

3rd Floor - 865 Waverley St Winnipeg, MB R3T 5P4 **P** 204-896-1209 **F** 204-896-0754 **kgsgroup.com** 

December 13, 2021

Impact Assessment Agency of Canada Prairie and Northern Region Suite 1145, 9700 Jasper Avenue Edmonton, Alberta T5J 4C3

Attention: Shelly Boss

Project Manager

Re: Response to IAAC Information Request PADCOM Potash Solution Mining Project

#### Dear Shelly Boss:

Kontzamanis Graumann Smith MacMillan Inc. (KGS Group) is submitting this letter on behalf of Potash and Agri Development Corporation of Manitoba Ltd. (PADCOM) in response to the Impact Assessment Agency of Canada's (IAAC) request for additional information regarding the proposed Potash Solution Mining Project (the Project). The information provided in this letter is in response to your letter dated November 22, 2021, and subsequent discussions with Daymon Guillas, PADCOM President. In particular, the information addresses the comments and questions submitted to IAAC in the November 16, 2021, letter from What the Frack Manitoba (WTFMB).

#### 1.0 IAAC INFORMATION REQUEST 1

Details about the proposed project components, activities and timelines, as well as land tenure and zoning are provided in the Environment Act Proposal (EAP) for the Project, which was submitted to Manitoba Conservation and Climate (MCC) on September 2, 2021. A copy of the EAP is available for download from the Environmental Assessment and Licensing Public Registry (<a href="https://www.gov.mb.ca/sd/eal/registries/6126/index.html">https://www.gov.mb.ca/sd/eal/registries/6126/index.html</a>) under File #6126.00. A summary of the key items, along with clarifications relative to the comments and description in the letter from WTFMB, is provided as follows.

WTFMB described the Project as being massive in scale extending over 212 square miles (54,900 ha), requiring an extensive network of buried pipelines carrying hot brine crossing numerous rivers and streams, provincial and



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municipal roads, CN and CP rail lines and the 230 kV Birtle transmission line. In particular the caption for Figure 1 provided in the WTFMB letter states "Historical drill holes shown by red dots illustrating the extent of the PADCOM potash resource, infrastructure and road, rail and river crossings of eventual brine pipelines are shown".

This reflects a WTFMB misunderstanding of the Project that has been proposed by PADCOM and is not a factual representation of the Project described in the EAP. The 212 square miles referenced, and shown in the EAP Figure 9, is the entire mineral rights holdings in both the North Block and South Block based on historical drill holes and not what is proposed to be developed. The Project that PADCOM is proposing and has applied to be licenced is for mining a high-grade vein of potash below the surface of Sections 21 and 28-20-28 WPM. The only surface infrastructure proposed will be within an approximately 1 ha area plant site located on privately owned land within part of the NW ¼ of 28-20-28 WPM. The site is situated in the abandoned hamlet of Harrowby Manitoba and consists of open pasture land with buried rubble and machinery from the previous town. PADCOM is targeting to mine 100,000 tonnes/year at this site. After discussion with MCC, the Project included the potential to increase capacity up to 250,000 tonnes/year, although it is unlikely that this would occur within 2-years as described in the EAP. The Project components include the following:

- Two production wells (reversible between intake and injection) drilled to an approximate depth of 822 m, at which point they become horizontal wells that extend out 1.6 km horizontally, where they are connected forming a loop. The well heads are located within the plant site to the southwest of the processing plant and connected by an above ground pipe gallery approximately 40 m in length to the equipment within the processing plant. Drawings showing the surface location of the wells and the horizontal well alignment are provided in Appendix A.
- A downhole brine injection well used intermittently to control magnesium levels in the mine feed brine during operation. The well will be located within the site adjacent the processing plant and connected by an above ground pipe gallery approximately 40 m in length to the equipment within the processing plant.
- A 975 m² (10,500 ft²) area footprint for the processing plant building (approximately 21 m by 45 m) at the site containing the processing equipment (crystallizers, centrifuge, dryer, hot water boilers, hot brine tank, cold water tank, pumps and fans), product storage and truck loading area.
- A process water storage pond that is sized to handle runoff from the roof of the processing plant and the immediate area of the plant site as well as any water collected within the sump pit in the processing plant building. This water will be used on a continuous basis for makeup water for the mining process.
- A small separate office building with staff kitchen and washrooms at the site. Drinking water will be supplied by bottled water. Wastewater and sewage from the kitchen and washrooms will be held in a 10,000 L holding tank until trucked to the Municipality of Russel-Binscarth lagoon.

As described in the EAP production after the initial test run is targeted to be 100,000 tonnes/year. While the EAP indicated installation of a groundwater well, considering the relatively small volume of process water required, estimated to be 142.6 m<sup>3</sup>/day (37,700 gallons/day) at the 100,000 tonnes/year capacity, water will instead be trucked to the site from the nearby Russell Municipal water plant. This will require approximately 9 truckloads



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per day using their existing 16,000 L (4,200 gallon) water truck with the potential to be reduced to 2.5 truckloads per day based on plans to purchase a larger water truck. Power for the Project will be supplied by a mix of propane (for dryer) and single-phase power, with any additional power requirements beyond the capability of the single-phase provided by a 500 hp diesel generator. If PADCOM eventually decides to increase the capacity to 250,000 tonnes/year they would need to upgrade the site to 3-phase power supply, install additional crystallizers and equipment within the processing plant, construct another on-site building to provide additional finished product storage and consider connection to the rail line immediately northeast of the site across Railway Avenue for shipping.

Considering that the proposed Project would have an approximately 60-year operation life at 100,000 tonnes/year PADCOM currently has no plans to develop any additional potash resources. If in the future PADCOM decides to develop any additional potash resources beyond the two current sections of land they would be required to complete another Environment Act Licence application with the associated environmental assessment. It is anticipated that any future development would also be restricted to within the 48 square mile North Block.

## 2.0 IAAC INFORMATION REQUEST 2

There is no federal financial assistance being provided for the proposed Project. Considering the Project components and activities the list of federal, provincial, municipal and/or other regulatory approvals required is as follows:

- A licence under The Environment Act (Manitoba)
- A licence under The Oil and Gas Act (Manitoba)
- A Certificate of Approval in accordance with the Tri-Roads Zoning By-Law
- Building permits from the Municipality of Russell-Binscarth (office building) and the Office of the Fire Commissioner (processing plant)

The proposed Project will not require any near or in-water work and therefore there are no regulatory approval requirements under the Fisheries Act or the Canadian Navigable Waters Act. As the plant site was previously cleared and disturbed for agricultural use the Historic Resource Branch indicated the potential to impact heritage resources is believed to be low and therefore there is no requirement to complete a Heritage Resource Impact Assessment and obtain the required permit in accordance with The Heritage Resource Act (Manitoba). Likewise considering the existing site disturbance there are no migratory birds or species at risk that will be affected by the project and therefore there are no regulatory approval requirements under the Migratory Birds Convention Act, Species at Risk Act or The Endangered Species and Ecosystem Act (Manitoba).

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## 3.0 IAAC INFORMATION REQUEST 3

A description of each regulatory approval required for the project, as identified in Section 2.0 is provided in the following sections.

