

# MANAGEMENT PLAN

## K & D Logging Ltd.

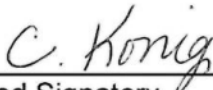
7409728

June 30, 2015

"Her Majesty the Queen in Right of British Columbia (the "Province") and K & D Logging Ltd. (the "Licensee") hereby agree that this document is the Management Plan for the purposes of Licence of Occupation No. 706519, dated April 27, 2015 from the Province to the Licensee (the "Licence") and that this document supersedes any earlier Management Plans. The signature of the Province's authorized representative is solely for the purpose of acknowledging the Province's acceptance of this document as the Management Plan for the purposes of the Licence and does not represent a certification by the Province or its signatory of any factual content or acceptance of professional responsibility by the Province's signatory for any advice or analysis contained in this document."

ACCEPTED BY:

SIGNED on behalf of HER MAJESTY THE  
QUEEN IN RIGHT OF THE **PROVINCE OF  
BRITISH COLUMBIA** by the Ministry of  
Forests, Lands and Natural Resource  
Operations, authorized representative of the  
minister responsible for the *Land Act*.



Authorized Signatory  
Ministry of Forests, Lands and Natural  
Resource Operations

SIGNED on behalf of **K & D Logging Ltd.**  
By a duly authorized signatory



containing

pages (including this page)



Industrial General Application Requirements and Management Plan for  
the SE Portion of DL 4759



# Industrial General Application Requirements and Management Plan for the SE Portion of DL 4759

Date: May 26<sup>th</sup>, 2014 (*Revised February 24, 2015*)

Plan by: Ross Hamilton, RPF

- We have included a Site Plan of the entire area, drawn to scale, with a North Arrow, identifying the location of all improvements (buildings, structures, roads, powerlines, fences, etc.) in relation to the boundaries of the tenure area and other legal boundaries.
  - Size and location of all proposed improvements;
  - Source of water- Shallow well behind the shop (not potable)
  - Means of sewage disposal –There be no production of sewage on the property and septic on the adjacent property, so not necessary.
  - Proposed parking – To be determined.
  - Utilities – Existing Powerline.
- The additional strip that corresponds with the western boundary of the SE corner of DL 4759 has been added to the application. This piece was part of the original application and was removed until approval from the Ministry of Transportation had approved removal from their gravel reserve lands. This has since been removed, as per Geoff Chamber's email (attached)

## **Management Plan**

### **Section A – Project Overview:**

- **See Attached Management Plan and Site Plan Map.**
- K & D Logging Ltd. intends to clear the site and construct a log, bio fuel<sup>1</sup> and equipment storage area. K & D Logging Ltd. also intends utilise ballast and fill material from the site for the purpose of construction of a log yard and fuel storage facility.
- K & D Logging Ltd. intends to expand operations on the adjacent property (Old Northern Interior Forest Products Site) to include a log processing and bio-fuel<sup>1</sup> management facility. The proposal area will be part of that facility.
- The project area is hectares 42.3 ha.
- Clearing and construction is scheduled to begin by August of 2014 and is dependent upon the timely approval of this application.

1. "Biofuel" means woody material intended for fueling the FSJGEP Plant

## Section B – Project Description:

### I. Background:

K & D Logging Ltd. intends to operate a primary log breakdown facility (Canting, Chipping and Grinding) on the adjacent site (Formerly Northern Interior Forest Products) and provide bio fuel for the Dalkia-Fengate BioEnergy Plant, called the "Fort St. James Green Energy Project" or "FSJGEP". This plant is currently under construction. K & D Logging Ltd. will be an equity partner in the biofuel management operations associated with the plant.

- The primary market for the product produced on site will primarily be the adjacent plant, consuming bio fuel. Secondary markets will be chips for regional pulp mills and sorted saw logs for local and regional sawmills.

