



REPORT

To: Chair and Directors

Report Number: DS-BRD-421

From: Development Services

Date: August 15, 2024

Subject: Temporary Use Permit No. 24-002

RECOMMENDATION: [Corporate Unweighted]

That the Regional Board authorize the issuance of Temporary Use Permit No. 24-002, to renew the permit that allows a 276-person temporary worker camp on the subject property identified as PID 018-784-534, for a three-year term.

BACKGROUND/RATIONALE:

Proposal

The applicant wants to renew their Temporary Use Permit that was issued in September 2021, that permitted a 276-person worker camp on a ±8.5 ha portion of the subject property.

Rationale

Support is being recommended as the proposal is consistent with the Official Community Plan and the worker camp has been in operation for three (3) years with no issues.

File Details

Owner: Gregory Michael Coates, Personal Representative of the Estate of Agnes Adelaide Harasmyk
Agent: Canada West Land Services Ltd.
Area: Electoral Area B
Location: Farrell Creek
Legal: The North West 1/4 Of Section 17 Township 84 Range 24 West Of The 6th Meridian Peace River District
PID: 018-784-534
Lot Size: 66.16 ha (163.48 ac)

Background

November 4, 2021 – The Regional Board authorized issuance of Temporary Use Permit No. 21-006 for a 276-person work camp for a term of three (3) years.

January 2024 – The Regional Board authorized issuance of Temporary Use Permit No. 23-004 for a Cardlock Fuel Sales facility for a term of three (3) years.

Site Context

The property is about 30 km northeast of Hudson’s Hope, 18 km north of Farrell Creek, and 55 km west of Fort St. John. The surrounding uses are all agriculture.

Official Community Plan (OCP)

Pursuant to the Rural Official Community Plan Bylaw No. 1940, 2011, the subject property is designated Ag-Rural (Agriculture Rural). Land within this designation should be used for agriculture. The minimum parcel size should be 63 ha (155 ac). Pursuant to the *Local Government Act*, the entire Rural Official Community Plan area is designated as an area where temporary uses may be allowed.

Therefore, the proposal is consistent with the Official Community Plan.

Land Use Zoning

Pursuant to Zoning Bylaw No. 1000, 1996, the subject property is zoned A-2 (Large Agricultural Holdings Zone). Land within this zone may be used for agriculture and residential. The minimum parcel size is 63 ha (155 ac). The proposed use does not comply with the Zoning Bylaw because temporary worker camps exceeding 30 people are not permitted in the A-2 Zone.

Therefore, a Temporary Use Permit is required.

Impact Analysis

Context

The proposed land use is consistent with the surrounding land uses as there is a lot of oil and gas activity in the surrounding areas.

Population & Traffic

No change is anticipated.

Sewage & Water

There is a water treatment plant on site to treat water obtained from a drilled water well. For sewer, there is a waste water treatment plant on site that includes onsite storage tanks. If the storage tanks fail, ARC will haul sewage to Fort St. John waste management facility.

Site Features

Land

The northeast portion of the property of the property is treed but the southwest portion of the property where the worker camp exists is mainly cleared.

Structures

As this is a Temporary Use Permit renewal, the work camp currently exists on the property as well as a card lock fuel station.

Access

The property can be accessed off a through road that connects from Harasmyk Ave.

Canada Land Inventory Soil Rating

According to the Canada Land Inventory, soils on the subject property are classified as 3⁸4²_w. Class 3 soils have moderately severe limitations that restrict the range of crops or require special conservation

practices. Subclass x denotes soils having a limitation resulting from the cumulative effect of two or more adverse characteristics.

Class 4 soils have severe limitations that restrict the range of crops or require special conservation practices. Subclass w denotes excess water.

Comments & Considerations

Fire Protection Area

The subject property is outside all Fire Protection Areas.

Mandatory Building Permit Area

The subject property is outside the Mandatory Building Permit Area; however Building Permits are still available on a voluntary basis.

Development Permit Area

The subject property is outside all Development Permit Areas.

Development Cost Charge Area

The subject property is outside the Development Cost Charge Area.

School District 60 School Site Acquisition Charge Area

The subject property is within the School District 60 School Site Acquisition Charge Area. However, the charge is not applicable at this time because no new residential lots are proposed.

Comments Received from Municipalities & Provincial Agencies

PRRD GIS

No concerns.

Agricultural Land Commission

As this is related to a non-farm use that was approved by the BC OGC under their delegation with the ALC, ALC staff have no comments.

PRRD Bylaw Enforcement

Interests unaffected.

ALTERNATIVE OPTIONS:

1. That the Regional Board provide further direction.

STRATEGIC PLAN RELEVANCE:

- Not Applicable to Strategic Plan

FINANCIAL CONSIDERATION(S):

None at this time.

COMMUNICATIONS CONSIDERATION(S):

The Regional Board's decision will be communicated to the applicant.

OTHER CONSIDERATION(S):

The applicant is required to complete reclamation within 24 months of the use discontinuing, pursuant to BCOGC Ancillary Activity on Private Land Application Determination No. 100107526, therefore no security is required for this TUP.

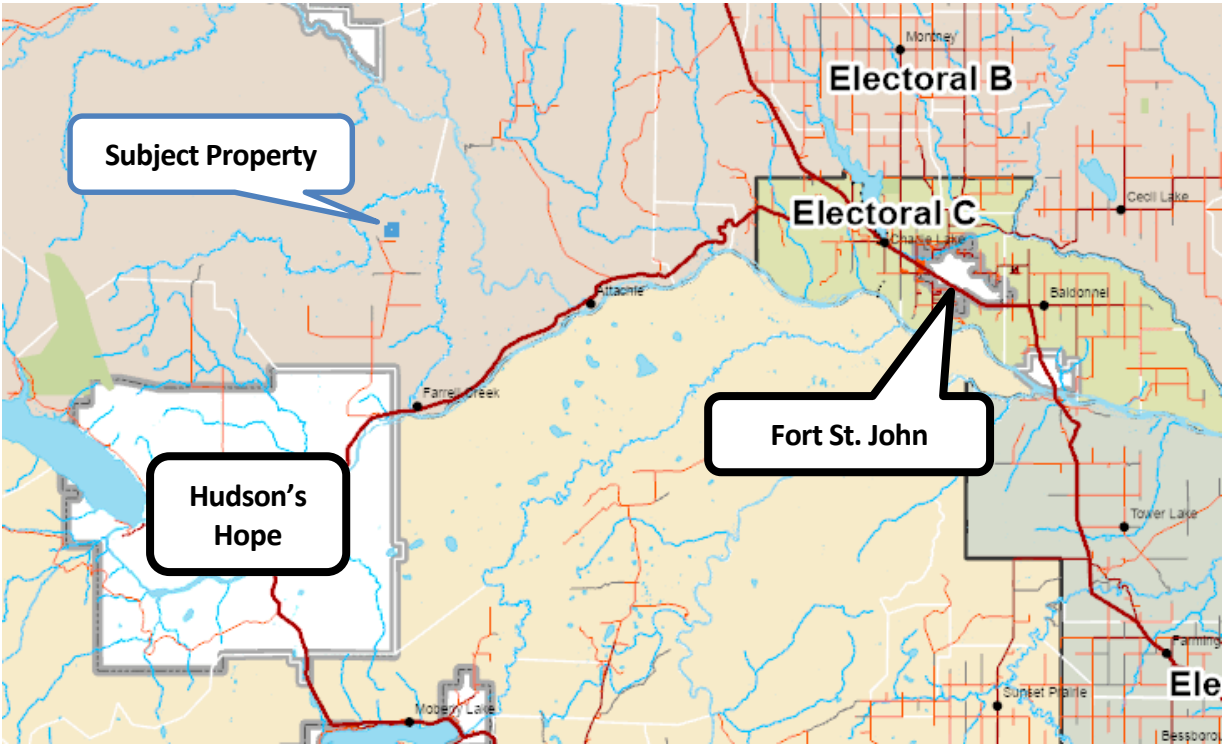
Attachments:

1. Maps, PRRD File No. 24-002 TUP
2. Application, PRRD File No. 24-002 TUP

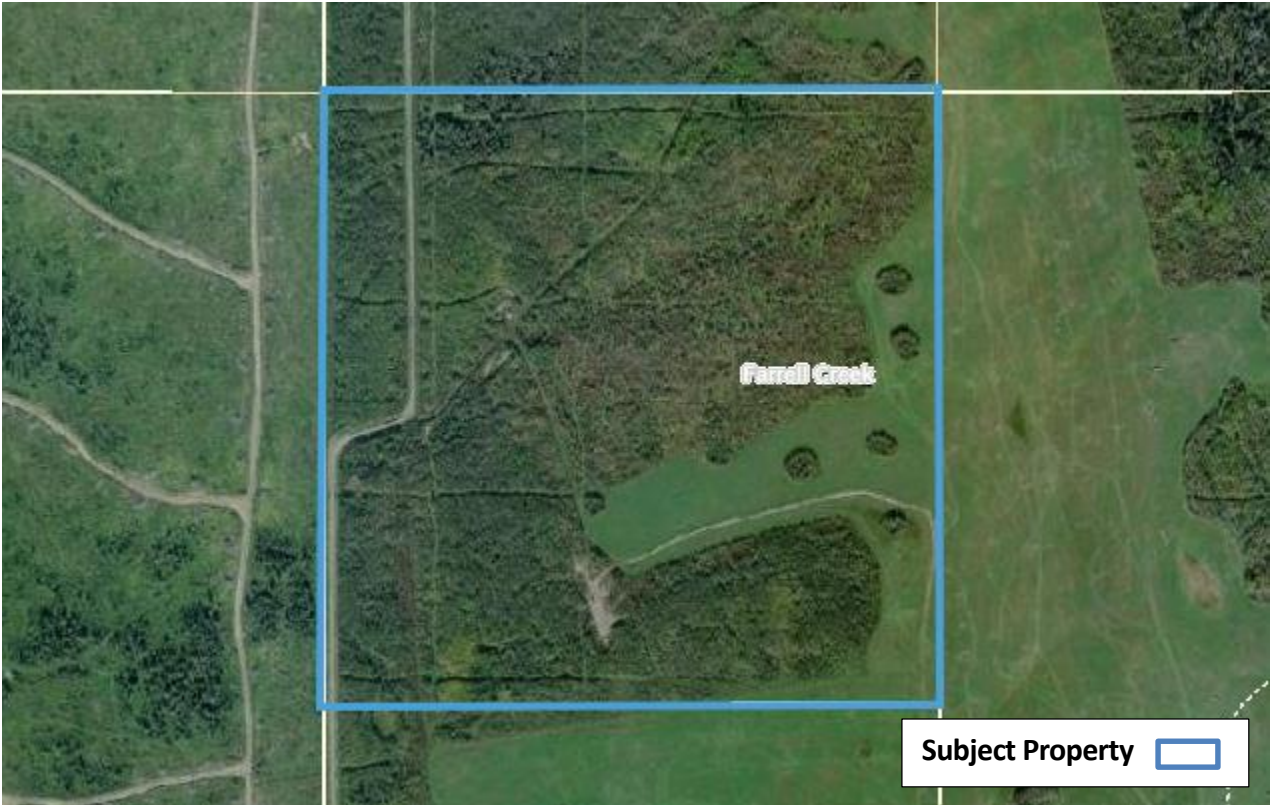
External Links:

1. [Temporary Use Permit No. 21-006, DS-BRD-195](#), See Item No. 10.11
2. [Temporary Use Permit No. 23-004, DS-BRD-364](#), See Item No. 8.11