#### 3.1 The Environment Act

The proposed Project will require an Environment Act Licence (EAL) issued by MCC under The Environment Act. The application process is currently still under review by MCC and the required EAL has not been issued to date. As part of the application process an EAP was prepared which included a description of the proposed project and existing environment conditions as well as an assessment of potential project effects. The EAP and application were submitted to MCC on September 2, 2021 to initiate the application process. MCC subsequently posted the Project to the public registry on October 18, 2021 and published a Notice of Environment Act Proposal in the Winnipeg Free Press (October 23, 2021) and the Russell Banner (October 26, 2021) inviting public participation in the review process. The published notice indicated that comments from the public would be received up to November 15, 2021. In addition to a public review period of the EAP, MCC distributes the EAP to a Technical Advisory Committee (TAC), which consists of provincial and federal government specialists who can provide technical expertise. Following the public and TAC review period MCC will review the comments provided and determine whether additional information is required from the proponent. Additionally, MCC will determine whether there is sufficient public concern to warrant a public hearing and whether the province has a legal Duty to Consult (DTC) with Indigenous communities. The EAL when issued will include clauses and conditions to address adverse effects and applicable public or TAC concerns.

#### 3.2 The Oil and Gas Act

Drilling of the two production wells and the brine injection well, respectively referred to as PADCOM Harrowby HZNTL 12-21-20-29 (WPM), PADCOM Harrowby HZNTL A12-21-20-29 (WPM) and PADCOM Harrowby 14-28-20-29 W1 SWD, each require a Well Licence issued by Manitoba Agriculture and Resource Development under The Oil and Gas Act. Well Licence No. 11641 and 11642 were issued to PADCOM for the two production wells on December 3, 2021 and are provided in Appendix B. PADCOM is in the final stages of obtaining the Well Licence for the brine injection well. The application process requires submission of legal surveys, drilling program, drilling prognosis, geotechnical prognosis and a drilling well diagram but it does not include an assessment of effects under federal jurisdiction. While public and Indigenous engagement is not a component of the application process there is a requirement to submit permissions from the surface rights and mineral rights owners at the location of the well.



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# 3.3 Tri-Roads Zoning By-Law

PADCOM obtained a conditional use Certificate of Approval to proceed with the project, issued January 28, 2021, by the Tri-Roads Planning District under the Tri-Roads Zoning By-Law #18/02/18 (Appendix B). This by-law regulates the use and development of land within the Tri-Roads Planning District's planning area, which included the Project site. The Certificate of Approval was obtained through a public hearing where participants were invited, and the public notified through local advertising. While the application does not include an assessment of effects one of the approval conditions is that all required provincial and federal licences and permits are obtained and copies provided to the planning district.

## 3.4 Building Permits

PADCOM has obtained the required building permit to construct the proposed office building from the Municipality of Russell-Binscarth. Similarly, PADCOM is in the process of obtaining a building permit from the Manitoba Office of the Fire Commissioner to construct the proposed processing plant. The building permit applications only require submission of design drawings. There are no requirements to conduct an environmental assessment or public and Indigenous engagement activities.

#### 4.0 IAAC INFORMATION REQUEST 4

The EAP submitted by PADCOM addressed the concerns raised by WTFMB in relation to effects to fish and fish habitat. As described in Section 1.0, the WTFMB concern is based on a misunderstanding of the extent of the proposed development and the assumption that there will be pipelines carrying hot brine crossing rivers and streams. Based on the proposed Project and existing environment conditions described in the EAP there is no inwater construction activities as there are no waterbodies on or near the site and there are no brine pipelines crossing streams or rivers and therefore no potential concern to impact fish and fish habitat. The only pipelines carrying hot brine will be in a pipe gallery at the plant site, approximately 40 m long, connecting the two production wells and the one brine injection well immediately southwest of the processing plant to the equipment within the building. The nearest surface water is a wetland slough area located approximately 350 m southeast of the site between Railway Avenue and the rail line, whereas the Assiniboine River is approximately 1 km east of the site. Additionally, any surface water runoff from the building and the site will be collected in a process water storage pond with no off-site discharge and therefore no potential to impact fish and fish habitat.

WTFMB raised a concern about potential changes in water levels of the Assiniboine River due to the large water withdrawal from the Hatfield Valley Aquifer. While the EAP indicated installation of a groundwater well as the water supply for the Project, considering the relatively small volume of process water required at the 100,000 tonnes/year production rate (approximately 142.6 m³/day) PADCOM has since decided that water will instead be trucked to the site from the nearby Russell Municipal water plant. Likewise, even if PADCOM increases the production capacity to 250,000 tonnes/year they will still truck water to the site rather than installing a



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groundwater well. As the Project is no longer proposing installation of a groundwater well there is no potential to affect water levels on the Assiniboine River located approximately 1 km east of the plant site.

As described in the EAP the proposed Project is located on privately owned land that was previously cleared and disturbed for agricultural use. The vegetation on site consists of seeded grass with only a few trees with no evidence of wildlife nesting or denning at the site. A search of the Manitoba Conservation Data Centre indicated that there are no occurrences of Endangered or Threatened Species at Risk recorded at or within 2 km of the site. Considering the proposed Project and existing site ownership and conditions, the project is not anticipated to cause adverse effects within areas of federal jurisdiction (fish and fish habitat, migratory birds, species at risk, federal lands or lands outside of Manitoba/Canada). As the project is on private land and has no anticipated adverse effects to the surrounding environment, the Project will not potentially affect Aboriginal and Treaty Rights. Additionally, as noted by the HRB, because the plant site was previously cleared and disturbed there is a low potential to impact heritage resources.

While the EAP does not directly assess potential cumulative effects for the Project it did indicate that the potential adverse Project effects were very low to negligible and therefore there likely won't be any significant cumulative effects. Additionally, the EAP noted that the plant site location was specifically selected to have a minimum potential impact on the surrounding area and communities. Considering the small size and location of the Project it is likely that the only potential cumulative effect would be an increase in truck traffic along the paved road between Highway 16 and the Bunge Canola plant. There are only two occupied homes south of the proposed Project that would be using the municipal gravel access road so there will be little social disturbance and any impacts to the road condition from increased traffic will be managed by PADCOM paying for maintenance of the gravel municipal road affected.

#### 5.0 IAAC INFORMATION REQUEST 5

As described in Section 2.0 there is no federal financial assistance being provided for the proposed Project and no federal licences, permits, authorization or approvals required. As such there are no anticipated adverse direct or incidental effects that may occur as a result of federal financial assistance or approvals.

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## 6.0 IAAC INFORMATION REQUEST 6

Table 9 in Section 5 of the EAP listed the public engagement activities undertaken for the Project which included meetings with the Town of Russell and the Municipality of Russell-Binscarth between 2012 and 2021 along with the Tri-Roads Planning District Public Hearing in January 2021.

There were approximately 55 people in attendance at the January 2021 Public Hearing, including the two Municipal councils of the Tri-Roads Planning District. Presenting and speaking on behalf of the Project were Daymon Guillas (PADCOM), Harvey Haugen (Beechy Potash Products Corporation), Gary Naherniak (Drilling Consultant), Chief Dave LeDoux of Gambler First Nation and Boh Kubrakovich (Lead Keeper for First Nation Treaty Two Territory). There were no public concerns raised at this hearing and generally people were in support of the Project being a small local mining operation as it would not bring in a large workforce from out of the area that could affect housing prices and increase traffic.