### II. Location and Development Requirements/Impacts:

- The area is located 5 km +/- due North East of the community of Fort St. James, due south of the former Northern Interior Forest Products site.
- **Access:** There is currently concern around the historic access to the site from the North. As an alternate measure, the proponent has applied for an access/junction permit at the location identified on the attached map, through DL 4756.
- **Gas Line:** The location of the gas line is marked in the field and identified on the map. A 30 meter "Gasline Management Area" has been identified on the map where no new construction or digging will occur, without written permission from Pacific Northern Gas. The proponent will follow the procedures laid out in the attached document, "**Pacific Northern Gas – Focus on the Safety of Our Pipelines**".

#### a. Reasons/Justification of need for this type of commercial venture at this location:

- The area provides the most proximal location for log and fuel storage to service the energy plant. This will minimize industrial vehicle traffic between the plant and remote storage facilities.
- Large areas are required for the management, manufacturing and drying of fuel materials.
- The area has an abundance of stable material making it suitable for yard traffic.
- The area is not subject to road restrictions during break-up months.
- The area will successful allow the resurrection of the Northern Interior Forest Products Site (which suffered a catastrophic fire in 2013).

1. "Biofuel" means woody material intended for fueling the FSJGEP Plant

- It is not anticipated that additional access roads will be required, however new road construction may occur within the plan area.
- Adjacent activities: **North boundary:** Former Northern Interior Forest Products Site and the Fort St. James Green Energy Project Site. **West boundary:** Forested crown land, some gravel extraction. **Southern Boundary:** Forested Land, swampy, assumed to be crown land. **Eastern Boundary:** Railway tracks and the Tachie Road.
- Other significant development impacts: Area is of low timber value (most of it was previously harvested and unmanaged) Some mature timber exists in the Southern portion.
- There are no known significant water features.

### III. Utilities:

- All utilities, including sewage already exist and are housed on the adjacent site and are not material to this application.
- **Not-potable** (untested) water will be supplied through an existing shallow well, in the Northern Portion of the area, should it be required. Water is not required on the property, except for fire suppression.

## Section C- Additional Information

### I. Environmental

#### a. Land Impacts:

- The site will be cleared, some there will be some logging in the south and levelling of the site where practicable. Material from levelling will be used as ballast on the site and the adjacent site for the construction of log and fuel storage. Access will be from the North through the existing site.
- The site is zoned light industrial.
- The site is primarily covered with immature forest cover (Aspen, Willow, Spruce and Fir), there are some older roads on it. Some mature timber exists in the Southern Portion, which will be cleared.
- Existing gravel and borrow pits exist from historic users.
- Archaeological: The Fort St. James Archaeological Predictive Model indicates that only a very small area in the southern part of the site has high archeological potential. There are no known archaeological features in this area. See the attached map called "Modelled Arch Potential."

#### b. Atmospheric Impacts:

1. "Biofuel" means woody material intended for fueling the FSIGEP Plant

- The atmospheric impacts associated with the site will be minimal.
- Noise will not be outside of the range of adjacent activities.
- There will be no emissions associated with the area.

**c. Aquatic Impacts:**

- There are no significant water features within 150 meters of the site. Priest Meadow Creek (S3, fish bearing) is 150 meters north of the area.
- There is a large W1 wetland 400 meters to the south of the plan area.
- There are two minor TRIM-feature water courses identified on the site. These are likely Non-Classified Drainages (NCDs). The classification and existence of these features will be verified and managed accordingly, through riparian reserves.
- Management of sedimentation and siltation into water courses will be achieved by: Managed site drainage with appropriate ditches; Grass seeding unused areas with exposed soil; Constructing sediment sumps to allow for controlled sediment deposition and; Silt fencing where necessary.

**d. Fish and Wildlife Habitat**

- There is no fish habitat that will be impacted by the activities intended for the site.
- The site does not impact any Ungulate Winter Ranges (UWRs), or Wildlife Habitat Areas (WHAs).
- The site is occasionally used by deer, bears and moose and is has low habitat value.
- The site is not known to be associated with any species at risk.
- The site presents low risk to fish and wildlife habitat.

