

# Red Dog-Suvisi

2013, Q4

## More Than a Business Meeting

By Verna Westlake

"Red Dog has done so much for our community that we want to give back and show our thanks for all you've done for us." That was the invitation we received from the people of Noatak that brought us to their village in July for our first annual operations update for 2013.

Teck promotes understanding and appreciation of cultural differences for our Red Dog people and so we look for opportunities for engagement, cultural awareness and exposure. What better opportunities than our annual operations update meetings! It could be fishing, hunting, berry picking, festivities and celebrations, building and maintenance projects, anything that was actually taking place at that moment and time in that community.

Our Noatak hosts took charge and set up quite a day for us. It was salmon seining season! The Elders needed fish, the young children needed to learn from the Elders and the mid-generation and young



Noorvik residents showing our employees how harvesting whitefish with a set net is done.

adults all played a big part in the success of the day. Our Red Dog people learned how to seine, cut and process the salmon, and best of all developed new relationships!

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## Message from the General Manager

By Henri Letient



As we look back at 2013, we have a lot of achievements to be proud of. Many great safety initiatives were set in motion here at Red Dog. The efforts by all on housekeeping are much appreciated.

On his last visit, the MSHA inspector made a point of recognizing our efforts and noted a visible improvement. More safety team ideas are completed each day. SafeTrack observations made a difference with over 1,000 observations recorded in the past three months alone. Keep it up! Safety is a core value at Red Dog. Preventing an unsafe act or pointing out an unsafe condition is a natural thing to do when embedded as a core value.

The Port had a record year: best start to a shipping season in 23 years at Red Dog; shipped in excess of 1.3 million tonnes of concentrate in 115 days, and all that without a recordable incident. The Port has not had a loss time incident in four years! That is something to be proud of!

The mill broke several throughput records this year achieving great production despite several setbacks. The mine worked hard through their challenges at keeping pace with the mill, exceeding planned production. Major projects associated to the main and back dams, wing wall and main waste dump re-sloping were completed safely and on budget.

Special emphasis was placed on cost reduction and operational improvements this year. While there are still many opportunities to improve, I am proud to report that through team work

and improved planning, we saved operating costs and generated additional revenue in 2013. These efforts will carry on into 2014 making us more efficient and generating more value. I cannot stress enough how important this is. In today's economy, your efforts are protecting our jobs here at Red Dog. We have not had to reduce our workforce—as many others in the industry have done—to compensate for tighter markets. On the contrary, there are 63 new faces at Red Dog, new hires to fill vacant positions and keep Red Dog a great place to work!

Thank you for your support and dedication and all the best to you and your families in 2014!

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## More Than a Business Meeting

After our cultural activities, we arrived at the school to set up for our business meeting. In the meantime, the school custodian had gone downriver to check his fish net and we could not get into the building. So, we held the meeting outdoors! It was one of the best meetings we've ever had. The community atmosphere was great with all the people we got to know during our fishing activity. It was well attended and you just couldn't ask for a more beautiful setting and background with the tundra, rolling hills and the arctic sky. It was a memorable day.

Our hosts in all the villages were very gracious and hospitable. We visited Ambler, Shungnak and Kobuk at the end of August

and participated in fishing for shee, salmon, whitefish and berry picking. Our Red Dog people were ready and willing to lend a hand with the foundation work of the new pastor's cabin being built in Ambler. Our maintenance guys went right to work at Shungnak to fix the school front door that was not shutting properly. After working with Elder sisters Mildred Black and Nina Harvey in Kobuk, we enjoyed the atmosphere and bounty of their hard work in their cache or storage place that had everything a person could ever want or need to survive! We ate fresh dried fish, moose, and had fresh blueberries!

Our hosts in Kiana and Noorvik kindly invited us and scheduled their annual Elders Appreciation Potluck dinners to coincide with our visit.

We were honored to attend. Although temperatures were 15-20 degrees below zero Fahrenheit, we enjoyed being down on the frozen Kobuk River with local fishermen as they checked their fish hook lines for burbot and their nets for whitefish through holes in the ice.

We are grateful to everyone who participated and welcomed us in each village. Our visits in our communities are now much more than a business meeting because of the kindness and efforts of all.

Weather did prevent us from visiting Kivalina, Kotzebue, Deering and Buckland in 2013. We look forward to future visits and activities with all of our 11 villages in 2014!



## Congratulations, Ron!



Nicole Baker, Environmental Technician sold Ron the winning ticket.

Ron Hoyem, Mill Mechanic, won a 7-day cruise for two with Holland America!

Alaska Resource Education (ARE) Board Member Verna Westlake and ARE would like to congratulate Ron for winning the grand prize at the George Schmidt Memorial Raffle & Auction ARE fundraiser on November 8!

Red Dog was the single largest supporter of raffle ticket sales this year. Thank you, Red Dog and a special "thank you" to Nicole Baker, Environmental Technician, who helped sell tickets and sold the winning ticket to Ron! Other prize winners included Sandi Black, Metallurgical Engineer; Jim Swendseid, Principal Engineer – Mine; and Joe McCue, Mine Operator.

ARE is a 501(c)(3) organization whose mission is to teach students about Alaska's natural resources. Based in Anchorage with a statewide outreach, ARE has a curriculum, kit, youth programs, and a 500-level course certified through the University of Alaska on mineral, energy, and forestry resources in the state.

ARE also thanks Red Dog for continued support through programming and fundraising efforts and for both hosting and sponsoring the "Rock & Roll Around Alaska" teacher training course for the Northwest Arctic Borough School District teachers and students.



# Mine Technical 2013 Projects

By Nancy Tracy

Mine Technical project's team members, Jim Swendseid, Principal Mine Engineer; Shaun Herron, Mine Technician; Tess Snyder, Mine Engineer and myself, Senior Mine Engineer ended our 2013 construction season in mid-December. We'd like to thank the Mine, Surface Crew, MatMan Mill Maintenance, Electrical, Environmental Departments, the contractors—Paa River, Magnus Pacific, Willowstick, Contec, Golder, URS, ERP, WHPacific and NANA Lynden for their assistance in the success of our projects.