In addition to these public engagement activities, PADCOM met with the three neighbouring landowners in the Harrowby area surrounding the Project. These meetings included a tour of alternative sites that had been considered for the proposed processing plant. During these discussions a landowner expressed concern that one of the potential plant sites was located on a 1 ha (2.5 acre) property that the siblings played on as children and their mother had a garden plot and it was upsetting to have these memories disturbed. In response PADCOM moved the plant site approximately 200 m away to an area acceptable to the landowner, as well as returning the land to the previous owner at no cost.

PADCOM plans to continue public engagement throughout operation of the Project by publishing an annual report outlining water usage, emissions, production quantities and profits earned. The purpose of this annual report is to demonstrate total transparency in relation to the Project and show the positive aspects. This annual report will be provided to the Municipality of Russell-Binscarth, the First Nation communities involved and the local high schools.

WTFMB expressed concerns related to impacts to fish and fish habitat, water levels on the Assiniboine River, a lack of Crown led Section 35 Indigenous consultation and Greenhouse Gas (GHG) emissions. Their concerns related to Project effects to fish and fish habitat and water levels on the Assiniboine River are based on a misunderstanding of the extent of the project as described in the previous responses. The concern that crude oil and octadecyl amine, used in the potash mining process, will leach from fields fertilized with the potash is an end user effect and not an affect associated with the potash mining. Similarly, the concern related to Section 35 Indigenous Consultation is not something the proponent can address as it is the Crown's responsibility to determine whether this consultation is required or not, regardless PADCOM has engaged with and involved Indigenous communities in the project as discussed in Section 7.0.

It is understood that WTFMB has some concerns with regards to the GHG emissions from the Project. The EAP was developed with several different assumptions in mind and limited information given the early timeline in the Project development. This has led to some discrepancies within the document with regards to the GHG



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estimates as was found by WTFMB. Considering the number of uncertainties still present as the capacity and power supply are still being optimized, an accurate estimate of total GHG emissions cannot be calculated in the near future. PADCOM is committed to reducing GHG emissions wherever feasible and the proposed mining process is expected to produce lower emissions per tonne of potash mined compared to more traditional mining processes.

We understand that the Project does not currently require a fully detailed plan to achieve net zero GHG emissions by 2050 considering the Project would not normally be subject to the Impact Assessment Act, as it does not fall under the definition of a "designated project" per the Physical Activities Regulations. Regardless, it is PADCOM's intent to engage in detailed tracking of relevant data for emissions estimations throughout project construction, project start-up and project operations as part of ensuring that any reporting requirements to the Greenhouse Gas Reporting Program (GHGRP) are met.

#### 7.0 IAAC INFORMATION REQUEST 7

PADCOM has involved the communities of Gambler First Nation, Birdtail Sioux First Nation and Waywayseecappo First Nation since 2014 with Gambler First Nation and Birdtail Sioux First Nation entering into Memorandum of Understandings with PADCOM in 2015. Additionally, the Gambler First Nation is a 20% shareholder in the Project which will ensure continued Indigenous engagement throughout the Project operation. As noted in the enclosed letter from the Gambler First Nation Chief David LeDoux they can see how much this project would benefit their First Nation as well as the Russell/Binscarth and surrounding communities through jobs and off shoot business development (Appendix C). Because the processing plant is located within the Gambler First Nation traditional territory, they feel it is important that the Project will not have salt tailings above ground and that the process will re-use water and have a small operational footprint as proposed. PADCOM is not aware of any Indigenous community concerns in relation to the Project.

The Gambler First Nation has worked aggressively to find markets for potash sales. Chief Dave LeDoux approached Federated Co-op to enter into an Off-Take agreement with PADCOM and hosted three meetings to try to bring this to fruition. Through another project Chief LeDoux introduced PADCOM to a consortium with a Quebec based company and the Government of Cuba for the sale of potash. While meetings were successful in developing a partnership in the project and a long-term Off-Take agreement, PADCOM turned down the offer of investment as it didn't meet the desired social royalties and high paying wages.

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## 8.0 IAAC INFORMATION REQUEST 8

There will be little to no adverse effect to the public or Indigenous peoples as the Project is a small-scale potash solution mine with low emissions and water consumption. In comparison the Project will provide definite and measurable public and Indigenous benefits in the form of local contract services, employment and social royalties, in addition to the tax revenues for the Municipality of Russell-Binscarth and Manitoba royalty tax. PADCOM currently employs 6 full and part time employees and had previously employed two Metis peoples. While the Metis peoples have recently left the company, PADCOM is hiring 2 additional full-time staff from the Gambler First Nation. In addition to Gambler First Nation being a 20% partner in the Project 11% of the net profit will be given away as follows:

- 1% to Gambler First Nation
- 1% to Birdtail Sioux First Nation
- 1% to Waywayseecappo First Nation
- 1% to Treaty 2 Territory
- 1% to Manitoba Metis Federation
- 1% to Specialized Middle School Program
- 1% to Citizenship University Program
- 4% to Socio-Economic Development Fund

PADCOM turned down a Quebec/Cuba consortium and potential investors out of California because their first questions were can the social royalties and Manitoba royalties be negotiated and are such large wages required. PADCOM believes that local ownership is required to maximize the benefit from a public resource rather than out of country and/or large pension fund ownership that generally only care about increasing dividends every year on the backs of hard-working good people.

Because of the small size of the Gambler First Nation they cannot access federal money for sidewalks, streetlights and other quality of life and safety infrastructure which we all take for granted. The 1% profit sharing and 20% partnership in this Project will allow them to fund these and other infrastructure development in their community.

There are five Specialized Middle School Programs in North America. They are for middle school students that have a high drop out rate. These at-risk students enter this specialized middle school which has a high teacher-student ratio so they can then return to public high school. The program is so successful that the students have gone from a 90% drop out rate in middle school to a 70% graduation rate from public high school. This subsequently has a ripple effect if these students have younger siblings. The 1% net profit sharing will allow PADCOM to support 20 students per year into such a school which will be located in Russell, Manitoba.

The Socio-Economic Development Fund will be spent at Gambler First Nation, Russell and Binscarth and can be used for a number of projects beyond just supporting business. The objective of this fund is to make the region long-term sustainable by growing new small businesses and enhancing quality of life. Funds obtained through



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this program do not need to be repaid in dollars but instead are paid for in volunteerism, further benefiting the communities. As an example, the fund can be used to provide daycare spaces, upgrade facilities and increase daycare wages that will retain and attract young families to the area, providing a ripple effect of having people to fill local labour needs and keeping money within the local communities. The fund could also be used for personal care home beds and to help people start up new businesses and advance new technologies and ideas.

### 9.0 IAAC INFORMATION REQUEST 9

There are numerous reasons, as discussed in the previous Sections, to indicate why the Project should not be designated under the Impact Assessment Act. These are summarized as follows:

- The concerns raised by WTFMB and used to support their request to designate the project are based on a
  misunderstanding of the extent and components of the proposed Project. The Project is significantly
  smaller than presented by WTFMB.
- There are no in-water construction activities proposed and there are no brine pipelines crossing streams or rivers and therefore no potential concern to impact fish and fish habitat.
- The plant site was previously cleared and disturbed for agricultural use and therefore there is little potential to impact heritage resources, migratory birds or species at risk and their habitat.
- There is no federal financial assistance being provided for the proposed Project and no federal licenses, permits, authorization or approvals are required.
- There are no anticipated adverse changes to the environment that will occur on federal lands or lands outside of Manitoba or Canada.
- There are no anticipated adverse effects on Aboriginal and Treaty Rights or Indigenous peoples, whereas there will be clear and measurable socioeconomic benefits for the local Indigenous communities. This is in the form of current employment at PADCOM, Gambler First Nation being a 20% partner in the Project and sharing 5% of the net profits with local First Nations and the Manitoba Metis Federation.