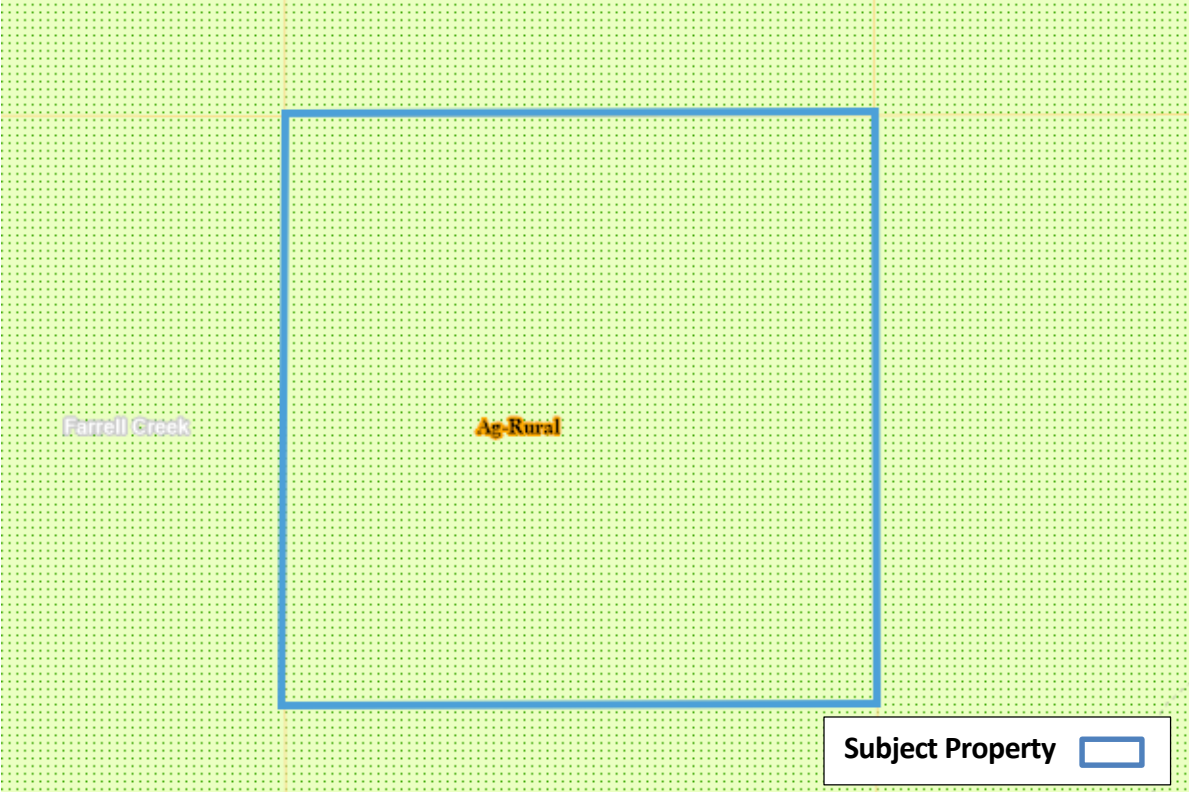
Location: Farrell Creek area



Aerial imagery



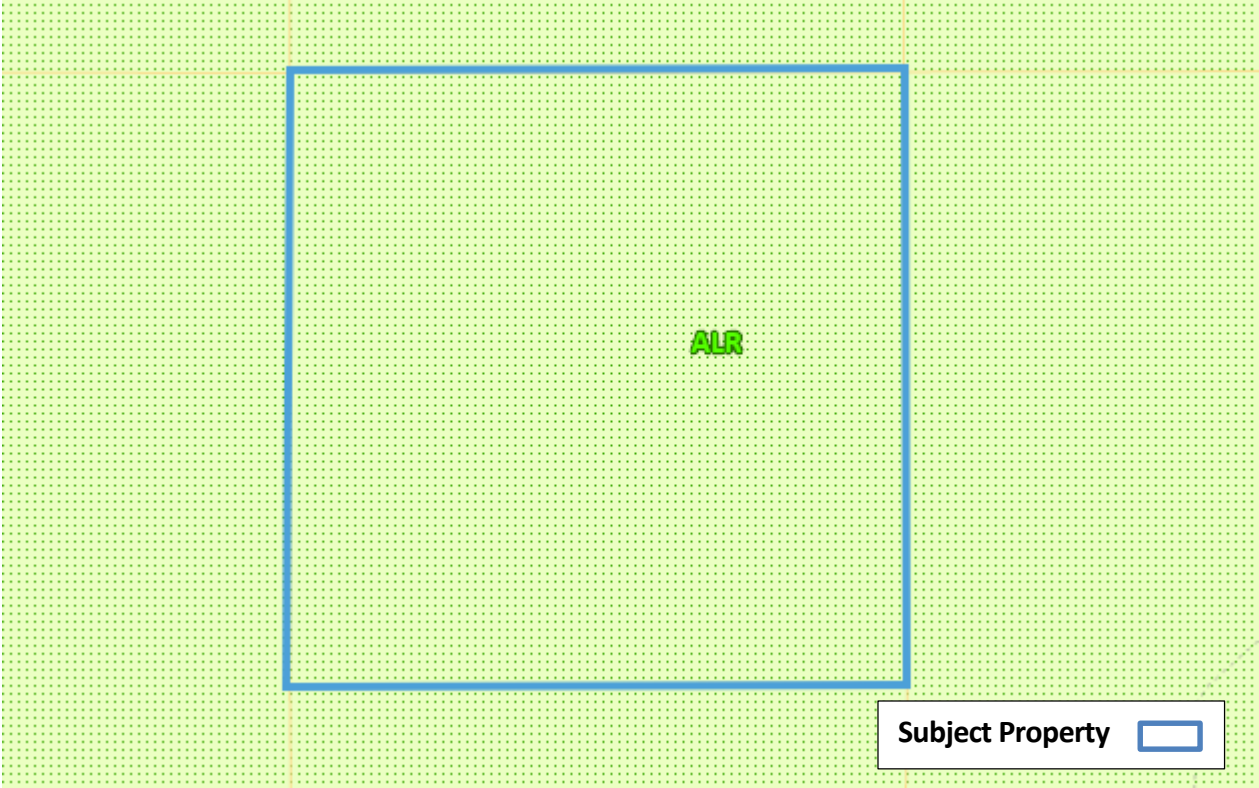
PRRD Rural Official Community Plan Bylaw No. 1940, 2011: Agriculture-Rural



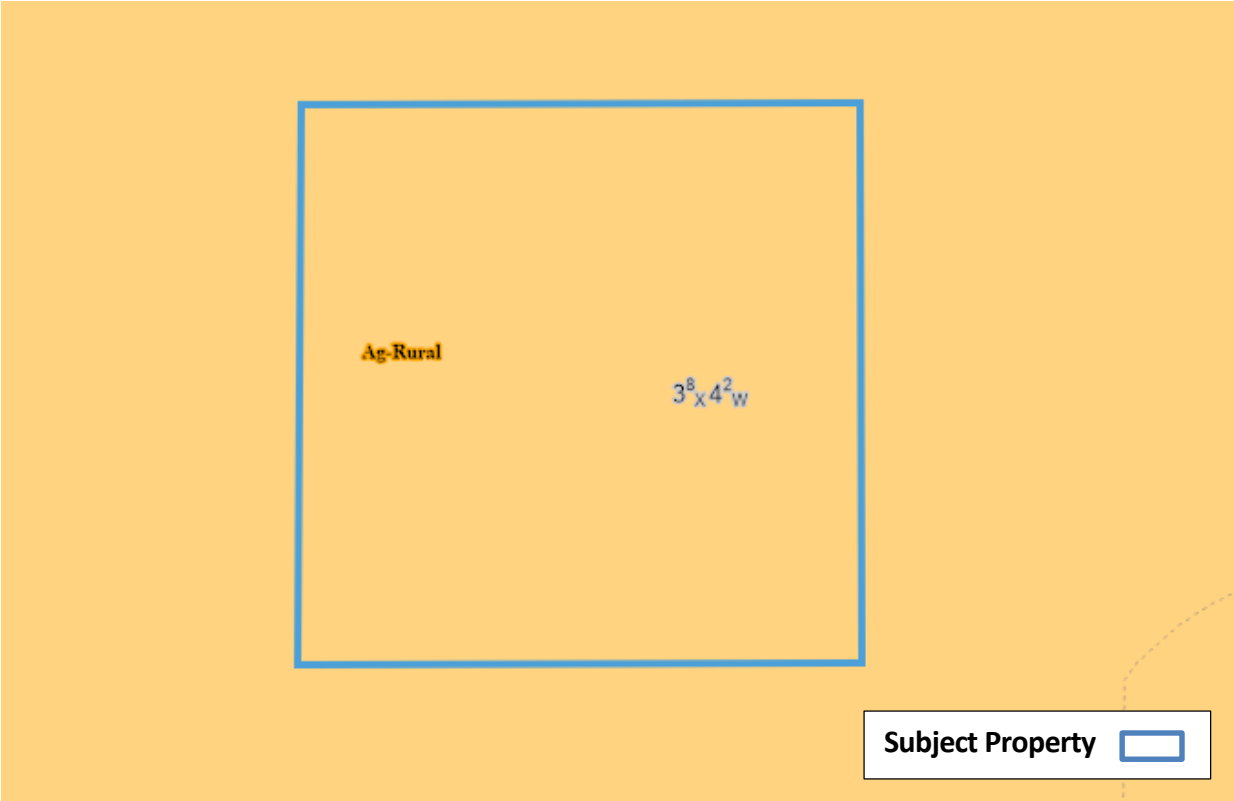
PRRD Zoning Bylaw No. 1000, 1996: Large Agricultural Holdings Zone (A-2)