**II. Socio-Community**

**a. Land Use**

- The site is currently zones "light Industrial" and it will not significantly impact forested lands to the West and South.
- The light industrial site to the North is currently being operated by the proponent.
- This site will enhance light industrial activities on the adjacent site to the North.
- There are no public recreation areas associated with the proposed site.
- The site is located in the Fort St. James Management Zone as per the 1999 Fort St. James LRMP and activities are consistent with the general management direction prescribed for that zone.
- Public use of the site is low.

**b. Socio-Community Conditions**

1. "Biofuel" means woody material intended for fueling the FSJGEP Plant

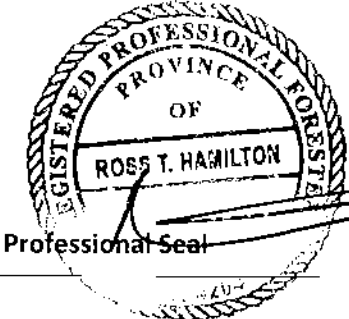
- The proposed project is relatively small in scope and does not create negative impact on community services or infrastructure above those associated with the existing or approved activities on adjacent sites.
- The population of the Fort St. James area is around 5000, of whom about one quarter identify as being of First Nations origin. The town is surrounded by numerous, small First Nations communities and Indian reserves, including Pinchie, Tachie, and Nak'azdli.
- Services operating in the Community: Hospital, Health Clinic, Dental Clinic, Ambulance, Fire Stations (2), Search and Rescue as well as Service BC and a Ministry of Forests Lands and Natural Resource Operations.
- The proposed project does not impact these services materially.

**c. Public Health**

- The proposed activity will not impact public health in any material way.

**d. First Nations**

- There has been no communication with regard to First Nations about the proposed site.
- There are no known archaeological sites associated with the proposed area.
- Please find attached, "**Modelled Arch Potential**", Indicating minimal areas with high potential for archaeological features.

This Plan was Prepared By Ross Hamilton, RPF for K & D Logging Ltd.	Government Agent Plan Approval
	

1. "Biofuel" means woody material intended for fueling the FSJGEP Plant

Map of: SE Portion of  
Tenure ID **District Lot 4759**  
(Tachie Road) *Page 1 of 1*

Forest Region / Forest District:  
Northern Interior Forest Region / Fort St James  
Drawn Date: February 24, 2015  
Drawn by: dvalk