Prepared By:

<Signature removed>

Approved By:

<Signature removed>

Shaun Mottatt, M.Sc. Senior Environmental Scientist

SFM/

Enclosure/Attached

cc: Daymon Guillas

Jason Mann, M.Sc., P.Geo.
Environmental Department Head/Associate Principal

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### STATEMENT OF LIMITATIONS AND CONDITIONS

#### Limitations

This report has been prepared for Potash and Agri Development Corporation of Manitoba (PADCOM) in accordance with the agreement between KGS Group and PADCOM (the "Agreement"). This report represents KGS Group's professional judgment and exercising due care consistent with the preparation of similar reports. The information, data, recommendations and conclusions in this report are subject to the constraints and limitations in the Agreement and the qualifications in this report. This report must be read as a whole, and sections or parts should not be read out of context.

This report is based on information made available to KGS Group by PADCOM. Unless stated otherwise, KGS Group has not verified the accuracy, completeness or validity of such information, makes no representation regarding its accuracy and hereby disclaims any liability in connection therewith. KGS Group shall not be responsible for conditions/issues it was not authorized or able to investigate or which were beyond the scope of its work. The information and conclusions provided in this report apply only as they existed at the time of KGS Group's work.

## Third Party Use of Report

Any use a third party makes of this report or any reliance on or decisions made based on it, are the responsibility of such third parties. KGS Group accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions undertaken based on this report.

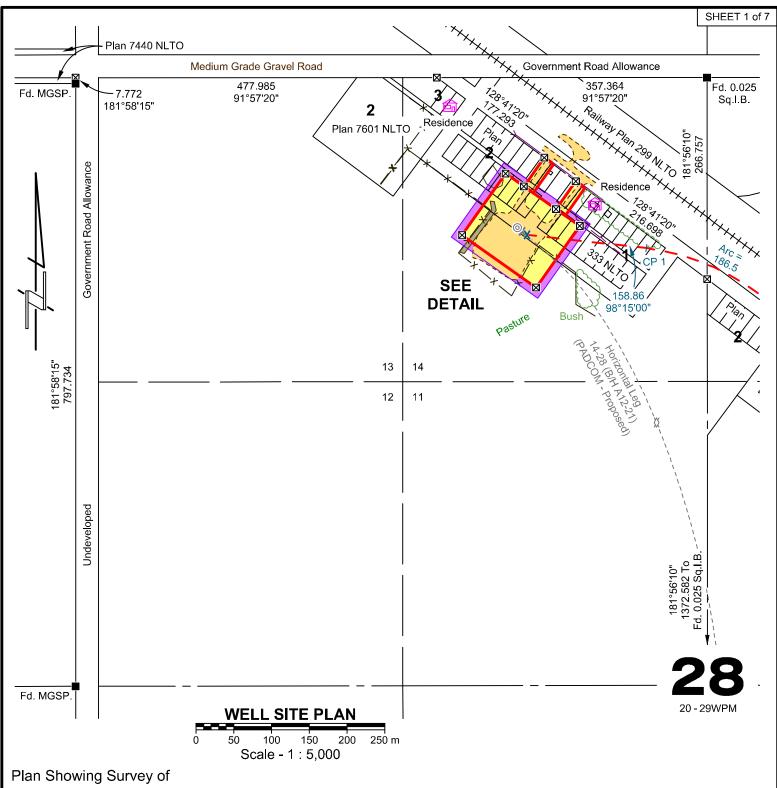
### Geo-Environmental Statement of Limitations

KGS Group prepared the geo-environmental conclusions and recommendations for this report in a professional manner using the degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. The information contained in this report is based on the information that was made available to KGS Group during the investigation and upon the services described, which were performed within the time and budgetary requirements of PADCOM. As this report is based on the available information, some of its conclusions could be different if the information upon which it is based is determined to be false, inaccurate or contradicted by additional information. KGS Group makes no representation concerning the legal significance of its findings or the value of the property investigated.

# **APPENDIX A**

**Project Drawings** 





# PADCOM HARROWBY HZNTL 12-21-20-29WPM

Pad Site and Access Road Terminus: 12C-21-20-29WPM Well Site Surface Location L.S.14B Sec.28 Twp.20 Rge.29 WPM

R.M. of Russell-Binscarth, Manitoba

I, K. Todd Baley, Manitoba Land Surveyor certify that the survey represented by this plan is correct to the best of my knowledge and was completed on the 12th day of October, 2021.

This is a copy of an original plan, signed and sealed by K. Todd Baley, Manitoba Land Surveyor, on November 16, 2021. The original plan is held on file in the offices of GeoVerra Manitoba Land Surveying Ltd.

This copy has been prepared for distribution via electronic and other means. Should there be a discrepancy between this document and the original document, the signed, sealed original shall govern.

<Signature removed>

Manitoba Land Surveyor/

<Signature removed>

Vitness ( Steven Dyck 🕖 )

PERMIT
GeoVerra

Surveying Ltd. No. 2020-16 ELEVATION ON GROUND AT WELL LOCATION = 486.29

CERTIFICATE OF TITLE:

NW 28-20-29WPM CT No. 2937805/5 (Parcel Two) (2021-10-14) Robrt Patrick Darnell Davies