Agricultural Land Reserve: Within



CLI Soil Classification: 3⁸x4²w





For Office Use:
Receipt # _____
Date Received _____
File No. _____
Sign Issued: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

Application for Development

1. TYPE OF APPLICATION

	FEE
<input type="checkbox"/> Official Community Plan Bylaw Amendment*	\$ 1,150.00
<input type="checkbox"/> Zoning Bylaw Amendment* #	\$ 800.00
<input type="checkbox"/> Official Community Plan / Zoning Bylaw Amendment combined* #	\$ 1,200.00
<input type="checkbox"/> Temporary Use Permit*	\$ 500.00
<input checked="" type="checkbox"/> Temporary Use Permit Renewal	\$ 350.00
<input type="checkbox"/> Development Permit #	\$ 165.00
<input type="checkbox"/> Development Variance Permit	\$ 165.00

* Sign is required for this application type.

Sign provided by the PRRD and posted pursuant to Section 6 of Bylaw No. 2449, 2021, attached.

Contaminated Site Declaration Form required for this application type.

<input type="checkbox"/> Exclusion from the Agricultural Land Reserve	\$ 1,500.00
(Applicant responsible for additional costs associated with the advertisements, signage, and facility rental, if applicable)	

2. PLEASE PRINT

Property Owner's Name Gregory Michael Coates, Personal Representative of the Estate of Agnes Adelaide Harasymyk	Authorized Agent of Owner (if applicable) Canada West Land Services Ltd.
Address of Owner [REDACTED]	Address of Agent [REDACTED]
City/Town/Village: [REDACTED]	City/Town/Village: [REDACTED]
Postal Code: [REDACTED]	Postal Code: [REDACTED]
Telephone Number: [REDACTED]	Telephone Number: [REDACTED]
E-mail: [REDACTED]	E-mail: [REDACTED]

Notice of collection of personal information:

Personal information on this form is collected for the purpose of processing this application. The personal information is collected under the authority of the *Local Government Act* and the bylaws of the PRRD. Documentation/Information submitted in support of this application can be made available for public inspection pursuant to the *Freedom of Information and Protection of Privacy Act*.

3. PROPERTY DESCRIPTION

Full legal description and PID of each property under application	Area of each lot	
THE NORTHWEST 1/4 OF SECTION 17 TOWNSHIP 84 RANGE 24 WEST OF THE 6TH MERIDIAN PEACE RIVER DISTRICT	66.16/163.48	ha./acres
		ha./acres
		ha./acres
	TOTAL AREA 66.16/163.48	ha./acres

4. Civic Address or location of property: _____

5. PARTICULARS OF PROPOSED AMENDMENT

Please check the box(es) that apply to your application type:

Official Community Plan (OCP) Bylaw amendment:

Existing OCP designation: _____

Proposed OCP designation: _____

Text amendment: _____

Zoning Bylaw amendment:

Existing zone: _____

Proposed zone: _____

Text amendment: _____

Development Variance Permit – describe proposed variance request:

Temporary Use Permit – describe proposed use:

Extension of a TUP issued under 21-006. Temporary 276 man camp for oil and gas activities in the area. The area required for the camp is 8.87 ha/21.92 acres.

Development Permit: Bylaw No. _____ Section No. _____

6. Describe the existing use and buildings on the subject property:

Previously used as 276 person temporary camp.

The land is otherwise vacant and no buildings or developments are located on the parcel. Well site access runs along the NW boundary of the parcel.

7. Describe the existing land use and buildings on all lots adjacent to and surrounding the subject property:

(a) North Vacant private land with some existing oil and gas development

(b) East Occupied private land where a home and farm is located

(c) South Vacant private land with some existing oil and gas development

(d) West Vacant private land with some existing oil and gas development

8. Describe your proposal. Attach a separate sheet if necessary:
Area for campsite is cleared as it was previously used as a temporary worker camp. See attached supplement.

9. Reasons and comments in support of the application. Attach a separate sheet if necessary:
Area for campsite is cleared as it was previously used as a temporary worker camp. See attached supplement.

10. Describe the proposed and/or existing means of sewage disposal for the property:
Please see attached

11. Describe the proposed and/or existing means of water supply for the property:
Please see attached

THE FOLLOWING INFORMATION IS REQUIRED DEPENDING ON THE PROPOSAL/APPLICATION:

- 12. Proof of ownership of the subject property or properties. (For example: Certificate of State of Title, BC Land Title Office Property Title Search or recent Property Tax Notice.)
- 13. A Sketch Plan of the subject property or properties, showing the following:
 - (a) the legal boundaries and dimensions of the subject property;
 - (b) boundaries, dimensions and area of any proposed lots (if subdivision is being proposed);
 - (c) the location and size of existing buildings and structures on the subject property, with distances to property lines;
 - (d) the location and size of any proposed buildings, structures, or additions thereto, with distances to property lines;
 - (e) the location of any existing sewage disposal systems;
 - (f) the location of any existing or proposed water source.

ADDITIONAL OR MORE DETAILED INFORMATION MAY BE REQUESTED BY THE PEACE RIVER REGIONAL DISTRICT FOLLOWING REVIEW OF YOUR APPLICATION.

If it is necessary for the property boundaries and the location of buildings and structures to be more accurately defined, a survey plan prepared by a British Columbia Land Surveyor may be required.

15. I / We the undersigned hereby declare that the information provided in this application is complete and is, to the best of my/our knowledge, a true statement of the facts related to this application.

Signature of Owner

JUNE 14/2024
Date signed

Signature of Owner

Date signed

16. **AGENT'S AUTHORIZATION**

If you have an agent act on your behalf in submission of this application, the following authorization **MUST** be signed by **ALL** property owners.

Gregory Michael Coates, Personal Representative of the Estate of Agnes Adelaide Harasymk		_____ and _____ (name of landowner) (name of landowner)	hereby authorize
Canada West Land Services Ltd. _____ (name of agent)		to act on my/our behalf regarding this application.	
Signature of Owner:	_____	Date:	<u>JUNE 14/2024</u>
Signature of Owner:	_____	Date:	_____

Excerpt from "Development Application Procedures, Fees and Delegation Bylaw No. 2449, 2021."

Section 6 – Public Notice Sign Requirements

1. A development application sign shall be posted on the subject property for any parcel that is that are subject to an application for:
 - a) Amendment to an Official Community Plan and / or Zoning bylaw; or
 - b) Temporary Use Permit.