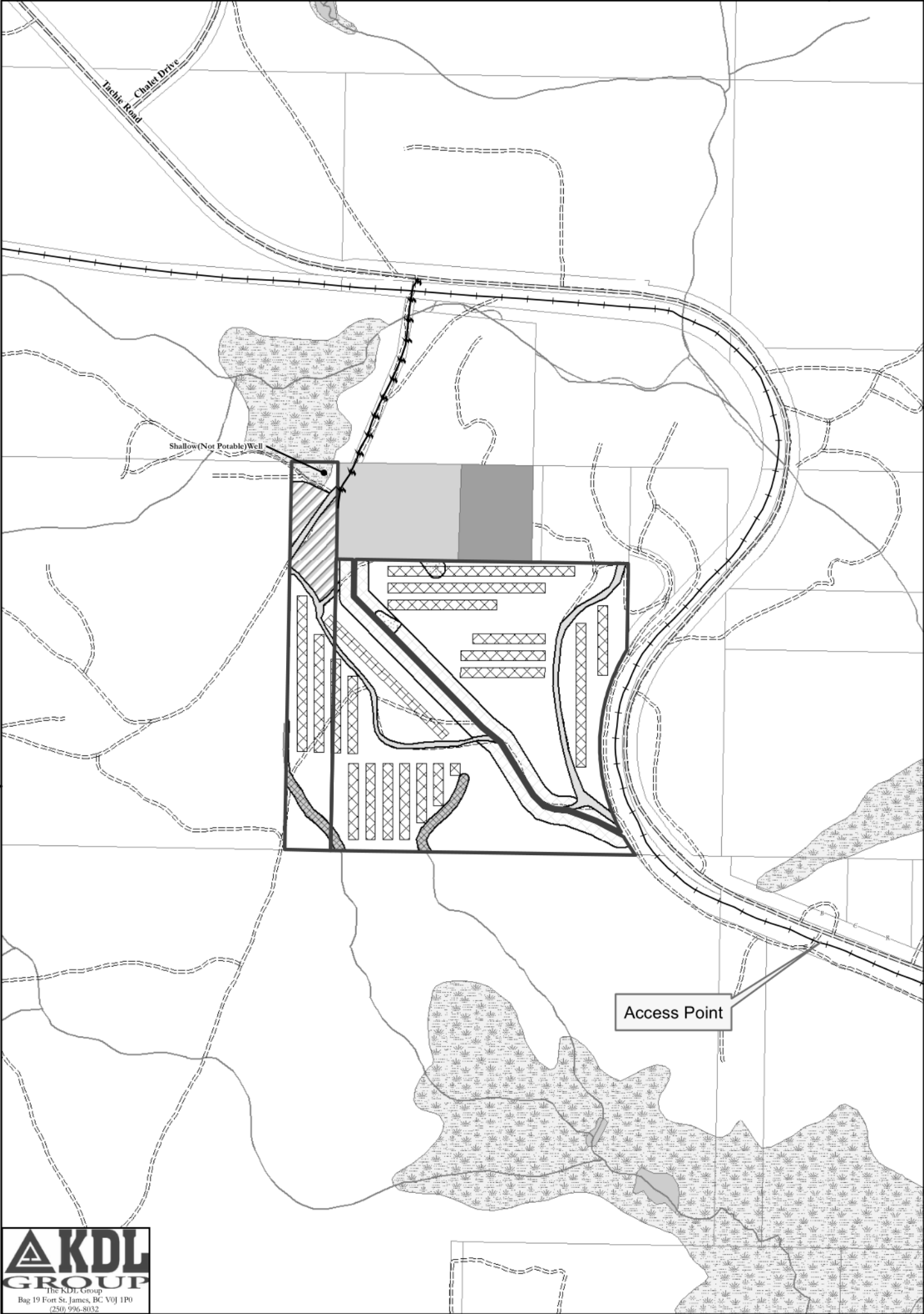
U.T.M.	Zone	NAD	Latitude: 124°12'57"W
421,242	10	83	Longitude: 54°29'9"N
6,038,266			

Management Plan  
Map

Scale: 1:10,000



- MAINROAD
- Rail\_line
- Area of Interest
- <all other values>
- BioPlant
- Chipping Plant
- GASLINE MANAGEMENT
- Log Deck
- PIT
- Riparian
- Road
- Sample Yard
- Cadastre





## **Pacific Northern Gas - Focus on the Safety of Our Pipelines**

Pacific Northern Gas (PNG) pipelines are designed, built, and operated to ensure the safety of our natural gas and oil transportation system. We work to meet or exceed industry and government standards to ensure public safety.

### **Design**

Our design requirements specify only top quality steel and welding techniques will be used throughout the system. Additional safety precautions are taken where pipelines cross roads and railway tracks or where waterways are located near communities. Precautions include using thicker-walled pipe and burying the pipeline deeper in areas of higher population.

### **Construction**

During construction, all welds are checked by an X-ray or ultrasonic process that can detect very small defects. To protect against corrosion, pipelines are coated.

### **Testing the Pipeline**

Once the pipeline is welded together, it is typically pressure tested to ensure there are no defects. During these tests, the pipeline is subjected to pressures that are much higher than normal operating conditions to ensure safety under all conditions.