OPERATOR: POTASH AND AGRI DEVELOPMENT CORPORATION OF MANITOBA

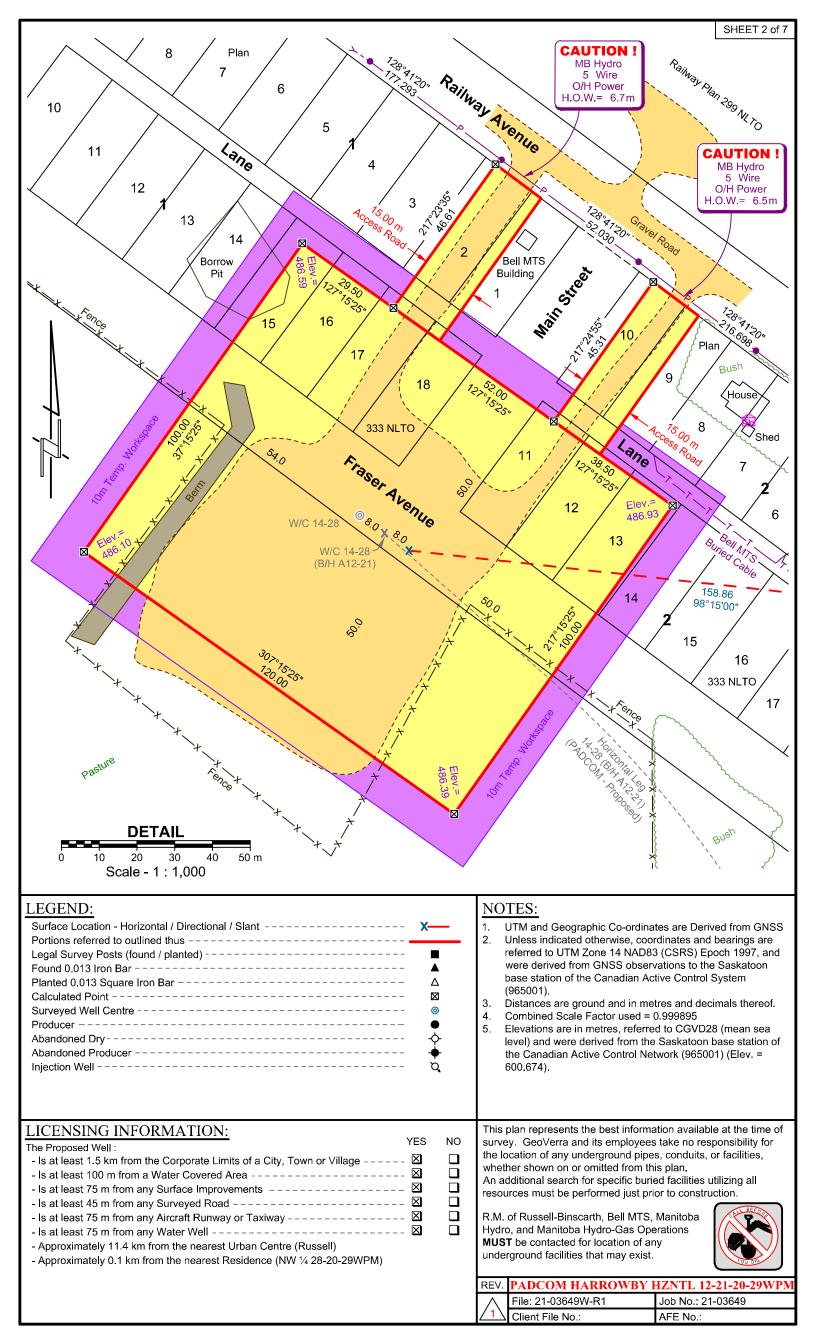


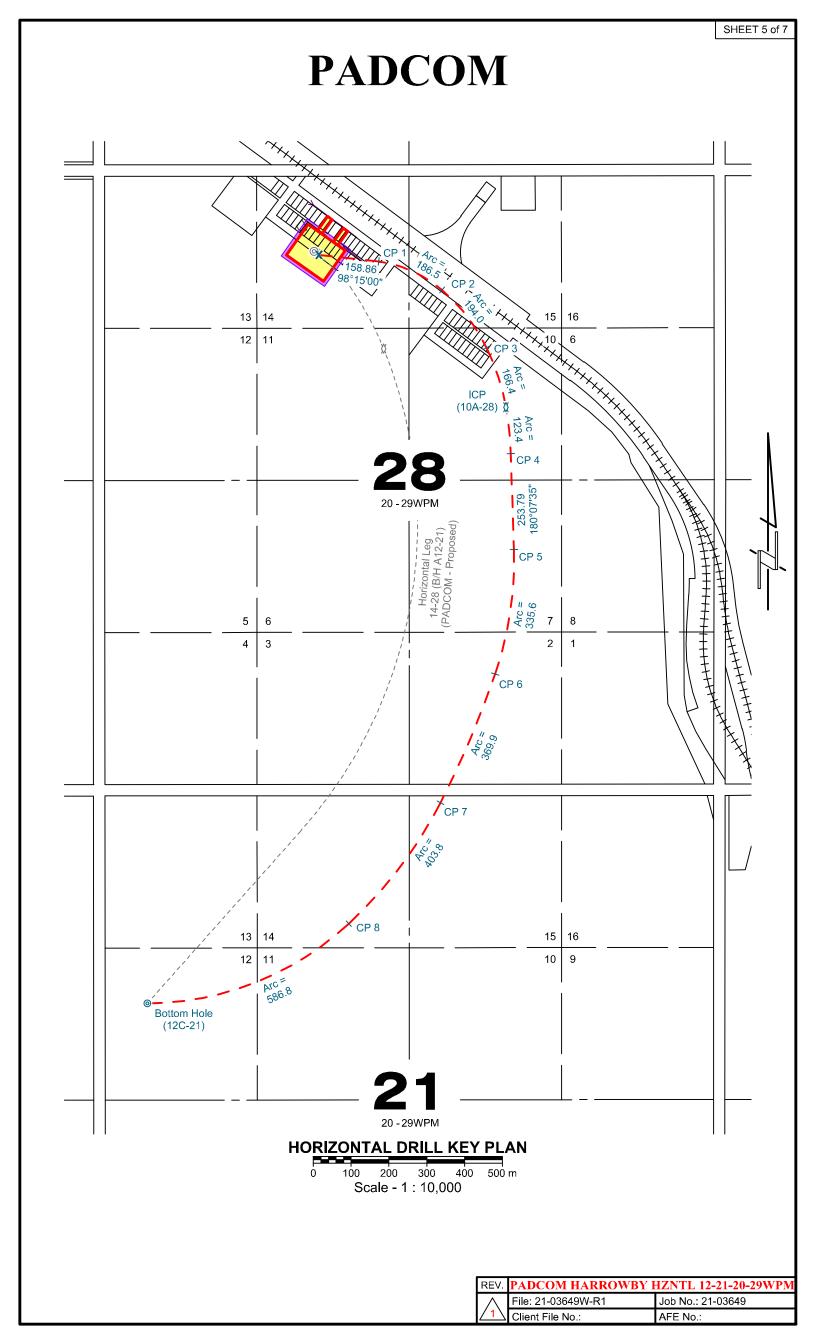
GeoVerra Manitoba Land Surveying Ltd. Toll Free: 1-800-465-6233 www.geoverra.com 
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 Added Horizontal Drill Key Plan
 Nov. 16, 2021
 SD - DB

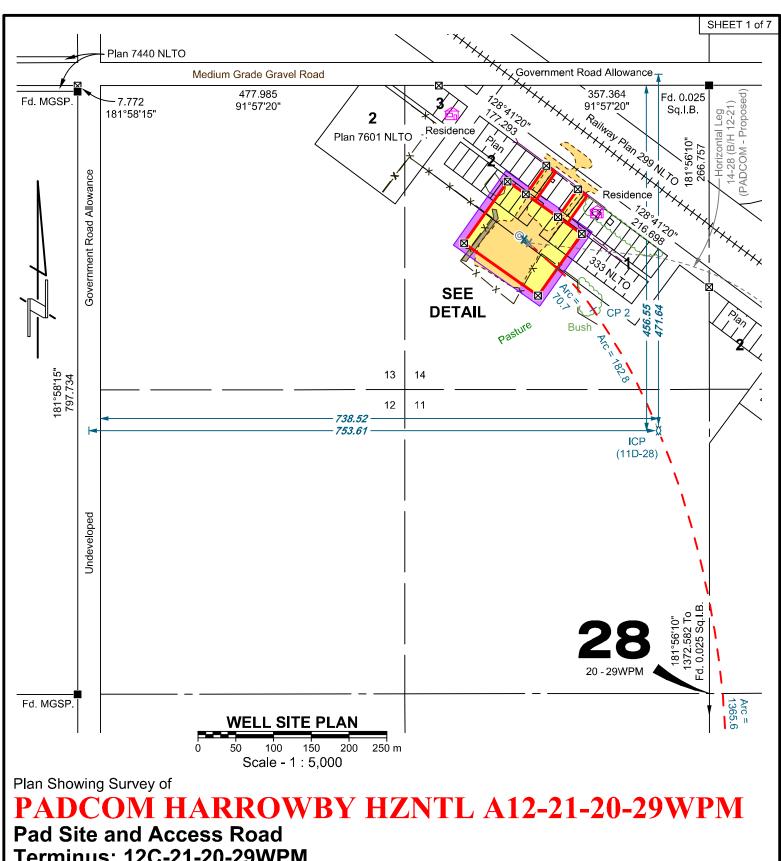
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 Issued
 Oct. 25, 2021
 JV - SD - DB