2. The Peace River Regional District shall provide the applicant with a development application sign which shall be posted by the applicant on the subject property as outlined below:
 - a) The sign must be placed at the driveway entrance or midpoint of the property fronting the main service road, providing the most effective legibility and visibility for passersby from the road;
 - b) The sign shall be erected on the property at a minimum of fourteen (14) days prior to the Regional Board considering the application, and the applicant must submit to the Regional District a photograph clearly showing the sign posted on the property;
 - c) The sign shall be placed in a manner that does not interfere with pedestrian or vehicle traffic flow, or create a potential hazard by obstructing visibility from a highway, road or lane;
 - d) The sign shall be installed in a safe, sturdy manner, capable of withstanding typical wind and other weather conditions;
 - e) The sign shall remain in place continuously until the conclusion of the Public Hearing or issuance of the permit, as the case may be, and shall be removed within fourteen (14) days after the decision(s) of the Regional Board on the said application. Applicants are encouraged to dispose of the signs by recycling them.
 - f) Failure to post and keep the sign in accordance with this bylaw may result in a delay or postponement of the Public Hearing and / or Board decision process;
 - g) Any additional notification costs incurred by the Regional District as a result of the applicant failing to post the required sign shall be payable by the applicant prior to advertising of the Public Hearing or delivering public notification;
 - h) Where a sign required by this bylaw is removed, destroyed or altered due to vandalism or the actions of unknown persons, the validity of any bylaw that is the subject of the relevant application and Public Hearing shall not be impacted;
 - i) If a land owner receives any written comments regarding the land use application, those comments must be delivered to the Peace River Regional District office as soon as they are received so that this information may be considered with the subject application.

September 8, 2021

PEACE RIVER REGIONAL DISTRICT
P.O. BOX 810
1981 ALASKA AVE
DAWSON CREEK, BC V1G 4H8

ATTENTION: LAND USE PLANNER

**Re: ARC Resources Ltd.
Proposed Attachie Campsite Within NW 17-84-24 W6M
ARC - 2364**

ARC Resources Ltd. (ARC) is applying for a Temporary Use Permit (TUP) for the purpose of constructing a closed, dry 276 man camp on private land within the NW ¼ 17-84-24 W6M. The site is located within a partial clearing and will require 8.50 ha of new cut. ARC is applying for the TUP for a three year term. The site is located in the Attachie/Farrell area approximately 34.61 km northeast of Hudson's Hope or 57.30 km from Fort St. John.

ARC is focusing on the development of the Montney formation in northeastern BC. ARC has substantial mineral holdings in the area and has multi-year plans to develop those minerals. The proposed camp would help facilitate the development of their assets.

In order to cost effectively and safely develop their assets, ARC requires the ability to house its drilling, completions, facility construction workers and employees directly in the area of operations. There are several reasons why ARC requires the ability to house its workers in the area of operations, which reasons are outlined below:

- During winter conditions, the highways and other access roads can be very rough with lots of oilfield traffic. This increases the accident risk to the workers having to commute from Hudson's Hope, Fort St. John and other rural communities. There is limited cellular service along some of the roads, so in the event of an accident or other weather-related incidents (sliding off the road), emergency response can be a significant challenge. Having a worker camp in the area would mitigate unnecessary risks for the contractors and workers.
- As a result of the commute times for the majority of individuals and the nature of drilling operations being 24 hour operations, ARC would be required to run three 8 hour drilling crews instead of the standard two 12 hour crews. This would impose significantly more vehicle trips adding to the stress on the local and rural transportation infrastructure. Further this would work to increase the cost of ARC's drilling operations materially. In a time of depressed commodity prices, ARC's capital budget can't support this type of operation. With no work camp, ARC would experience a material limitation on its ability to develop its assets and grow as a company, which would have a negative effect on stakeholders, shareholders with a ripple affect on the local employment and economy.
- Housing workers in our area of operations allows for better response times in the event of an emergency since the necessary medical and technical people would be in the immediate area to respond to any emergency.
- As ARC's proposed camp will be a dry camp, ARC is able to ensure that it's employees and workers are in compliance with health and safety policies.
- During storms or bad weather, local highways and roads at times become impassible and are often shut down. This can put our operations and personnel at risk should a shift change not be able to take place. In addition, ARC would have to shut down operations which carries with it numerous safety risks and serves to further escalate costs.

ARC can offer the following further details about the proposed camp:

WATER

ARC plans to install a water treatment plant on site to treat water obtained from a drilled water well. The water is plentiful in yield but requires significant iron reduction and softening in order to make the water useful for general showering, laundry and housekeeping. The drinking and food preparation water will be treated additionally to yield high purity water, comparable to bottled water.

At the well water will be pumped from the well through the system up to 18 U.S. gallons per minute at 75 psi to the inlet of the water treatment building.

The treatment system will include iron filtration, the reported iron level is considered significant and in order to remove the iron two stages of reduction will be implemented. The initial stage shall utilize three 14x65 neutralizer vessels containing magnesium oxide and calcium carbonate. This will stabilize the pH condition and also strip over half of the iron from the water. During the sequential back-washing/cleaning of the media bed, clean water piped over from the water storage building shall be utilized. This will enable the media bed much greater efficiency (removal of iron).

The second stage shall utilize three 14x65 manganese greensand vessels to complete the removal of iron and manganese. Potassium permanganate shall be proportioned into the water at approximately 15 mg/L by a frequency controlled proportioning pump. Contact time shall allow the permanganate approximately three minutes of contact prior to entering the filtration vessels. We shall see complete oxidation and filtration of the dissolved iron and manganese from the water using the technique. Just as in the first stage the media beds shall be back-washed sequentially with clean water from the treated water tank storage.

Following filtration the water will be softened using a duplex alternating softener typical softening salt shall be used as the regenerant. To safeguard against growth of algae, bacteria, mold, etc during storage, the treated water shall be supplemented with a residual of the sodium hypochlorite solution through a frequency driven chemical pump. A residual 1-1.5 mg/L of free chlorine shall maintain the waters integrity.

SEWER

ARC plans to install a waste water treatment plant on site that will included onsite storage tanks. If the storage tanks fail Arc will haul sewage to Fort St. John waste management facility.

TRANSPORTATION

McElhanney Consulting Services Ltd. (McElhanney) has engaged with the Ministry of Transportation and Infrastructure regarding the traffic impact analysis for the proposed camp. No traffic impact analysis is required as per the information provided in the Traffic Information email of September 2, 2021.

HOUSING

ARC's proposed camp would consist of 8 all weather, skidded modular complexes and utilities equipment. There will be a 16 unit kitchen/dining/management office complex with the ability to seat 100 people and will offer men's and women's washrooms. ARC plans to have eight 30-bed executive style dorm sleeper units. Guest will enjoy private washrooms, in-room satellite entertainment and lockable cabinetry. The camp will have a fitness center with a large variety of weight and cardio equipment. There will also be a recreation room with gaming equipment, large TVs and comfortable seating.

Services for the camp will be connected to withstand the elements and mitigate spill risk. Each complex will tie into the potable water plant, sewer plant, diesel generators for power and LPG bullets for heating. The associated parking will consist of 60 marked parking stalls.