### **Operation**

The entire gas transmission system is monitored 24 hours a day by highly trained staff from computerized control centres. From there, our staff can detect changes in pressure along our pipeline and ensure that all facilities are operating properly.



Pipeline control valves are located along the pipeline. Should pressure in the pipeline drop (for example, because of a leak), the valves are designed to automatically shut off the flow of product. This limits the amount of gas that is released into the environment.

During operations, a very low-voltage electric current called cathodic protection is applied to the pipe. This is another way we protect against corrosion.

Each region is fully staffed with qualified technicians who ensure the safe and efficient operation of our facilities in the area. In addition, regional offices have access to health, safety, and environmental coordinators and

pipeline integrity specialists.

### **Monitoring**

We regularly inspect the entire pipeline route from low-flying helicopters and planes. We look for signs of leaks, unauthorized activity, soil disturbances on the pipeline right-of-way, or any other conditions that could affect the safety of the pipeline.



PNG employees may also inspect sections of the pipeline on foot or all-terrain vehicles.

### **Maintenance**

Electronic in-line inspection devices, known as "smart pigs", are periodically used on sections of the pipeline system to detect defects.

Hydrostatic testing and investigative digs visually inspect the pipe condition.

PNG works to meet all industry and government standards.

### **Damage Prevention**

Our operations extend across Northern British Columbia and we have established offices in many communities. Each region is fully staffed with qualified employees trained in safety and emergency response who ensure the safe and efficient operation of our facilities in the area.

We also have strong partnerships with emergency services organizations in the communities where we operate. These organizations such as firefighters, police and emergency medical crews are familiar with PNG's operations and are ready to respond in the event of an incident.

While we are prepared to respond to emergencies, we are focused on awareness and damage prevention.

You can help maintain pipeline safety by being aware of the regulations governing activities near underground utilities and by knowing the location of PNG's facilities. We are all responsible when it comes to damage prevention.

### **Know the warning signs of a NATURAL GAS pipeline leak**

#### **What you may see:**

- Dead or dying vegetation on or near a pipeline in a normally green area.
- Water bubbling or blowing into the air at a pond, creek, or river.
- Dirt being blown or appearing thrown into the air.
- Frost build-up on the ground.
- Fire coming from the ground or appearing to burn above the ground.

#### **What you may hear:**

- A roaring, blowing, hissing, or loud whistling sound.

#### **What you may smell:**

- An unusual petroleum or 'rotten egg' smell

### **If you suspect a leak**

If you witness any of the typical signs listed above, or any other unusual sights, sounds, or smells near a pipeline location, it is important that you follow these steps:

1. **Leave** the area immediately – do not create a potential spark with motor vehicle use or use of equipment that could be a potential ignition source (including cell phones).
2. **Move** to a safe location.

3. **Call '911'**, then call PNG's Emergency number (1.800.663.1173).
4. **Warn others to stay away.**

In the event of an emergency, PNG's priorities are to ensure public safety, minimize environmental harm, and safeguard our facilities. PNG responds immediately to emergency calls.

### **Think you hit a pipeline?**

#### **Stop activity**

If you suspect you have hit or damaged one of our pipelines (even if there doesn't appear to be any damage), immediately shut off any machinery you are using. Turn off all portable lighting, flares, welding torches, pilot lights, and electrical equipment as they can create a source of ignition. Tools made of steel can also create a spark, so put them down carefully. Extinguish all cigarettes and other smoking materials.

#### **Evacuate the area**

Notify all people in the area and tell them to evacuate until further notice.

#### **Assess the situation**

From a safe distance, try to determine how much damage has occurred. Can you hear gas leaking? Is there a fire? Are portions of the pipe above ground? Can you see pieces of coloured pipe coating?

#### **Call 911**

Explain that a pipeline may have been hit and that you will contact PNG immediately. Inform 911 of injuries, leaking product, or fire.