 REV.
 REVISION
 DATE
 INITIALS

File: 21-03649W-R1 Job No.: 21-03649
Client File No.: AFE No.:







Pad Site and Access Road Terminus: 12C-21-20-29WPM Well Site Surface Location L.S.14B Sec.28 Twp.20 Rge.29 WPM

R.M. of Russell-Binscarth, Manitoba

I, K. Todd Baley, Manitoba Land Surveyor certify that the survey represented by this plan is correct to the best of my knowledge and was completed on the 12th day of October, 2021.

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<Signature removed>

Manitoba Land Surveyor/

# <Signature removed>

Vitness ( Steven Dyck // )

PERMIT

GeoVerra

Manitoba Land

Surveying Ltd.

No. 2020-16

ELEVATION ON GROUND AT WELL LOCATION = 486.24

#### CERTIFICATE OF TITLE:

NW 28-20-29WPM CT No. 2937805/5 (Parcel Two) (2021-10-14) Robrt Patrick Darnell Davies

AFE No.

OPERATOR: POTASH AND AGRI DEVELOPMENT CORPORATION OF MANITOBA

1 Added Horizontal Drill Key Plan Nov. 16, 2021 SD - DB

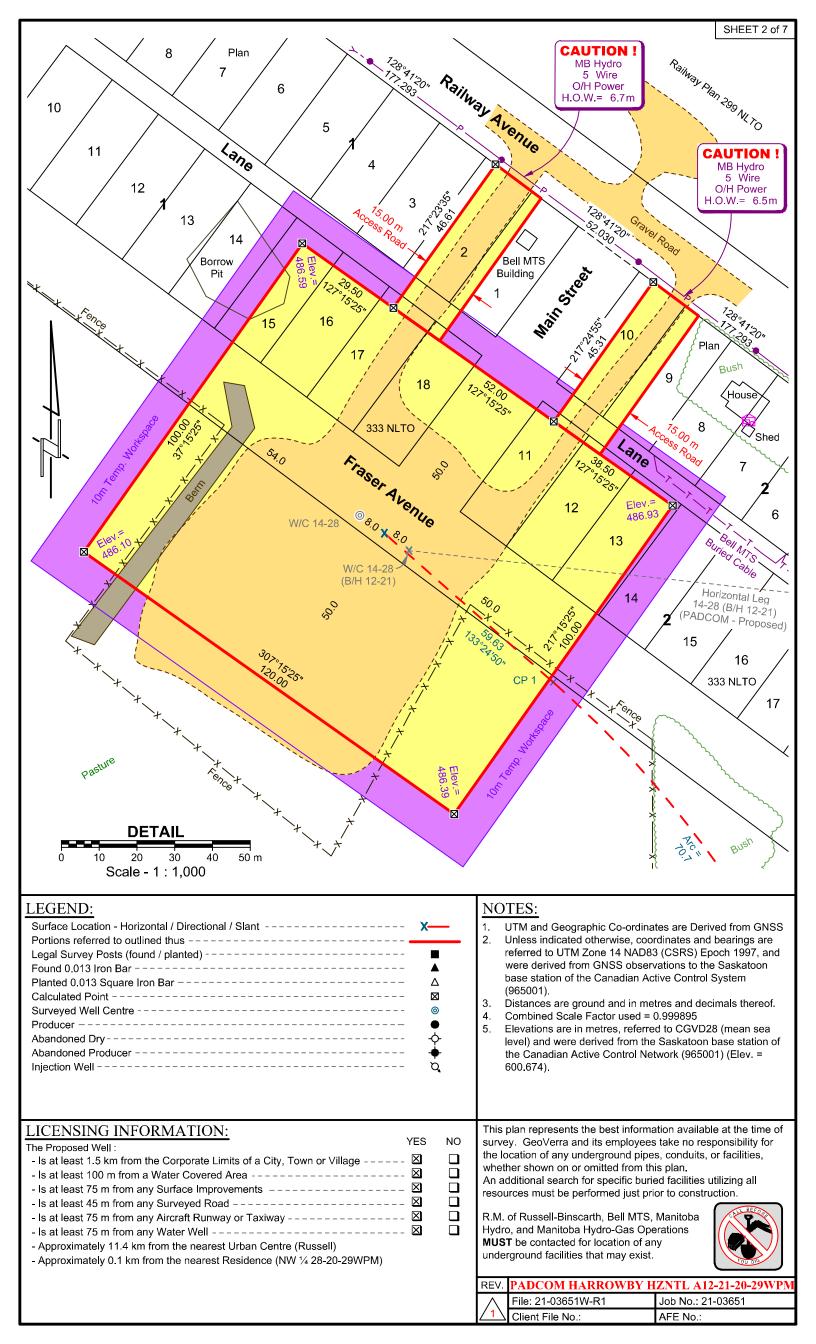
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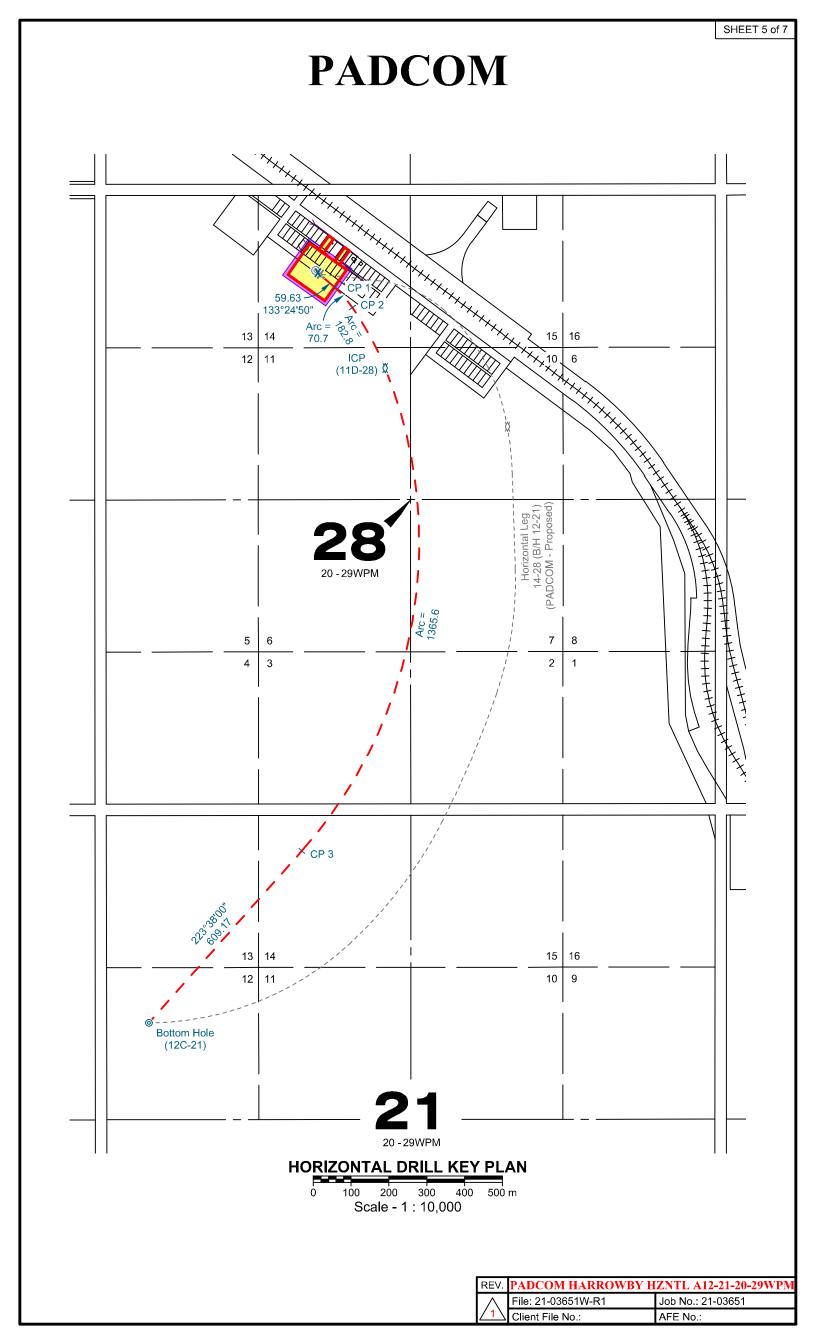