In an article in the 2013 Q1 Suvisi newsletter titled "Red Dog Takes Water Management Seriously", it states that Red Dog stopped discharge in 2012 due to selenium levels followed by a 1,000-year-storm event which increased the stored water by 170%. As a precautionary measure, Mine Technical began projects to raise the tailings impoundment.



Paa River & Layfield laying liner on the West Abutment of Main Dam

**Tailings Dam Lifts** – The elevation of the Back Dam and Main Dam was raised 6 feet to 976 feet. The Back Dam is constructed of a plastic-concrete core and the Main Dam of a liner system. We also extended the slurry wall on the eastern side of the tailings pond by approximately 700 feet to the south. All designs were submitted, reviewed and approved by the Alaska Department of Natural Resources (ADNR). The Back Dam designer and Quality Control (QC) is Golder Associates of Anchorage. Project management was performed by Golder Construction and the earthwork and concrete by Paa River. The Main Dam

designer is URS Corporation of Seattle. The QC was performed by URS, the slurry wall extension was completed by Magnus Pacific, earthwork was completed by Paa River and Mine Operations, and the liner installation was completed by Layfield. WHPacific was contracted to complete all the survey work on the dams and other Mine Technical projects. With the 6 foot raise completed this summer, we have created 1,320 million gallons of storage in the tailings impoundment, this is anticipated to last 3 years.

**East Tailings Pipe Bench** – This in-house design by Mine Technician, Shaun Herron; supports the longer-term tailings management strategy by placing piping around the perimeter of the tailings impoundment. This pipe bench was constructed to accommodate 5,000 feet of 26" high density polyethylene (HDPE) piping. The Water and Tailings group has already placed piping on the bench and is utilizing this for the winter discharge line. Mine Operations completed the bench and ramp fills, Paa River moved pipes onto the bench and placed jersey barriers and the Electrical Department moved power cables. With the addition of the pipe bench and relocation of pipes, the Water and Tailings Group distributed tailings in a reliable, effective manner to maximize the storage space in the pond.

**Portable Crushing Operations** – Mine Technical is tasked with ensuring that all material quantities are met and within the design specifications. This year we crushed 91,000 total cyd of material specifically for the tailings dam projects. Mine Technical worked closely with the same Paa River Crusher crew. This has been the same crew for the past 2 years. The Mine Operations Drill and Blast crew provides the broken inventory for the crushing operations and Mine Operations hauls material away to designated stockpiles. There are very specific gradations set by the dam designers that have to be met in order to maintain workability and maintain material performance.



Main Waste Dump in August 2013

## Main Waste Dump Acid Rock Drainage

**Cut-Off Wall Engineering** – Mine Technical was tasked with a small drilling program to assist in verifying a hydrology model that was constructed in 2012 by Golder. This project is to ultimately identify a cut-off wall along the Main Waste Dump. Currently there is a French drain collection system in place along the toe. However, this system will need to be protected as the pond level rises. Mine Technical has been working with Golder Associates in the Anchorage office regarding the hydrology mode. The Drill and Blast crew assisted in the drilling of all the instrumentation for this project. By drilling and installing instrumentation we are gaining a greater understanding of flow paths beneath the surface. This will help establish target zones for installing pumps and final placement of a cut-off wall.

Additional scheduled projects and reviews to enhance the operations were completed in the 2013 season not prompted by the 2012 events.

## Rock Drain Civil Refurbishment

In 2011, we conducted a study with URS that showed the under-drain—a zone of coarse rock that runs beneath the tailings dam—was functioning properly. There was an indication of a blockage causing restricted flow. The engineering design was completed in 2012 and refurbishment began in 2013.

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## Mine Technical 2013 Projects

There were enhancements made to the area such as perforated pipe providing a direct connection between the pond and the pumps and replacement of the coarse rock material. URS Corporation worked on the studies and designs of repairs and QC. Paa River completed the pipe installation and earthwork. By replacing the under-drain material and enhancing the direct connection from the pumps to the pond, we have observed a drop in the water level within the dam structure which ensures effective, safe operation of the dam.

### **Engineering Review Panel (ERP) –**

The ERP, BCG Engineering, Klohn Crippen and a private consultant reviewed the Red Dog Tailings Facility including the Main Dam, Back Dam and Seepage Reclaim Facility. We reviewed historical construction and onsite activities for geotechnical considerations. At the guidance of ERP, we conducted field studies such as a cone penetration test (CPTs) and installation of instrumentation such as inclinometers and flumes. Mine Technical worked with Contec on the CPT program. Mine Operations drilled the inclinometers to depth and Paa River installed all the instrumentation. URS Corporation completed the QC on both projects as well. By completing the reviews and following work plans with ERP guidance, we are ensuring that Red Dog's dams are held to a high-standard of safety and effectiveness.



Paa River crew rolling out jute for erosion control on Sulfur Creek Diversion.

**Sulfur Creek Diversion** - Development of Aqqaluk deposit will result in the eventual encroachment into Sulfur Creek drainage area, requiring the need for a permanent diversion system. The design was done in-house, by Shaun Herron. This system will function to keep Aqqaluk runoff water separate from natural occurring storm water that presumably flows into Sulfur Creek and eventually makes its way to Red Dog Creek. This ditch was constructed in early spring of 2013. Paa River completed all earthworks on this project. By re-routing the water, we will prevent it from flowing over the highwalls of Aqqaluk pit and give the clean water a direct pathway to Red Dog Creek.

**Geophysical Survey** – At the request of the ADNR, we conducted a geophysical survey to locate flow paths beneath the surface of the tailings impoundment. The survey was conducted around the Main Dam, Seepage Pond and Back Dam facilities with Willowstick Technologies to complete these surveys. By completing this survey we can identify any flows out of the tailings impoundment and correct them before they could cause any impacts to the environment.

### **Bridge Grouting Repairs** – Every 3

years PND Engineering is contracted to complete a thorough inspection of all nine bridges, including approaches, bridge structure and drainage channels and note any deficiencies. This year we completed grouting repairs at Little Creek and Aufeis Bridge. Paa River completed the grouting repairs. By performing regular maintenance on the bridges, we will prevent potential weakness and ensure reliable transport from Red Dog to Port.



Red Dog airport runway in August 2013.