**Call PNG's emergency line 1.800.663.1173.**

The emergency numbers are prominently displayed on pipeline right-of-way markers and signs. When you call, PNG's representatives will need to know the location and time of the incident, whether there are any injuries, and the extent of damage to the pipeline.

#### **Stay a safe distance away**

Everyone's health and safety are our primary concern. PNG personnel are trained to investigate and control any pipeline emergency. We have the proper equipment to perform repairs safely. You can provide valuable assistance by meeting us at a safe location to tell us more about the situation.

#### **Do not attempt to operate any valves**

Many of the valves will automatically close and shut off gas flow. Other valves may need to be closed manually by trained PNG personnel.

### **Responding to Emergencies**

At PNG, safety of the public, our employees, and the environment is top priority. We have developed a comprehensive Emergency Management Plan (EMP) to ensure a quick and appropriate response to any pipeline emergency.

In the event of any emergency, our goal is to ensure an effective, coordinated response preventing harm to people, property, company operations, and the environment.

Our system is documented and tested regularly through annual exercises involving both our employees and the community. By working with our communities, PNG builds relationships with local first responders and community officials, informing each other of emergency response strategies and gaining an understanding of each other's roles and responsibilities.

We continuously improve our emergency response program by developing complex exercises to test emergency management procedures and by training staff in effective emergency response.

### **Call Before You Dig**

Whether you're building on a jobsite or in your backyard, before you dig, know what's below. Call BC One Call at 1.800.474.8886. This service is free of charge to have your underground utilities located and marked.

**In case of emergency, call PNG**

**1.800.663.1173**

### **The Right-of-Way**

PNG approvals are required for heavy equipment crossing, construction, and excavation activities on or near our right-of-way (RoW) in accordance with your provincial regulations. The RoW is a strip of land usually 18m wide, and containing one or more pipelines. The RoW enables PNG to gain access to its facilities for inspection, maintenance, and testing purposes.

### **Before You Dig**

Whatever the project, keep everyone safe by calling BC One Call **at least three days in advance** to learn the exact location of pipelines and other underground utility installations on your property. You will avoid costly repairs and interruption of vital services that can occur as a result of a line strike.

### **Before You Cross**

PNG approvals are required for crossing over our RoW, to reduce the risk of pipeline damage and protect the public and the environment.

Companies, utilities, and landowners require approval from PNG to cross our facilities or conduct work within our pipeline RoW. If there is any planned work on your property, contact a PNG representative for a Crossing Agreement **at least two weeks** before crossing.

Please call **BC One Call for all crossing enquiries**; alternatively, you may send your request via e-mail to [tleach@png.ca](mailto:tleach@png.ca).

### **Location of our pipelines**

We use a variety of markers and signs along the RoW to clearly mark the general location of our pipelines. Markers are typically placed at any intersection or in heavily congested areas. However, pipeline markers should not be relied on for the exact location, path, or depth.

Our pipelines are buried underground at varying depths and the exact depth of cover can only be accurately

determined by a PNG representative. For this reason, certain activities such as erecting structures and planting trees within the RoW are restricted until authorized by PNG.

Please call BC One Call and, PNG will send a representative to your proposed excavation site to mark buried utilities at no cost to you.

### **Community and Landowner Relations**

PNG has a diverse group of stakeholders with many different interests. Through our public communication and consultation programs we engage regularly with our stakeholders to share information about our plans, help them understand our projects and garner their views.

We have established a set of principles that govern our dealings with stakeholders. These principles are based on:

- Trust, fairness and respect;
- Aiding in the safety of the public and our facilities;
- Our commitment to social responsibility with respect to land and landowners from our initial interest in business development through project design.

PNG is committed to treating all landowners who may be affected by our project honestly, fairly and with mutual respect.

All landowners will receive fair and equitable compensation for the land easements granted and PNG will work closely with them to identify special circumstances, land restrictions, access routes and other construction requirements to minimize disturbance to the land, the landowner and the environment.