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REV. REVISION DATE INITIALS

↑ File: 21-03651W-R1 Job No.: 21-03651





# **APPENDIX B**

Regulatory Approvals





## **WELL LICENCE**

In compliance with the Oil and Gas Act Drilling and Production Regulation, application is hereby made for a well licence for:

Well Name: PADCOM Harrowby HZNTL 12-21-20-29 (WPM)

Name of Well Owner: Potash and Agri Development Corporation of Manitoba (PADCOM)

Manitoba Corporation No: 897355-5
Address of Well Owner: Box 460

**Phone:** (204)-773-6228 **Fax:** (204)-773-7516

Ground Elevation (metres above see level): 486.24

Well Location:LSD: 12Quadrant: CSection: 21Township: 020Range:29(W)Surface Location:LSD: 14Quadrant: BSection: 28Township: 020Range:29(W)

Surface Co-ordinates	Directional or Horizontal Well BottomHole Co-ordinates
208.22 m S of N of Sec 28	548.99 m S of N of Sec 21
567.09 m E of W of Sec 28	111.59 m E of W of Sec 21

Surface Owner: PADCOM, Municipality of Russell Binscarth

Occupant: none

Royalty Owner(s): Crown, R Davies, W&B Dilts, J Morrisseau

Freehold Oil and Gas Rights Leased

By:

Daymon Guillas

**Crown Reservation or Lease No.:** 

Type of Well: OTHER
Projected Total Depth (m): 3321.40

#	Casing Type	Casing Size O.D. mm	Weight Kg/m	From	То	Estimated Cemented Interval
1.	SURFACE	244.50	48.07	Surface	120.00	Surface
2.	INTERMEDIATE	177.80	34.23	Surface	1247.30	Surface

**Drilling Contractor:** Ensign Drilling Inc.

**Rig No.:** 12

Expected Spud Date: 12/1/2021

Responsible Agent of Company at Well:

**T.** 1. . 1 . .

Steve Lobreau

**Telephone:** (306)-483-8546

<Signature removed>

12/3/2021 (Date - MM/DD/YYYY)

(Signature of Applicant)

Well Licence No.: 11641

UWI: 100.12-21-020-29W1.00

Well Classification: New Field Wildcat

<Signature removed>

<Signature removed>

12/3/2021

Date of Issue Reviewed By Director of Petroleum

## Lic. No 11641 PADCOM Harrowby HZNTL 12-21-20-29 (WPM)

A licence to drill a well known as PADCOM Harrowby HZNTL 12-21-20-29 (WPM) is hereby granted to Potash and Agri Development Corporation of Manitoba (PADCOM).

The Licensee shall comply with all the provisions of the Oil and Gas Act, the Drilling and Production Regulation and the following terms and conditions:

- 1. A copy of a fully executed surface leases (i.e. signed by the licencee.) is to be emailed to Mines\_Br@gov.mb.ca
- 2. The final directional survey and drilling tour reports are to be e-mailed, as per Info Notice 13-05, as soon as drilling is finished.
- 3. The licencee is to provide samples from the surface casing shoe to TD. They are to be taken at 5m in the vertical section and at 10m intervals for the horizontal section. One set of samples is to be washed, dried and preserved in vials that are labeled with the name of the well and the depth at which each sample was taken (in accordance with Subsection 111(2) of the regulation) and shipped to the Rock Preparation Lab at 10 Midland Street in Winnipeg.
- 4. The Licencee must ensure that the cover of each sample cutting tray is labeled with the licence #, location and intervals for that particular tray.
- 5. All drilling mud and drill cuttings are to be stored in tanks and disposed of as per approval of an inspector from the Virden District Office. The licencee is to contact the Virden District Office prior to performing any off lease spreading of any other materials.
- 6. PADCOM is to abide by the agreement dated December 3rd, 2021 made between Manitoba Government and Potash and Agri Development Corporation of Manitoba Ltd.
- 7. The Licencee is to submit mandatory digital submission of multi-spacing unit production allocation in both PDF as per Informational Notice 20-08.
- 8. Open hole logging requirements as per section 113 of the Drilling and Production Regulation have been waived, however, Gamma Ray MD and TVD image files in PDF or TIF format and LAS data file format are still required from surface casing shoe to TD at a minimum sample rate of 1 reading per 0.2 m (20 cm) (Files with 0.0 step or inconsistent reading steps will not be accepted). Any gas or Rate of Penetration (ROP) data collected is also to be submitted as an LAS file. As well, the licencee will supply copies of the Geological Report and detailed strip logs, in .pdf or .TIF format, which show the well trajectory, rates of penetration and any other information recorded as per Informational Notice 13-05.
- 9. Effective June 1, 2013. All submissions are now required to be submitted in digital format, emailed to petroleum@gov.mb.ca, as per Informational Notice 13-05. Please ensure that the following is included in the subject line of your email: Company name, well licence #, location (bottomhole) and the type of report (see Appendix 1) for logs see Appendix 3.

## **MANITOBA SUBMISSION REQUIREMENTS FOR NEW WELLS**

The following notifications and information must be provided to the Manitoba Mining, Oil and Gas Branch as per the requirements under the Oil and Gas Act.