### **Airport Re-surfacing** – Mine Technical is

conducting preliminary engineering on the airport runway resurfacing. This study is examining current pavement conditions, re-surfacing designs and future maintenance of the runway. Currently, this project will span multiple years with the engineering, building material inventory and actual project completion. WHPacific is working on the re-surfacing design. By completing the runway re-surfacing, we will ensure safe passage in and out of Red Dog.

## Working Toward a Common Goal

By David Reardon

After working together diligently for several years, we have completed the Teck/NANA Contracting and Procurement manual. This detailed document outlines the process by which Teck and NANA approach and conduct business with one another.

Teck is committed to its contracts process and to fostering positive working relationships

with NANA and their affiliate companies. This document helps to define roles and responsibilities of both parties and outlines the various steps in the process. It provides a framework for negotiating and coming to a favorable outcome for both parties. It ties together the various governing documents signed over the years, into one clear and concise management process. It provides

guidance for both parties on communication protocols, contract creation, negotiations, supplier performance and dispute resolution.

Many thanks go out to all of the people who have been involved in pulling this document together. This is a good example of how Teck and NANA can work toward a common goal.

# Eat. Sleep. Ship. Repeat.

By Marquita George

Ships are scheduled and tonnes are calculated with goals in place. All the preparation and storage over the past winter is about to pay off. The busiest time of year for Red Dog port is about to begin.

"When are we going to start shipping? Is the ice gone? Did the FOSS barges leave Seattle yet? When is the first ship scheduled?" The guessing game and questions began long before June arrived.

Many events take place at the same time: the ice is breaking up, but still compact for miles; the FOSS barges have left Seattle; summer hires return; maintenance prepares and tests the conveyor systems and scales and; operators are filling every available space in the Concentrate Storage Buildings (CSB) with lead and zinc. We're all wondering when the ice will free up the port site to allow the Noatak and Kivalina barges through. We're ready to start shipping the concentrate out for the world markets. However, all we can do is monitor the marine forecast and wait for nature to take its course and for the local subsistence committee to give us the "okay" to begin our season.

Once the ice cleared and we were given the "OK", the 2013 shipping season began smoothly with "perfect" shipping weather. We shipped out 77% of the concentrate in the first 2 months, which was a Red Dog record for the past 23 years. That's 17 consecutive ships before the month of September. Loaders and dozers worked around the clock, loading 15-20 ton buckets of concentrate into hoppers to load the conveyor belts. Concentrate stockpiles were continuously prepared for the next ship, so that when anchored, we were already loading a barge for it. As the season progressed, we did all of this with minimal mechanical and weather delays. This was a major accomplishment, thanks to the employees who inspected and maintained the equipment throughout the season.



What is the "million dollar question" at the Red Dog Port? As in the beginning of the season, there isn't one question, there are several: "How much lead do we have in the CSB? Do you think we have enough loads to finish the ship? Are we going to be waiting for zinc from the mine? Do you think we can add another barge load to the last ship? How many haul truck loads does it take for a full barge? How many days will it take to get it to the port?" and "How much has the mill been producing this week?"

At the last ship of every shipping season, we scramble to find answers to those questions. We try to find every last bucket of lead or zinc from every corner of the CSB. We wait for trucks to haul enough concentrate. Most importantly, we work together to get the job done safely.

This season, we did just that, exceeding the goal of 1.2 million, and shipped out 1.3 million WMT. We loaded 253 barges with 24 ships completed in 113 days. Most importantly, as we hoped and expected, on October 30, 2013, the Red Dog Port has gone 1,571 days without a Loss Time Incident, and we are all proud. We made it through another season with everyone going home safe and healthy!

Now that the buildings are emptied, all we need to do is refill the CSBs, to do it all over again!

## Another Successful Sealift!

By David Reardon

I don't know about you, but the process of sealift still amazes me—four container barges, 2,500+ containers; 18 pieces of deck cargo weighing approximately 53,000 tons—forklifts, trucks and about two dozen people all working together! It's quite an event.

October 2013, marked the end of another successful delivery season at Red Dog, one that started off well, and yet had its share of challenges as the season progressed—in particular the weather. We had several false starts and weather delays due to rough seas.

Our fuel delivery season ended with the final barge delivering 2,743,456 million gallons of fuel. We received a record amount of 20.1 million gallons total of diesel fuel for 2013.

All was done safely and without serious incident. This is a testament to the men and women who participate in this part of the operation.

Many thanks to each of you.



# Congratulations, to All! Another Successful Shipping Season Completed at Red Dog!

By Mark Smith

At 3:00PM on October 23rd, we completed the 2013 concentrate shipping season. Shipping commenced on July 1st with a total of 24 ships loaded against an original target of 23 ships.

It was accomplished safely and efficiently through the efforts of all our Teck Red Dog employees, both regular and seasonal; our Contractor Support Group (FOSS, Fed Nav, ANP Shipping, Nana Lynden) and Teck's Marine Transportation and Marketing Group.

Total volume of concentrate shipped was approximately 1,318,450 WMT, or 7% above the original target. This is a direct result of the additional concentrate production this year in the Mill, as well as the efforts of the Marketing Group to sell this concentrate. The concentrate was comprised of approximately 1,118,972 WMT of zinc and 199,478 WMT of lead.

The Port load-out facilities experienced only 11 hours of mechanical/electrical delays during the entire effort, which is a testament to the support work performed throughout the year by both the Port Maintenance and Port Operational folks.

The overall weather conditions this shipping season were very good. Through the end of August, a total of 17 ships containing 77% of the expected 2013 tonnage were loaded, which is the best start to a shipping season in 23 years at Red Dog.

In comparison to this same time last year, we had loaded only 11 ships containing 51% of the expected 2012 tonnage and there were 6 ships anchored and waiting to be loaded.

Another major milestone was also achieved—the Port Operations group completed 4 years without a lost time incident (LTI) which is equivalent to 1,461 LTI free days.

Congratulations and thanks again for a job well done and ensuring *Everyone Going Home Safe & Healthy Every Day*.

## Gifts and Farewell

By Brent Baumann



Laramie Baumann (left) hazing for his son Trevin (right). Following a legacy of Baumann's, Brent's nephew Trevin competed in Youth, High School, College and Amateur and Pro rodeos for three generations. Trevin currently is in first place in the Montana State High School standing in Steer Wrestling and is a contender for the All-Around Title.