POLICING

ARC's camp has a staff of approximately 34 people with an onsite Camp Manager. Arc's operations being largely 24-hour operations when the camp is manned, helps reduce the need for onsite security personnel since all the workers present are either directly or indirectly employed by ARC. Further, the fact that the proposed camp will be a dry camp, helps reduce any potential issues associated with drugs or alcohol consumption. There are no weapons allowed in ARC's camp and hunting is strictly prohibited. Due to the remote location and as the camp will be located on private land, ARC does not anticipate any issues requiring any police response.

There will be a guard shack located at the entrance with a day and a night shift worker to track vehicles entering/exiting the location as well as support the camp staff in the even that a security even arises.

SOCIAL

ARC will have 1 onsite medic at the camp 24 hours a day. Those medics are qualified to handle most minor procedures and are capable of making any medial related decisions with respect to evacuating a patient or seeking further care.

RECLAMATION

Please see attached Schedule A.

SOLID WASTE

ARC will have recycling bins on site and all other garbage will be stored in animal proof steel bins. Once the bins become full, cardboard recycling will be delivered to the Eco-Depot recycling center in Fort St. John and garbage will be trucked off site for disposal at Fort St. John or Hudson's Hope Landfill. Beverage containers will be collected and removed from the camp via grocery truck and recycled at their distribution hub.

EMERGENCY MANAGEMENT

ARC has comprehensive health and safety policies in place that govern the conduct at its camps. Further, ARC has in place with the OGC a Corporate Emergency Response Plan (ERP) which outlines their responses to emergency situations, whether they be oilfield related, or personal injury. In accordance with that plan, if required, notification to the local or provincial government agency would be communicated. ARC has obtained certification that all fire extinguishers and hood suppression systems meet provincial fire code.

COMMUNICATION

ARC's proposed camp would use satellite internet as well as a cell signal booster tower which would help to facilitate safe communications in the area. Further, contractors and employees are equipped with radio communications, which is the dominant form of communication in the area. Since radio is the dominant form of communication and the internet is satellite provided, there is minimal impact to local communication infrastructure.

BC ASSESSMENT

Notification has been sent to the BC Assessment office informing them of the proposed camp, the size of the camp and the intent to apply for a TUP with the PRRD.

We hope that the above explanation satisfies any questions that you may have with respect to ARC's proposed camp. Should you have further questions or require additional information, please contact Kevin Krall at:

Direct Line: [REDACTED]
Fax: [REDACTED]
Email: kkrall@arcresources.com



ARC's emergency number is (403) 292-0434.


Yours truly,
ARC Resources Ltd.

[REDACTED]
Kevin Krall
Senior Surface Landman

Search

Find Data

2 Harasymy...  

 Click or tap a location on the map to learn v



I want to...



Agricultural

S 1/2
Sec 19

SW 1/4
Sec 20

PROPOSED
WATER HUB
(100105828)
(McElhanney J25398SK1)

Non-Classified
Drainages

FTA
CUTBLOCK
ACTIVE
L49667 1

PROPOSED ARC RESOURCES ROAD (J25219WS1)

PROPOSED ARC RESOURCES PIPELINE (J25457A3)

CAUTION
Buried Pipe

NW 1/4
Sec 17

Owner: Agnes Adelaide Harasymyk
Title: CA6764985
PID: 018-784-534
Campsite Area = 8.87 ha

Land

Sec 18

Tp 84

R 24

W6M

SW 1/4
Sec 17

Reserve

3	Revised Campsite	11/04/19	BRD	SK
2	Added Topography	07/01/19	NMA	SP
1	Moved Campsite	21/12/18	NMA	SP
0	Original Plan Prepared	29/11/18	NMA	SP
REV.	REVISIONS	DD/MM/YY	CAD	CHKD

AREAS (MAXIMUM DISTURBANCE)			
	NEW CUT	EXISTING CLEARING	TOTAL
CAMPSITE	8.50 ha	0.37 ha	8.87 ha
TOTAL DISTURBANCE =	8.50 ha	0.37 ha	8.87 ha

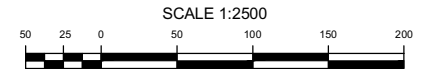
PROPOSED CAMPSITE DISTURBANCE FALLS WITHIN THE AGRICULTURAL LAND RESERVE
 Sec 17, Tp 84, R 24, W6M
 EXISTING NON-FARM USE = 11.01 ha
 PROPOSED NON-FARM USE = 8.87 ha
 TOTAL AREA = 19.88 ha

NOTES:
 All coordinates shown are NAD 83 (CSRS) UTM Zone 10.
 Coordinates shown are for the centroid.
 All dimensions are in metres and decimals thereof.
 The proposed disturbance falls within the Agricultural Land Reserve.
 The proposed disturbance does not fall within the Enhanced Management or Regulatory Policy areas of Area Based Analysis.

LEGEND:

	Tree Line
	Bank
	Road Shoulder
	Ditch
	Non-Classified Drainage
	Buried Pipe
	Cutblock Boundary

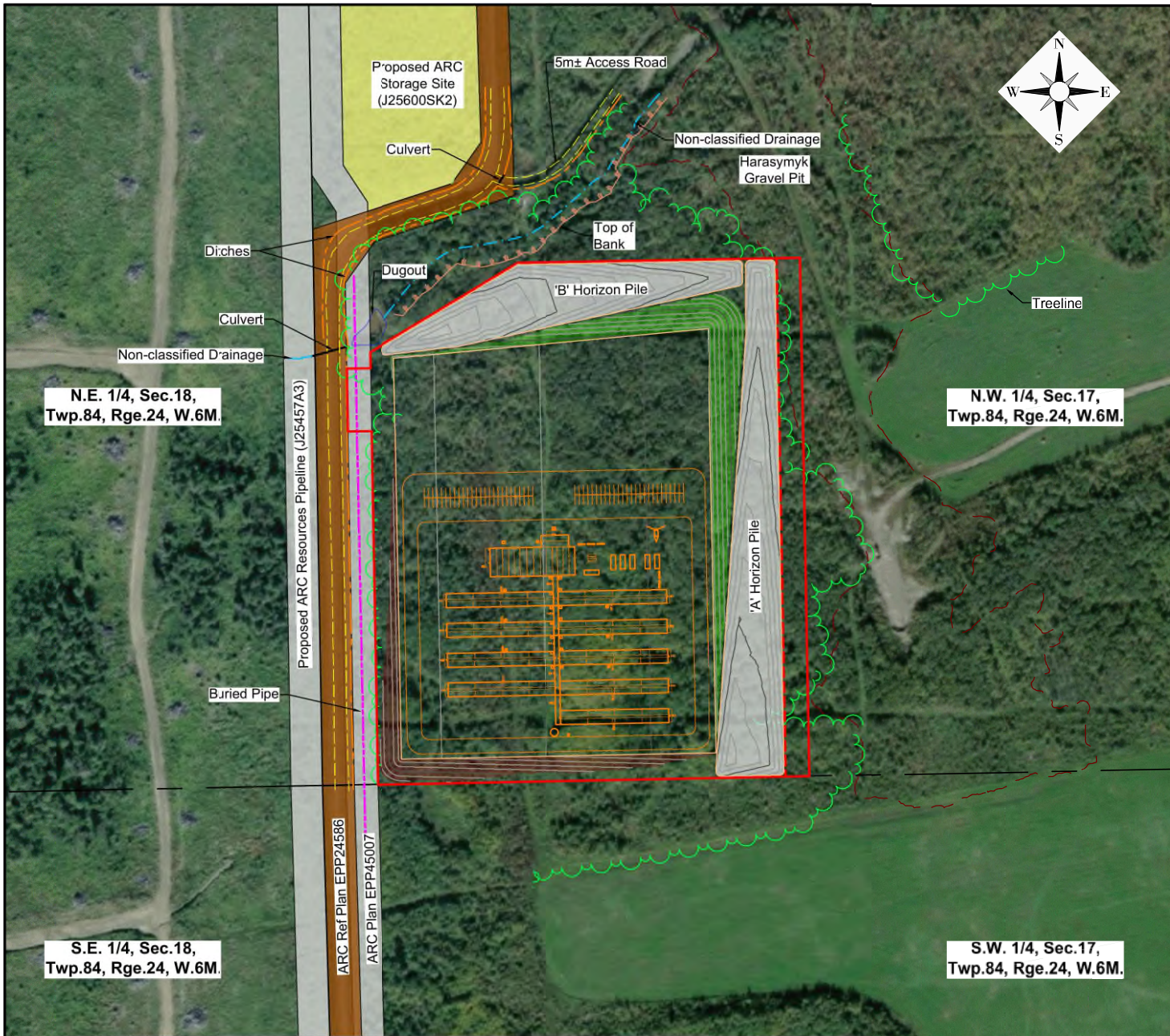
TABLE OF CROSSINGS			
No.	DESCRIPTION	NORTHING	EASTING
1	Buried Pipe within Arc Plan EPP45007	6238468±	576182±