#### **DRILLING AND COMPLETION SUBMISSION REQUIREMENTS:**

(Company representative at the well site is responsible for items 1 to 13)

Item	Notification/ Submission	Notification
		period/submission deadline
1	Intent to begin wellsite construction	Min. 24 hours prior
2	Intent to spud a well	Min. 24 hours prior
3	Intent to pull pipe during a drill stem test	Min. 2 hours prior
4	Intent to run and cement surface or production casing	Min. 2 hours prior
5	Intent to complete or service a well	Min. 1 hour prior
6	Intent to conduct a pressure test under Subsection 50 (1)	Min. 24 hours prior
7	Intent to commence a segregation test under Subsection 52 (3)	Min. 24 hours prior
8	Intent to abandonment a well in which only surface casing has been run. Verbal approval to abandon must be obtained from the district office before abandonment can commence.	Min. 2 hours prior
9	Intent to abandonment a well in which production casing has been run	Min. 24 hours prior
10	Intent to backfill on an abandoned well	Min. 2 hours prior
11	Weekly status reports (New Well Summaries) on all	Weekly, on Mondays before
	activities up to rig release.	9am
12	Tour Reports	Within 48 hours of rig release
13	New Well Summaries	Each Monday morning
14	Drill Stem Test Results	Within 30 days of being obtained
15	As Drilled Survey plats for horizontal and directional wells	As per IN 20-08
16	Geological Reports	Within 30 days of being obtained
17	Core Analysis Reports	Within 30 days of being obtained
18	Reservoir Pressure measurements	Within 30 days of being obtained
19	Detailed, chronological report of all completion operations	Within 30 days of being obtained
20	Final Directional Surveys	As per IN 08-03
21	Logs	Within 48 hours of log run date
22	Cores	Within 60 days of the finished drilling date

Please submit all required information to: <a href="mailto:petroleum@gov.mb.ca">petroleum@gov.mb.ca</a>

Pease submit all Drilling cuttings and cores to:

Midland Sample & Core Library 10 Midland Street, Winnipeg, MB, R3E 2Y6.

If you experience any difficulties please contact:

Mining, Oil & Gas Branch, Production Stewardship
Box 1359, 590 Wellington Street East, Virden, MB, ROM 2C0.
Phone: 204-748-4260; Fax: 204-748-2208



## WELL LICENCE

In compliance with the Oil and Gas Act Drilling and Production Regulation, application is hereby made for a well licence for:

Well Name:

PADCOM Harrowby HZNTL A12-21-20-29 (WPM)

Name of Well Owner:

Potash and Agri Development Corporation of Manitoba (PADCOM)

Manitoba Corporation No:

897355-5

Address of Well Owner:

Box 460

Phone:

(204)-773-6228

Fax:

(204)-773-7516

Ground Elevation (metres above see level):

486.24

Well Location:

LSD: 12

Quadrant: C

Section: 21

Township: 020

(W) Range:29

Surface Location:

LSD: 14

Quadrant: B

Section: 28

Township: 020

Range:29

(W)

Surface Co-ordinates	Directional or Horizontal Well BottomHole Co-ordinates			
203.60 m S of N of Sec 28	548.99 m S of N of Sec 21			
560.56 m E of W of Sec 28	111.59 m E of W of Sec 21			

Surface Owner:

Municipality of Russell Binscarth

Occupant:

none

Royalty Owner(s):

Crown

Freehold Oil and Gas Rights Leased

By:

Daymon Guillas

Crown Reservation or Lease No.:

Type of Well:

**OTHER** 

Projected Total Depth (m):

2980.00

#	Casing Type	Casing Size O.D. mm	Weight Kg/m	From	То	Estimated Cemented Interval
1.	SURFACE	244.50	48.07	Surface	120.00	Surface
2.	INTERMEDIATE	177.80	34.23	Surface	1004.47	Surface

**Drilling Contractor:** 

Ensign Drilling Inc.

Rig No.:

12

**Expected Spud Date:** 

12/1/2021

Responsible Agent of Company at

Well:

Steve Lobreau

Telephone: (of the above person)

(306)-838-8546

<Signature removed>

12/3/2021

(Date - MM/DD/YYYY)

(Signature of Applicant)

Well Licence No.:

11642

UWI:

102.12-21-020-29W1.00 **New Field Wildcat** 

Well Classification:

<Signature removed>

<Signature removed>

12/3/2021

Date of Issue

Reviewed By

Director of Petroleum

### Lic. No 11642 PADCOM Harrowby HZNTL A12-21-20-29 (WPM)

A licence to drill a well known as PADCOM Harrowby HZNTL A12-21-20-29 (WPM) is hereby granted to Potash and Agri Development Corporation of Manitoba (PADCOM).

The Licensee shall comply with all the provisions of the Oil and Gas Act, the Drilling and Production Regulation and the following terms and conditions:

- 1. A copy of a fully executed surface leases (i.e. signed by the licencee.) is to be emailed to Mines\_Br@gov.mb.ca
- 2. The final directional survey and drilling tour reports are to be e-mailed, as per Info Notice 13-05, as soon as drilling is finished.
- 3. The Licensee is to provide samples from 50 m above Mississippian to T.D. They are to be taken at 5m in the vertical section and at 10m intervals for the horizontal section. One set of samples is to be washed, dried and preserved in vials that are labeled with the name of the well and the depth at which each sample was taken (in accordance with Subsection 111(2) of the regulation) and shipped to the Rock Preparation Lab at 10 Midland Street in Winnipeg.
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Mining, Oil & Gas Branch, Production Stewardship
Box 1359, 590 Wellington Street East, Virden, MB, R0M 2C0.
Phone: 204-748-4260; Fax: 204-748-2208

Issued By:	Tri-Roads Planning District		
	Board		
Applicant:	PADCOM		
In Respect of:	TRCU #01/21		
In Accordance of:	Tri-Roads Zoning By-Law		
	#18/02/18		
Date of Order:	January 28 <sup>th</sup> , 2021		

The application listed above has been approved with the following conditions:

- 1. That all required provincial and federal license, permits and insurance is obtained and copies provided to Tri-Roads Planning District within a reasonable period of time.
- 2. That PADCOM enters into an agreement with The Municipality of Russell Binscarth for road maintenance prior to any development of the lots.
- 3. Valid for a period of 18 months from the date of this order.
- 4. Applicant is responsible to review any notations on certificate of title.

<Signature removed>

Adrienne Falloon
Planning Officer
Tri-Roads Planning District

Approved by Resolution #9/21



# **APPENDIX C**

Gambler First Nation Letter





Box 250 Binscarth, Manitoba ROJ 0G0

Phone: 1-204-773-2525 Fax: 1-204-773-8353

Email: office@gfnation.ca

8 December 2021

Shelly Boss – Project Manager Impact Assessment Agency of Canada Prairie and Northern Region Suite 1145, 9700 Jasper Avenue Edmonton, Alberta T5J 4C3

RE: Padcom Potash Selective Solution Mining Project

#### Greetings:

Gambler First Nation was offered interest in and signed an MOU in the selective solution processing of potash with PADCOM in 2014. We are eager to negotiate a formal benefits agreement with PADCOM that will include profit sharing and employment opportunities for our community. We will be negotiating upon the project being approved by the Province of Manitoba.

We have walked side by side through the process of watching the project develop from its infancy, and can see how much this project would benefit our First Nation, the Russell /Binscarth community and surrounding communities with jobs not only on site but as well as off shoot business development.

The potash processing facility is a green project that will have a minute impact on the environment, with NO tailing required for salt, the salt will remain in the ground, re-use of water and a small operational footprint. The issues just listed are very important to our First Nation as the potash processing facility will be on our traditional territory.

Should you require any further information please do not hesitate to call.

Miigwech,

# <Signature removed>

Chief David LeDoux