My job as a Geotechnical Geologist at Red Dog was a gift from God because it afforded me a place to get away from the familiar places that represented pain in my life at the time, breathe fresh arctic air, work long hours, workout at the gym daily and try to focus on the future. The two months prior to coming to Red Dog Mine were some of the toughest days of my life, because my wife decided to end our marriage of 26 years.

It was because of this job that two years ago I providentially met my soon-to-be new wife's cousin from Columbia, South America while getting a haircut in Homer, Alaska while on R&R. The 4-weeks-on and 2-weeks-off schedule worked in my favor as I started a very long-distance relationship, traveling from Red Dog Mine to Cartagena, Colombia and oftentimes back through Montana. However, moving a new wife from another culture and being away over 50% of the time is not exactly "ideal" circumstances for your first year of marriage.

I am now leaving Red Dog because commitments to family and church have been difficult to maintain while working a shift rotation schedule that requires being away from home two-thirds of the year.

I come from a ranching and rodeo background and chose to leave Red Dog in October as this is when we wean and sell our calves and work the cows. I will be busy buying, fixing and flipping houses and I recently bought into landscaping franchise business that will open doors for business April 1st. In my spare time not spent on the ranch, I plan to finish writing two books which are both half-written.

I will miss many of you and I will certainly never forget the 2 ½ years of my life spent at Red Dog Mine. Needless to say, my wife is very excited about having me around more than just 12 days a month!

May the Lord Richly Bless You All and Cause His Favor to Shine on You!

Suvisi (Sü-vi-see)  
in the Iñupiaq  
language means:

"What are the many  
people doing?"

# Safety Teams

## Electrical & Instrumentation

Martin Dimas, Electrician, was concerned about the wiring and unwiring of the electrical motors for the IsaMill gland seal water system. Access to the motors was limited in confined areas, creating awkward and cramped positions for the worker. Martin and fellow Electricians Sigwein Riley, Thomas Bernhardt and Vance Schaeffer found a way to install disconnects with plugs to eliminate the need to enter such tight spaces.

The Electrical Shop worked as a team to take this idea to the next level to include most of the sump pumps around the entire mill. This made the work of Mill Operations and Mill Maintenance a lot easier because if they needed a sump pump racked out, it is now available to them. The need to call out an electrician to unwire or rewire a pump was eliminated. With a convenient rack out location, maintenance can now unplug the pump motor to ensure that it is safe to work on the sump pump and then place it back in service without an electrician. Over 20 sump pumps now have this new safety feature.



Disconnects with plug feed to pump motor.



Completed cable to pump motor.

## Building Maintenance

Jeff Vineyard, Mill Mechanic, proposed to address dust and odor for the Personal Accommodation Center (PAC). Originally, he proposed to extensively modify and upgrade the outdated Heating Ventilation Air Conditioning system utilizing current technology. A solution of this magnitude requires engineering feasibility and big ticket budgeting. It's not out of the question, but not feasible on the near horizon. In the interim, Jeff sourced a battery powered spray cleaner and disinfectant applicator and went to work on the 20 PAC air handlers. Not only did this simple safety idea improve air quality in the PAC, but it also had a side benefit of reducing the energy required to force air through the dirty coils, which more than paid for the cost of the sprayer and Jeff's time to complete the work.



Magnetic gauge showing before and after coil cleaning data.

## Mine Department

Rex Lewis, Mine Ops and Norm Paley, Mine Technical, submitted a safety idea: One-way roads going in and out of DD2 gravel pit were too narrow. Trucks got into soft spots or bad areas on the road and were not able to move over to avoid these areas. The road needed to be widened so that haul trucks could spread their tracks and not drive continuously in the same path. Plans and action were taken immediately to redesign and widen the road. The task was completed by Mine Ops Crew 34\* within two days.

Darold Sun, Mine Ops, submitted that the main haul ramp grade was too steep from the crown to the outside edges. The switchback area had too much of a bank grade and haul trucks were sliding when making the turn on the corner. Mine Ops, Crew 34, night shift started right on it. Work continued into next day shift and was completed by night shift's second night on the project.

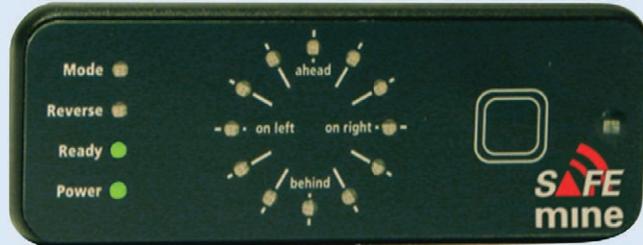
Turk Martin, Drill and Blast submitted an idea to install the helicopter radio channel in the blaster's and pit shifter's truck for traffic control of blasting in the pit. Richard Zanni, Communications, completed the task the next day.

\* Crew 34: Ryan Sherman, Alta Horst, Luke Koonook, Tommy Adams, JT Sherman, David Walton, Austin Norton, Rex Lewis, Ronnie Cornell, Jordan Carpenter, Chris Reich, Bernadette Jack, Dean Mitchell and Darold Sun.

# Safety Teams

## Safe-Mine

By Mark Tatlow



NANA/Lynden and the Mine Department are working together to test a new collision avoidance system called "Safe-Mine".

The system uses GPS technology to determine the location and direction of vehicles on the port road that are equipped with the Safe-Mine system. A transmitter sends the location of a vehicle to other vehicles equipped with the Safe-Mine system. The system will warn the operator of approaching traffic. We feel that this will create a safer working environment, especially in times of reduced visibility on the port road.

We are testing the system in seven concentrate haul trucks and one pickup. If this test proves to be successful, we will push this out to all equipment that travels the port road. Testing will continue through early January.



Jason Anderson, HE Mechanic, submitted that a lot of questions were being asked about available Personal Protective Equipment (PPE) in the warehouse and that it was very time consuming to locate on our GenCid database system. With the help of Dan Rawlins, Materials Planner and Jeff Dalton, HE Shop Supervisor, a guide book was created with photos, descriptions and supply codes for each item. The guide book covers ear and hand protection, different types of safety glasses and, respirators and components including cartridges and filters. New items are added to the guide as they arrive in the warehouse. Easy reference to PPE helps ensure that we have the correct product for a specific job and also saves time in locating the item.

