third bed layer was wrapped onto the sand drum using slightly different line tension. However, again the subsequent layers did not spool correctly, indicating a problem with the bed wrap. The new wire rope (down to the final three wraps on the bed layer) was wound back onto the wooden spool on the semi-trailer.

The third attempt was completed as noon was approaching. Mr. Loberg asked Mr. Bringham for a ride to a nearby convenience store. Mr. Loberg & Mr. Arteta used the restroom and got some water/pop to drink. While at the store, Mr. Loberg telephoned Mr. Whisler to provide an update on the morning's events and to obtain technical advice.

Mr. Bringham, Mr. Loberg, and Mr. Arteta returned to the rig to begin the fourth attempt at installing the new wire rope onto the sand line drum. Following the procedures as before, Mr. Loberg set the bed wrap making slight corrections in the spacing of the individual wraps. The second layer then spooled onto the drum successfully as did the third layer. Mr. Loberg then

signaled to Mr. Bringham to increase the speed on the sand line drum (see **Photo # 6**). Mr. Loberg also signaled to Mr. Arteta to increase the tension to 3500 lbs., the running value for spooling the remainder of the drum. At this point, Mr. Loberg remained standing next to and facing the drum (see **Photos #7 & #8**). He was positioned toward the right hand end of the drum (facing forward toward the cab of the rig). Mr. Loberg then turned to face Mr. Arteta and signaled that all was spooling OK (see **Photo #9**). As the sixth layer was beginning, Mr. Arteta saw Mr. Loberg raise his left hand and then Mr. Loberg's body disappeared. At this moment, Mr. Bringham was looking in the direction of Mr. Arteta and the cable spooling off the truck and onto the sheave at the rear of the rig. When Mr. Loberg disappeared from Mr. Arteta's sight, Mr. Bringham was still turned away but heard a thump. He turned and noted that Mr. Loberg had gotten wrapped onto the drum. Mr. Bringham cut the power to the sand line drum and it stopped rotating. This mishap occurred approximately 1:10 p.m.

Mr. Bringham noted the position and condition of Mr. Loberg being wrapped under the wire rope on the sand line drum. He then ran to his truck to summon emergency assistance. When the EMT personnel arrived, Mr. Bringham showed them the location of Mr. Loberg's body. The EMTs covered Mr. Loberg's body with a blanket and summoned the Natrona County Sheriff to report the fatality. Through the afternoon investigators from the sheriff's department, the deputy coroner, and Mr. Whisler arrived at the mishap location. The sheriff & coroner's department personnel gathered witness statements and took photographs of the scene.

The following day, 09/15/01, the coroner performed an autopsy.

## **Findings:**

- Mr. Loberg was 37 years old. He had worked for Splicer since February 2000.
- Prior to working for Splicer, Mr. Loberg had worked out of state as a mechanic.
- Mr. Loberg and Mr. Whisler had known each other since childhood.
- Splicer performs wireline cable and wire rope spooling both in the field and at their shop facility in Casper, WY. The equipment used to do this work and the techniques to accomplish the job are nearly identical regardless of the location.
- Mr. Loberg had worked under the supervision and guidance of Mr. Whisler on approximately 150 to 200 field jobs during the past 18 months involving replacement of wire rope on drums. Those jobs were very similar to the job being performed on the day of the mishap.
- Splicer does not have written procedures for replacing wire rope on drums.
- Splicer uses on the job training (OJT) in their nine employee company as the method to impart knowledge from experienced employees to less experienced employees.
- Records are not made of who receives OJT (topic, date, etc.).
- The company uses "tailgate training" to emphasize safety aspects of upcoming jobs.

- Mr. Whisler had provided Mr. Loberg with increasing responsibility during field jobs under training. The culmination was Mr. Whisler having Mr. Loberg run the job with Mr. Whisler assuming the role of "hand". Mr. Whisler would guide Mr. Loberg as needed and provide advice regarding techniques for various aspects of replacing wire rope on a drum. This training technique had been used during the four to six months prior to the mishap.
- Throughout training, Mr. Whisler emphasized staying clear of running (moving) cable and to exit the drum area when the third layer is complete. Mr. Loberg always complied while under training with Mr. Whisler.
- The sand line drum on the J & R rig is of the smooth variety. It does not have grooves to guide the placement of the bed wrap. Smooth drums are common on oil field related equipment.
- While wrapping the bed layer, the drum is rotated in a "start and stop" manner as adjustments are made to the spacing of the individual wraps.
- The second and third layers are wrapped on the drum using low rotation speeds. During this time, the wire rope being applied may need minor adjustments in tension or alignment.
- The sand line drum rotation is not speeded up until the third layer is complete. At this point, the training stresses that the foreman should have exited the drum area.
- On the day of the mishap, Mr. Loberg was standing next to the revolving drum as the sixth layer of cable was being wrapped. The rotation speed of the drum had already been increased and the tension brought up to 3500 lbs.
- Mr. Loberg was wearing coveralls over a tee shirt and jeans at the time of the mishap.
- The accident scene photographs provided by the Sheriff's Department show that coverall material from Mr. Loberg's left sleeve area was first caught in the pinch point under the wire rope wrapped on the drum. This was followed by Mr. Loberg's left shoulder and then upper torso and neck area. Mr. Loberg's body came to rest under two wraps of wire rope.
- This was the first field job for Mr. Loberg where he was the supervisor without being under the tutelage of Mr. Whisler. This was also the first field job for Mr. Arteta. He had performed similar "hand" operations using like equipment at the company's Casper based shop.
- The new wire rope sand line did not spool correctly on the first three attempts, which required it to be pulled off and the process started over. This is not uncommon when wrapping new wire rope on a smooth drum. Seldom does the new wire rope spool correctly on the first attempt.
- Mr. Loberg had on occasion remained close to moving and revolving wireline cable and wire rope while performing work in the shop. He was reminded more than once by a coworker with the words "... you're scaring me Brad, back away...".
- The coworker reported that Mr. Loberg would guide the spooling wire rope or wireline cable with a gloved hand vice using a metal clevis device.
- Mr. Loberg would sometimes "get reckless" while working around moving wire rope per interview with a coworker.
- At the time of the mishap, the two J & R hands were a short distance away performing unrelated work on a wire rope swage fitting. They came running to lend assistance when they heard the rig shut down and saw Mr. Bringham running to make the call for assistance.