We connect with our key community stakeholders such as landowners, municipalities, emergency service organizations and contractors on an on-going basis through the Pipeline Public Awareness (PPA) program supported by PNG's wholly owned or operated facilities. The PPA is a coordinated approach to inform the public of the location of PNG facilities and activities. The level of public awareness provided and the frequency of contact maintained with affected stakeholders is dependent on the specific needs and risks of each region.

## Ross Hamilton

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**From:** Sargent, Geoff TRAN:EX <Geoff.Sargent@gov.bc.ca>  
**Sent:** July-30-14 9:10 AM  
**To:** Ross Hamilton  
**Subject:** RE: Google Earth Image

Ross,

I just heard back from our gravel manager, and we won't need test pitting on site. The process is in motion to release the big strip.

Geoff Sargent  
District Operations Technician – TELP  
Fort George District  
Phone: (250) 565-6492 | Cell: (250) 617-7931

-----Original Message-----

From: Ross Hamilton [mailto:rhilton@kdlgroup.net]  
Sent: Wednesday, July 30, 2014 9:04 AM  
To: Sargent, Geoff TRAN:EX  
Subject: RE: Google Earth Image

Geoff,

Clearly we would like the entire strip, but if it expedites your process, we can cut it to the smaller piece. As for access, there is a legal right of way associated with that road--so no issue, then a Forest Road Permit behind the mill, which is held by Apollo, where access cannot be denied.

Ross

-----Original Message-----

From: Sargent, Geoff TRAN:EX [mailto:Geoff.Sargent@gov.bc.ca]  
Sent: July-29-14 4:01 PM  
To: Darryl Valk; Ross Hamilton  
Subject: RE: Google Earth Image

Yes, that's excellent. We'll use this to determine how much (if any) test pitting we require. Thank you!

Geoff Sargent  
District Operations Technician – TELP  
Fort George District  
Phone: (250) 565-6492 | Cell: (250) 617-7931

-----Original Message-----

From: Darryl Valk [mailto:dvalk@kdlgroup.net]  
Sent: Tuesday, July 29, 2014 3:45 PM  
To: Sargent, Geoff TRAN:EX; XT:Hamilton, Ross FLNR:IN  
Subject: RE: Google Earth Image

Does this help?

Darryl Valk, RFT  
KDL Group  
Office - (250)996-8032 ext 27  
Cell - (250)996-1006

-----Original Message-----

From: Sargent, Geoff TRAN:EX [mailto:Geoff.Sargent@gov.bc.ca]  
Sent: Tuesday, July 29, 2014 3:38 PM  
To: Ross Hamilton  
Cc: Darryl Valk  
Subject: RE: Google Earth Image

We were looking for a more precise file than an image. Attached is our Google Earth bookmark for the gravel pit, if you had something similar that would be great.

Geoff Sargent  
District Operations Technician – TELP  
Fort George District  
Phone: (250) 565-6492 | Cell: (250) 617-7931

-----Original Message-----

From: Ross Hamilton [mailto:rhamilton@kdlgroup.net]  
Sent: Tuesday, July 29, 2014 1:13 PM  
To: Sargent, Geoff TRAN:EX  
Cc: XT:Valk, Darryl FLNR:IN  
Subject: FW: Google Earth Image

Geoff,

Are you referring to one of these?

Ross

-----Original Message-----

From: Ross Hamilton  
Sent: July-16-14 8:52 AM  
To: 'Karen.Andrews@gov.bc.ca'  
Subject: Google Earth Image

Karen,

Try this.

Google Earth streams the world over wired and wireless networks enabling users to virtually go anywhere on the planet and see places in photographic detail. This is not like any map you have ever seen. This is a 3D model of the real world,

based on real satellite images combined with maps, guides to restaurants, hotels, entertainment, businesses and more. You can zoom from space to street level instantly and then pan or jump from place to place, city to city, even country to country.

Get Google Earth. Put the world in perspective.

(<http://earth.google.com>)