Ron Sweet, Trainer, identified that ladders in the HE shop stored near the south side man door entrance created congestion in the area, oftentimes blocking the walkway. HE Mechanics Jim Tavis and Bob Conway welded and installed hangers for ladder storage in a new location at south #2 bay wall. This cleaned up the area near the man door and put the ladders in a central location for easy access.

## Safety Teams – Red Dog Maintenance

By Bob Chesham

The safety team concept in very basic terms is the empowerment of the work force to identify issues that under certain conditions may lead to an injury and then develop and implement a solution.

The workforce is in the best position to recognize potential hazards and implement the corrective actions. The initial intent was to identify smaller "nagging-type" issues that never seem significant enough to be addressed during normal operation.

As ideas become more complex in nature they may require the implementation of a team of

individuals with expertise in several disciplines such as engineering, etc. The focus area is most definitely smaller issues of which it is estimated there are possibly several thousand of them out there.

Safety teams have proven to be highly effective in several large industrial organizations and have developed to a point where the safety teams are operating with minimal input from the management group.

This concept is very appealing to our organization because it is what is known as a "leading indicator". By that, we mean it is a

process that identifies potential hazards and eliminates them before an injury happens, thus scoring ourselves on accomplishments versus the consequences, which we categorize as medical aids, first aids and lost time accidents.

This is our first full-year with the program in place and it has yielded a significant number of great ideas. We look forward to addressing many more of the possible thousands that are out there.

Thank you to all those who participate and continue to make a difference in making Red Dog a safe and healthy environment to work in.

## Red Dog Firefighters 2nd in State

By Otto Kraus

Red Dog firefighters Sonya Adams, Geologic Technician; Russell Brandon, Heavy Equipment Shop Supervisor; Otto Kraus, Environmental Technician; Josh Luther, Mine Operator; Shawn Rangitsch, Heavy Duty Mechanic; Pete Savini, Fire Systems Serviceperson; Matt Shelton, Port Mechanic and; Tim Smith, Port Operator, attended a week of advanced firefighting and rescue training at the Alaska State Firefighters Association's (ASFA) 2013 Conference in Anchorage in September.

Firefighters from across Alaska attend the conference to learn advanced skills and share experiences to better serve their communities. Skill training courses include truck company operations, nozzle-forward hose lines, advanced vehicle extrication, and high angle rescue. As technology becomes more advanced, these trainings ensure that Red Dog firefighters are ready to effectively and safely mitigate emergencies as they occur.

The week of training ends in a skills competition that pits departments against each other. This year, Red Dog firefighters took 2nd place overall in the state, showing that our abilities as firefighters are exceptional.

The Red Dog Chapter of the ASFA thanks Teck for its continued support in sending these eight firefighters to conference this year. This invaluable training opportunity is one of the highlights of a Red Dog Fire Department firefighter's career.

The volunteer firefighters of the Red Dog Fire Department stand ready as a last line of defense to ensure *Everyone Going Home Safe & Healthy Every Day.*



Photo courtesy Liisa Morris

Competition Team on the Anchorage Fire Training Grounds:  
Kneeling L-R: Otto Kraus, Tim Smith  
Standing L-R: Matt Shelton, Russell Brandon, Shawn Rangitsch

- ★ 2ND PLACE, LADDER RAISE:  
Russell Brandon, Matt Shelton, Tim Smith, Otto Kraus
- ★ 2ND PLACE, MAKE & BREAK:  
Shawn Rangitsch, Russell Brandon, Otto Kraus
- ★ 3RD PLACE, SCBA DONNING:  
Otto Kraus
- ★ 4TH PLACE, FIRE EXTINGUISHER:  
Shawn Rangitsch

## Why Do We Throw all this Stuff Away?

By David Reardon

Why do we throw all this stuff away? Have you ever asked yourself that while walking past a garbage can, dumpster or drop box? Have you noticed all the cardboard and scrap metal in the dumpsters? You're not alone.

Recently, to support Teck's sustainability vision, we formed an internal group dedicated to address this important issue.

The Materials Stewardship Group, was formed with a relatively simple goal in mind—"establish new recycling programs and enhance existing programs"

We assembled a cross-functional team to represent all the departments on the property. Those team members are: Marcus Munro from the Mill; Zeek Chalbaud, Loss Control; Frankie Pillifant, Geology; Steve Rhodes, Reliability Centered Maintenance; Stacey Harris, Finance; David Reardon and Jeff Casteel, Materials Management; Joe Diehl and Chris Eckert, Environmental and; Neil Christensen and Tim Jones, BEAR.

As the Materials Stewardship program develops and takes hold, it will include many other Teck employees in various areas. We all have

a stake in ensuring the program's success and maintaining our local Red Dog environment.

I'm excited by the opportunity that this group has to make a positive impact on the property and I look forward to getting started. If you have any suggestions on how the program can be improved feel free to reach out to one of the team members.

## Fire Attack

By Pete Savini



*Fire Attack Class and instructors:*

*Back row L to R: Pete Savini, Frank Jones, John Hoops, Travis Clark, Joe Russell, Cliff King and Darren Jones*

*Front row: Tim Smith, Josh Luther, TJ Milton, and Otto Kraus*

The Red Dog Fire Department conducted a Fire Attack Class in August for its newest volunteers. This is the first step to becoming a firefighter. The class gives aspiring firefighters a foundation in the techniques used by the Fire Service.

The new volunteers are Frank Jones, Crusher Operator; Tim Smith, Port Operator; Clifford King, Contracts Administrator; Lex (Josh) Luther, Mine Operator; The Red Shirt (TJ) Milton, Mill Operator; Joe Russell, Mill Operator and; Dora (Travis) Clark, Mill Mechanic. Each day for a week they practiced putting on their turnout gear, did classroom work and testing, and received hands-on training for various types of tasks. At the end of the week, this training culminated in a live fire exercise.

Most importantly, though we teach firefighter safety, we emphasize the necessity of using breathing apparatus whenever the possibility of a hazardous atmosphere is present. We drill them in the proper use of our specialized protective gear, ensuring they use it correctly in emergencies.