## **Analysis & Conclusions:**

Mr. Loberg had a total of 18 months experience with the company working in both the shop and the field. During the last four to six months, Mr. Loberg had spent extensive time in the field under the direct supervision of the company owner. Mr. Whisler was grooming Mr. Loberg to work on his own. The methodology of this final grooming stage was for Mr. Loberg to run the job with Mr. Whisler on site acting as a hand and being available for advice & technique guidance.

Splicer uses OJT to transfer knowledge from experienced employees to less experienced employees. There is not a formal training program utilizing written procedures. Per interviews with company employees, the OJT approach is effective for both technical information transfer and for conveying safety procedures regarding the job. Safety is reinforced during tailgate training meetings.

While working with Mr. Whisler, Mr. Loberg had never remained in the vicinity of a sand line drum once the third layer was wrapped and the rotation speed was increased. Mr. Whisler cannot explain or fathom why Mr. Loberg opted to do this on the day of the mishap.

Another employee reported that Mr. Loberg would, on occasion, take chances by remaining close to revolving cable and wire rope. Though he would heed reminders to back away, he would sometimes repeat the behavior on later jobs.

On the day of the mishap, Mr. Loberg remained next to the revolving sand line drum as the sixth layer was being wrapped. He had directed the rig operator to speed up the revolutions on the sand line drum after the third wrap was complete and he had directed Mr. Arteta to bring up the tension on the wire rope to 3500 lbs.

When the fourth attempt at spooling the new wire rope on the drum had succeeded, both Mr. Loberg and Mr. Arteta were happy with the job and proud that they had succeeded as a team at working independently in the field. They conveyed this accomplishment to each other just prior to the mishap.

Immediately prior to the mishap, Mr. Loberg had his back to the revolving drum. He was standing slightly right of center of the drum with cable wrapping from the drum's right to left on its sixth layer. He was observed to have raised his left hand. Almost immediately he disappeared from sight as his body was wrapped on the drum under the wire rope.

The wire rope feeding onto the drum extended downward from the crown of the rig to the bottom of the drum where it was spooling. At the time of the mishap the wire rope was passing just to the left of Mr. Loberg. As it was wrapping onto the drum, it was moving closer to him with each revolution of the drum.

It is not known if Mr. Loberg's coveralls became entangled in the spooling wire rope; or if he reached out to touch the moving wire rope to determine its position; or if he inadvertently grabbed hold of the wire rope in preparation for moving clear of the drum area.



Accident scene and autopsy photos were provided by the Natrona County Sheriff Department. The photos indicate that Mr. Loberg's left sleeve coverall material was the first to enter the pinch point where the wire rope was wrapping around the drum followed by his left arm/shoulder area and then his upper torso/neck area. His body came to rest beneath two wraps of wire rope.

Mr. Loberg likely died immediately as he became trapped beneath the wire rope spooling onto the revolving drum. Tension on the wire rope was set at 3500 lbs. at that time.

This fatal accident appears to have been caused by Mr. Loberg's momentary inattention to the moving wire rope as it was being wrapped onto the sand line drum. At the time of the mishap, he should not have been standing in the vicinity of the rotating drum.

The procedures taught to and used by company employees provide for exiting the drum area once the third layer is observed to be spooling smoothly and the layer is painted with the warning operator warning marks. Further, the drum rotation speed is not to be increased until the employee is clear of the drum area. Mr. Loberg had not violated these tenants during any of the training time spent with Mr. Whisler.

The day of the mishap was the first opportunity for Mr. Loberg to work in the field in a foreman capacity without direct supervision. He did not follow the guidelines that had been repetitiously presented to him during 18 months in a training status.

Mr. Loberg had demonstrated careless behavior to a fellow employee on sporadic occasions during shop based work. This pattern is likely the root cause of this accident.

The training afforded to employees by Splicer is deemed adequate. It meets baseline OSHA requirements.


There were not any Notices of Hazard issued to the employer as a result of this investigation.

## **Recommendations:**

- All employees should be briefed on the facts and circumstances of this particular accident.
- The employer should put in writing the procedures for changing out wire rope on well servicing rig drawworks drums. Special emphasis should be included about safety considerations for this work.
- The employer should ensure that coveralls worn by employees working around moving machinery are not loose fitting.
- The employer should reaffirm with all employees the importance of working safely. When one employee observes unsafe behaviors on the part of another, a management official should be made aware.
- The employer should institute a program of regularly scheduled safety training meetings for all employees.


This report of investigation and findings are regarding the fatal accident involving:

Mr. Brad Eugene Loberg  
808 Silver Sage  
Evansville, WY 82636

Signed: 

Lenard Brewer  
Wyoming Workers' Safety

Date: 10/22/01



Kenneth D. Lantta  
Wyoming Workers' Safety

10/22/01