ARC RESOURCES LTD.



SKETCH PLAN SHOWING
PROPOSED CAMPSITE
WITHIN NW 1/4 Sec 17 Tp 84 R 24 W6M
PRIVATE LAND,
PEACE RIVER DISTRICT

ARC FILE: S13811	BCGS: 94A .022	REVISION
	McElhanney Geomatics Professional Land Surveying Ltd. 8908 - 72 Street Fort St. John, BC Phone: (250)787-0356, Fax: (250)787-0310	SHEET: 1 OF 1 JOB No.: 311125600 DRAWING: J25600SK1
		3



Plan Showing Preliminary Site Model
ARC RESOURCES
ARCHIE WAY ROAD CAMP
 Proposed Camp Site in
 N.W. 1/4, Sec.17, Twp.84, Rge.24, W.6M.
 Peace River District - British Columbia

AERIAL OVERVIEW
 Background Image source World Imagery
 Contours derived from Bare Earth LIDAR data

Proposed Final Grade (Major Interval: 5m, Minor Interval: 1m) 
 Lease Boundary: 
 Lease Area: ~8.87 ha
 Usable Area: 200.0 x 262.5
 Proposed Grade Slope: Cut = 3:1
 Fill = 3:1

**PRELIMINARY
 FOR APPROVAL ONLY**

Note:
 The model shown in this package is purely geometric and is for volume estimation and right of way determination only. No material compaction or expansion factors, civil or other geotechnical considerations are accounted for in the design.

2		
1		
0	Prelim - Original Issue	September 2, 2021
Revision #	Revision Note	Date

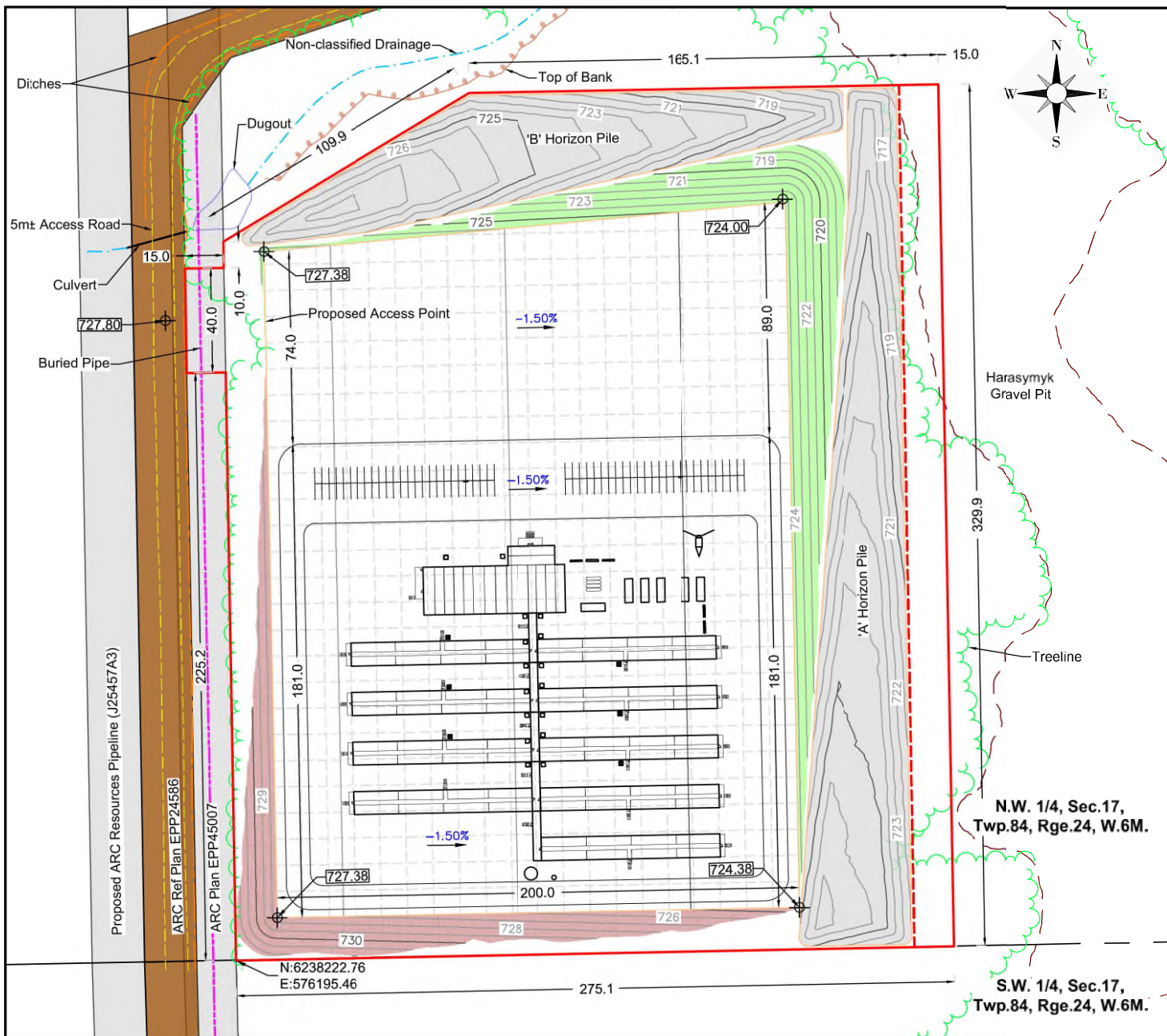
ARC RESOURCES LTD.