But it's not all technical training; we strive to instill in our volunteers a sense of the history and tradition of the Fire Service. We emphasize safety and unique techniques, our philosophy of bonding, trust, camaraderie and teamwork that embodies professional fire department's whether volunteers or not.

Thank you to Red Dog Firefighters, John Hoops, Darren Jones and Otto Kraus who provided instruction and to the Management Team at Red Dog for supporting the Fire Department and training in particular.

## Teamwork and ICAM

By Sean Forrester

When an incident takes place here at Red Dog, we have an opportunity to make ourselves better and safer by taking the time to recognize and identify what the contributing factors are. We have not learned how to prevent recurrence if we don't properly and thoroughly analyze the order of events and pieces.

ICAM (Incident Cause Analysis Method) is a tool that will help us identify contributing factors that lead to incidents. It is a step-by-step, investigative process where a team of three to five individuals collect data, gather information related to events leading to the incident, brainstorm data collected, analyze, and retrace the sequence by way of the ICAM process to determine the underlying cause(s) of the incident. The team collects information through securing the incident scene, documenting through pictures and re-creations, and conducts interviews with people involved.

The team is made up of individuals who are not members of where the incident took place. This helps with remaining neutral and presenting facts with no personal judgment. From this investigation and process, the team develops recommendations to prevent recurrence and reduce risk, identify key learnings and present findings of the incident in a clear and concise manner to the area involved with the incident so that they can learn from it.

Training sessions for managers, supervisors and front line personnel took place in October and November which included working together as ICAM teams on incident scenarios, presenting findings, and addressing issues we've faced in the past with incident investigation. ICAM is not only for safety investigations but can also be used for a variety of other things such as environmental and business interruption incidents.

If you are invited to be part of an ICAM team, take advantage of the opportunity to be part of a process that makes Red Dog safer by helping ensure that *Everyone Goes Home Safe and Healthy Every Day*.

## Congratulations!

Kevin Lackey is the lucky winner of the drawing for two round trip tickets on Alaska Airlines for his participation in the Safety Team Idea process. Kevin participated in two ideas that were completed and received two entries for his participation. When you see Kevin, please congratulate him on making Red Dog a safer place to work and helping us achieve our vision of *Everyone Going Home Safe & Healthy Every Day*.

# Buildings on Permafrost

By Jeff Clark

Red Dog's buildings are built on permanently frozen ground (permafrost). In permafrost areas some soils contain ice as a component of the soil. If heat is applied to that soil from an overlying building, the ice melts, the water runs out and the soil collapses along with the building. That is why you often see old cabins in Alaska with what appear to be doors constructed for short people. What has happened is that the heated cabin has melted the ice in the permafrost and the cabin has sunk into the soil. The doors are actually full size.

At Red Dog, we protect the permafrost from melting under our buildings by two methods. Some of our buildings (like the new Powerhouse, the PAC and the Mill) are built on pilings. The pilings allow any heat which escapes from the floor of the building to be carried off by the air before it can melt the permafrost.

For buildings built even with the ground, we attempt to keep the ground under them frozen. This is accomplished by pulling freezing air under the building in the winter time with under floor cooling fans.

The exhaust fans only turn on when temperatures are below freezing. Please notify your supervisor if you see any of the following: Fans running in warm weather; if fans are not running in very cold weather and; any damaged intake vent or a vent plugged by snow.

Proper maintenance and operation of the cooling system is vital to prevent the floors of our buildings from sinking and becoming uneven.



## Updated Teck/NANA Employment and Training Plan

By D'Anne Hamilton

During the past nine months, the joint Teck/NANA Employment & Training Committee has been retargeting efforts to increase the number of NANA Shareholders employed at the Red Dog Mine. The Employment Plan—developed in collaboration between the two organizations nearly 25 years ago—has been updated to reflect today's reality. The plan is now called "The Employment and Training Plan" as it entails much more than just the hiring process, but covers support to education, training and development.

"The recent work on the plan to define measurable goals with achievable outcomes, really demonstrates the strength of our partnership with NANA and Teck's commitment to fulfilling the original Agreement," said Red Dog General Manager Henri Letient.

The Committee, comprised of four Teck representatives and four NANA representatives, meets quarterly. As per the original 1982

Operating Agreement between Teck and NANA, we continue to be committed to achieving 100% Shareholder hire. The Committee is looking at ways we can increase the number of Shareholders to fill technical positions here at Red Dog. This can only be done through a cooperative effort between Teck and NANA, including outreach throughout the NANA region to promote education and support college and university programs.

NANA recently hired former Red Dog Mine Shift Supervisor, Chuck Barger as its Shareholder Relations Director at the Mine, and collaborated with Teck on the hiring of Teck's Personnel Officer Dee Hamilton this summer. Dee and Chuck will support our efforts in increasing the hiring and development of Shareholders and provide the link between the two companies to ensure the programs we put in place are effective.

# Congratulations, Larry Stone!

By Mike Skeeters



Larry Stone with Supervisor Paul Muth

Larry Stone began the Millwright Apprenticeship Program in January 2008. He completed the requirements of the Apprenticeship on October 10, 2013.

Larry had many achievements along the way. Our program requires a minimum of 576 hours of classroom training and 8,000 hours of on-the-job training over the term of the apprenticeship. Larry completed a total of 805 hours of classroom training and over 11,000 hours of on-the-job training.

Larry studied in many areas over the course of his apprenticeship including blueprints and diagrams, conveyors, pipe and pipe fitting, pumps, air compressors, seals, motor alignment, gears and gear boxes, and hydraulics, just to name a few. Larry also worked on two final projects. One was to identify our mill pinions and to design and build a storage unit for our new frame scaffolding.

Larry is a good employee who is quietly effective. He moves from one project to the next without hesitation, performing quality work along the way. He was persistent with his training, never giving up and always working toward his final goal of graduation. Great work, Larry!

Willie Gallahorn received his official Certificate of Completion of Apprenticeship, Industrial Millwright from his Supervisor, Paul Muth in December. Willie Gallahorn's achievements were spotlighted in previous editions of Suvisi. Congratulations, Willie!



## Stop by and Say "Hi"

By Chuck Barger



NANA Regional Corporation (NRC) opened its new office at the Red Dog Mine on January 6, 2005.

Shareholders of NANA knew the importance of having NANA representation at Red Dog to help with understanding the Inupiat culture of the northwest arctic. Lydia Scott and Hannah Loon were appointed by NRC to work onsite at Red Dog to not only be here for shareholders, but equally important, to help Red Dog management and all Red Dog people understand our cultural differences.

The environment was new to them both, but the work was what they specialized in—helping people, caring, sharing stories, supporting and motivating people on new challenges in the work place. They both brought Inupiat values to pass on to others.

Red Dog is an economic success that fuels the region with good paying jobs, provides skills and training for work to be successful both on the job and at home. Oftentimes, we don't think of the money paid in taxes to help the borough build new schools, and the small business owners in the region and state that benefit from Red Dog.

Since the operation began 24 years ago, 1,469 shareholders have worked for the operator, Cominco; Teck Cominco, and now Teck. This does not include work for the various contractors over the years.

Some of you have seen the mine develop from construction to production, from paper mail to e-mail, from physically hard work to making the workplace easier to operate with advances in technology. Thank you all for making Red Dog what it is today.

In late September 2013, after 12 years with Teck in the Mine Department, I accepted a position as the NRC Director of Shareholder Relations for Red Dog. Our goals include working with Teck toward 100% Shareholder hire, informing youth in our district schools about the opportunities at the Red Dog, promoting connection between Elders of the region and mine workers, and to help and develop on-site cultural awareness here.

Our office is located in the PAC across from NMS billeting. When you see the door open, stop by and say "hi", or you can reach me or Hannah Loon at ext. 46443, e-mail charlie.barger@nana.com and hannah.loon@nana.com

## Donations and Sponsorships

Alaska Miners Association	\$ 5,000
Resource Development Council	\$ 3,000
Team Baker	\$ 50,000
KOTZ Radio	\$ 15,000
Aqqaluk Trust	\$ 100,000
Alaska Resource Education	\$ 22,500
Noatak HS Basketball Tourney	\$ 8,553
<b>Total Q4 Donations</b>	<b>\$ 204,053</b>

## New Faces and New Digs



L to R: Sheila King, Lena Naylor, Josh Petersen, Harold Jessup, Chris Petersen, Valerie Radakovich, Lani Newlin and Stacey Harris.

Our Anchorage Office near Lake Hood is the home of the Red Dog Finance team. Recently, our office received a long overdue remodel with new carpet and a bit of sprucing up. In addition to the new digs, there are some new faces there as well.

Stacey Harris spent about a year on site as the Mill Maintenance Secretary before she transferred to the Anchorage office earlier this year. As the Administrative Assistant, she is the first friendly face you'll see when you stop in. Stacey has a heart for excellent customer service and an aptitude for accounting related work.

Joshua Petersen, Manager in the Finance group, came to us from KPMG, LLP, an international public accounting firm with an office in Anchorage. His experience includes mining through financial auditing.

Christon Petersen (no relation to Joshua unless you consider "friends" as family) is our new Supervisor, Accounting. Christon has been an auditor for Mikunda Cottrell Accounting & Consulting, a local public accounting firm for the past few years.

To complete our team: Harold Jessup (Cost Accountant), Lena Naylor (Payroll Administrator), Val Radakovich (Accounting Assistant IV), and Sheila King (Controller), will also be pleased to welcome you when you stop in.



General Manager's 4th quarter crew meetings.

## Red, White and Blue

By Wayne Hall



Community Relations receives all types of requests from people wanting to visit Red Dog. However, I was somewhat surprised by a call I received in late 2012 from a woman with a strong New York accent. Sheila Bernard explained she was working on a project she called "Shop America", which is to photograph patriotically painted red, white, and blue buildings representing the 50 states to create a traveling exhibit and book.

Sheila was very excited after discovering a picture on the Internet of the port concentrate storage buildings. She wanted to use the buildings as the centerpiece for the project and to represent Alaska! She asked how many direct flights there were to the area and how to drive to the location. Finding the question humorous, I explained to her about the remoteness of Red Dog facilities. Initially, I was not open to the idea, but Sheila was persistent and explained that she would be willing to donate her time if there was something that she could contribute. I told her that we would consider her request and get back to her. After some time passed, an idea began to emerge around a community investment opportunity.

We recognized that several residents in the nearby village of Noatak were interested in learning about photography and built an artistic photography teaching component around Sheila's visit. Sheila was very excited about the opportunity to teach community members and in addition to photographing the concentrate storage buildings. Community Relations arranged for Sheila to spend two days in Noatak in the spring where she conducted artistic photography lessons. Noatak teacher Lori Moore coordinated the community's contribution and the class was a big hit for the participants and for Sheila. A big change from New York City I am sure.

The photographs Sheila took are great and she is well on her way (40% complete) to getting additional photos of buildings to complete her "Shop America" project. So if you know of a great example of a red, white, and blue building in another state, be sure to let her know.

*Sheila is an artistic photographer from New York City. Her specialty is architectural photography and she has some amazing examples of her work at [www.sheila-b.com](http://www.sheila-b.com).*

# Congratulations, to Our Red Dog Employees on Their Development and Achievements

**Darold Sun** accepted the role of Mine Shift Supervisor in August. Darold is a Level VI Heavy Equipment Operator and has over 10 years of service at Red Dog. He has also fulfilled the role of a lead hand supervisor as part of his development to become a Mine Shift Supervisor.

**Phillip McCue** accepted the role of Mine Shift Supervisor in August. Phillip is a Level VI Heavy Equipment Operator and has over 8 years of service at Red Dog. He has also fulfilled the role of a lead hand supervisor as part of his development to become a Mine Shift Supervisor.

**Allison Conwell** accepted the role of Mobile Equipment Trainer in August. Allison is a Level VI Heavy Equipment Operator and has over 7 years of service at Red Dog. She has also fulfilled the role

of a lead hand supervisor and as an OHSC Safety Representative and Co-Chairperson as part of her development to become a Mobile Equipment Trainer.

**Wesley Sommers** accepted the role of Mill Shift Supervisor in October. Prior to this promotion, Wesley was a Level V Mill Operator and has over 6 years of service at Red Dog. He has also fulfilled the role of a lead hand supervisor as part of his development to become a Mill Shift Supervisor and has actively promoted safe production.