McElhanney Associates
 Land Surveying Ltd.
 8808 - Northern Lights Drive Fort St. John, BC
 Phone: (250)707-0356

File: CAMP_NW-17-84-24-W6_R0.dwg / 3111-25600 | Drafted by: BN | Checked by: LM
 Scale: 1:2500





Plan Showing Preliminary Site Model
ARC RESOURCES
ARCHIE WAY ROAD CAMP
 Proposed Camp Site in
 N.W. 1/4, Sec.17, Twp.84, Rge.24, W.6M.
 Peace River District - British Columbia

CAMP DIMENSIONS
 PROPOSED SITE DIMENSIONS AND GRADES
 All units in metres
 Coordinates in UTMz10 NAD83

- Proposed Final Grade (Major Interval: 5m, Minor Interval: 1m)
- Lease Boundary:
- Lease Area: ~8.87 ha
- Usable Area: 200.0 x 262.5
- Proposed Grade Slope: Cut = 3:1
Fill = 3:1
- Break Point Elevations:

**PRELIMINARY
FOR APPROVAL ONLY**

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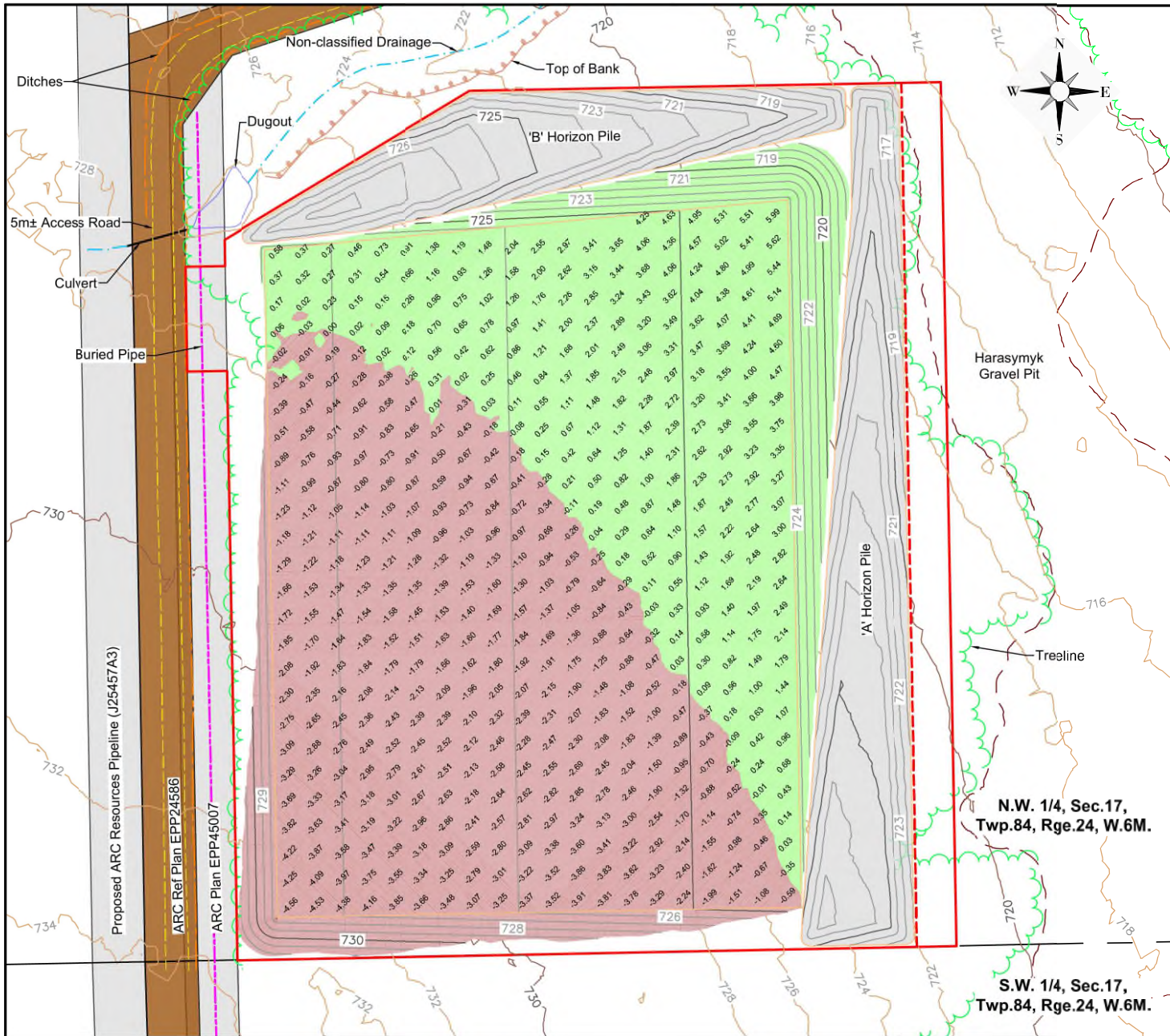
ARC RESOURCES LTD.

McElhanney	McElhanney Associates Land Surveying Ltd. 8808 - Northern Lights Drive Fort St. John, BC Phone: (250)707-0356
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Proposed ARC Resources Pipeline (J25457A3)
 ARC Ref Plan EPP24586
 ARC Plan EPP45007

**N.W. 1/4, Sec.17,
Twp.84, Rge.24, W.6M.**

**S.W. 1/4, Sec.17,
Twp.84, Rge.24, W.6M.**



Plan Showing Preliminary Site Model
ARC RESOURCES
ARCHIE WAY ROAD CAMP
 Proposed Camp Site in
 N.W. 1/4, Sec.17, Twp.84, Rge.24, W.6M.
 Peace River District - British Columbia

CUT AND FILL ANALYSIS

Existing Grade (Major Interval: 10m, Minor Interval: 2m)
 Proposed Final Grade (Major Interval: 5m, Minor Interval: 1m)

MIN. ELEV.	MAX. ELEV.	AREA	COLOUR CODE
-4.68	0.00	33705.09	
0.00	6.40	27820.89	

Total Cut Volume	57941 m ³
Total Fill Volume	57058 m ³
Net Material	883 m ³

'A' Horizon (25cm)	18521 m ³
'B' Horizon (15cm)	11113 m ³

PRELIMINARY
FOR APPROVAL ONLY

- Note:**
- Earthwork volumes stated above are estimates only and may not reflect actual volumes on site.
 - Design elevations and cut fill depths shown are to final surface of compacted clay.
 - 'A' Horizon pile shown has 3:1 slopes and holds 19497m³.
 - 'B' Horizon pile shown has 3:1 slopes and holds 12982m³.

2		
1		
0	Prelim - Original Issue	September 2, 2021
Revision #	Revision Note	Date

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