**Joshua Peterson** accepted the role of Manager, Accounting. He will continue to take a lead role in budget planning as well as actively managing various technical accounting aspects for the department. Prior to this promotion Joshua was our Supervisor, Accounting.

**Jim Swendseid** assumed the role of Principal Mine Engineer- Projects. Jim has worked at Red Dog for approximately 17 years.

**Norm Paley** assumed the role of Principal Mine Engineer - Long Range Planning. Norman has worked at Red Dog for approximately 17 years.

**Tom Krolak** assumed the role of Principal Geologist – Reserves. Tom has worked at Red Dog for approximately 22 years and with Teck for 26 years.

**Nancy Tracy** assumed the role of Senior Mine Engineer - Projects. Nancy has worked at Red Dog for approximately 2 years.

**Tess Snyder** assumed the role of Engineer-Projects. Tess recently joined Red Dog and has been working in Short Range Mine Planning.

## Welcome Sophie, We're Glad to Have You back!



Sophie Brodigan accepted a full-time position as Administrative Assistant in Human Resources. She has worked for Red Dog in the past and brings back a wealth of knowledge and experience to her role. Sophie is always willing to help others. Her warm, friendly smile and excellent client service traits are greatly appreciated. Sophie works with matters related to employment, new hires, status and demographic changes, benefit information and various tasks related to Human Resources. Sophie is originally from Kiana.



Matt Kerr  
Database Coordinator



Joe Determan  
Communications Technician



Jon Gregg  
Assay Lab Assistant Entry

Skye Karmun (no photo available)  
Mill Mechanic Entry

## Emily's Butterfly

By Sharon McCleary



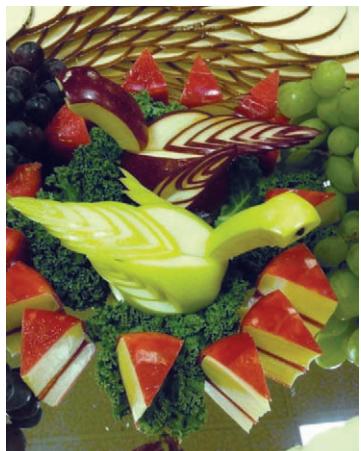
John Ballot is a Driller/Blaster here at Red Dog. As Drill and Blast Engineer, I know the gentlemen on the Drill and Blast crew better than other Mine Operation workers.

John's two-year-old daughter, Emily has been battling leukemia for the past year. She just returned home to Anchorage from a children's hospital in Oregon. I wanted to do something to welcome her home and to make her Christmas a little more special.

I made the quilt in my Montana home. My style of quilting is somewhat different. Instead of tying the two sides of fabric together I sew them together with a sewing machine or long-arm quilting machine. If you look closely, you will see variations in stitching and thread color.

The fabric used for the quilt relates to the children's picture book series called The Very Hungry Caterpillar, illustrated and written by Eric Carle. It features a caterpillar that eats its way through a wide variety of foodstuffs before pupating and emerging as a beautiful butterfly. Emily will also receive one of the books from the series as well as the quilt.

Welcome home, Emily. You make my heart smile!



Thanksgiving dinner artwork by NMS Executive Chef Peter Kung and Chef's Mike Paul and John Theis.

## For Current Job Vacancies (or opportunities)

Please go to [www.teck.com](http://www.teck.com)  
and/or [www.nana.com](http://www.nana.com)  
and apply on-line.  
(Paper applications or letters of interest  
are no longer accepted.)

## Quyaana

*Thank you, to all who  
contributed to our newsletter.*

To submit topic ideas or an article about your work, a coworker spotlight, a special project or life at Red Dog, contact Verna Westlake, Managing Editor, x45189  
[verna.westlake@teck.com](mailto:verna.westlake@teck.com) or [communityrelationsRDOG@teck.com](mailto:communityrelationsRDOG@teck.com)

# Grace

By Andy Willis

On November 27th we wished Grace Graves a farewell here at Red Dog. Grace was with NANA Management Services (NMS) at Red Dog for 12 ½ years. She started as Billeting Clerk and worked her way up to General Manager for NMS. Her commitment of excellence to her clients and those who worked for her was unmatched. Her selflessness and dedication to her job was noticed by all her peers.

No matter how difficult some situations got, she never let it show, always doing her job with a smile. She has been an inspiration to many people around her at Red Dog and in life. She will be greatly missed by her Red Dog family and NMS. Anyone that has worked for Grace will never forget her mantra at the end of EVERY safety meeting, "wash your hands, wash your hands, wash your hands!"

By David Walsh

I've worked for Grace (my cousin) for a little over a year-and-a-half. The first thing I noticed when we met was her infectious smile and laugh. She was always willing to help anyone and would go out of her way to help. Her unselfishness and big heart is what made Red Dog a great place to work for our NMS employees. They were family to her. She made sure to let each one know they were special and that Red Dog was "home". Grace set the bar very high for myself, Andy and future managers here at Red Dog and showed me how to be an effective leader. She is truly one of a kind. The impact she's had on anyone who knows her will never be forgotten. Though I worked with Grace for just a short time, I feel a big loss without her here at Red Dog. She taught me how to be not only a better manager, but a better person. I'm envious of her next employer and fellow co-workers. She is a very special person.

We wish you all of life's best, Grace!  
from your Red Dog Family.

Grace shared before she left on her last jet ride out:



"I'd like to THANK everyone for the last 12 ½ years—what a whirlwind it's been! Also, THANKS for the wonderful send off—what a truly unexpected surprise!

"I was so overcome with emotion last night that I forgot to THANK the most important people in my life here at Red Dog, which is the NMS Crew! THANK YOU for all of the support you have given me over the years and for making my job a joy, even thru all of the bumps in the road! You guys and gals are the BEST and I'm so proud to have worked with you all!

"Take care all – Red Dog will always have a special place in my memories!"

## From the Managing Editor

Verna Westlake



There are many good things to share about Red Dog. While it's not possible to capture and publish them all, I believe that in *Red Dog-Suvisi*, we have provided a good snapshot of our unique and remote community and our Red Dog people in the hills of the arctic in northwest Alaska.

Thank you, Red Dog for making my job an enjoyable one. I'll reiterate, "there is no story without you". I look forward to sharing the 2014 stories. All the best for the New Year!

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