

**TECHNICAL REPORT
POTASH MINERAL RESERVES AND
RESOURCES
AGRIUM,
VANSCOY POTASH OPERATIONS
VANSCOY, SASKATCHEWAN**

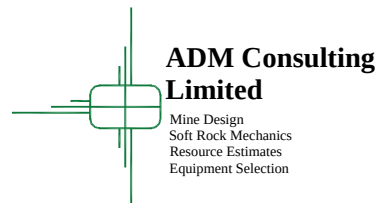
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The scientific and technical information included in this report has been prepared by, or under the supervision of, a person who is a Qualified Person (QP) under National Instrument 43-101 of the Canadian Securities Administrators (NI 43-101). The QP who supervised the preparation of all information presented in this report and who verified the data herein is:

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2 TABLE OF CONTENTS

1	TITLE PAGE.....	1
2	TABLE OF CONTENTS	3
3	SUMMARY	6
4	INTRODUCTION	11
5	RELIANCE ON OTHER EXPERTS.....	14
6	PROPERTY DESCRIPTION AND LOCATION.....	15
7	ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY 22	
8	HISTORY	24
9	GEOLOGICAL SETTING	27
10	DEPOSIT TYPES.....	31
11	MINERALIZATION.....	32
12	EXPLORATION.....	33
13	DRILLING	37
14	SAMPLING METHOD AND APPROACH.....	40
15	SAMPLE PREPARATION, ANALYSES AND SECURITY	47
16	DATA VERIFICATION	53
17	ADJACENT PROPERTIES	57
18	MINERAL PROCESSING AND METALLURGICAL TESTING	58
19	MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES	59
20	OTHER RELEVANT DATA AND INFORMATION	63
21	INTERPRETATION AND CONCLUSIONS	66
22	RECOMMENDATIONS.....	67
23	REFERENCES	68
24	CERTIFICATION AND DATE	69
25	ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES.....	72
26	ILLUSTRATIONS	82

List of Tables

Table 3-1: Municipal & NTS Block Locations.....	6
Table 3-2: Agrium VPO Mineral Reserves & Resource Summary (as of August 31, 2009)	9
Table 4-1: Definitions & Common Terms	133
Table 6-1: Municipal, NTS Block Designations & Minesite Legal Land Location	15
Table 6-2: Area of Lease Subdivisions & Mineral Rights	17
Table 12-1: VPO Past Seismic Programs	34
Table 14-1: Composite Grade of Original Drill Holes Over a 3.35m Thickness.....	41
Table 14-2: Assay Composites from Wildcat Drill Holes	44
Table 14-3: VPO Drill Holes & Underground Channel Sample Composites.....	45
Table 16-1: Comparison of SRC Repeated Samples	54
Table 16-2: Comparison of VPO Duplicate Channel Samples.....	54
Table 19-1: Agrium VPO Mineral Reserve & Resource Summary as of August 31, 2009.....	61
Table 20-1: Comparison of Vulcan & Historical Grade Estimates	64
Table 25-1: Average Potash Recovery Factors for VPO Mill	76
Table 25-2: Previous Five Year Financial Performance.....	79

List of Figures

Figure 3-1: Location of VPO & Other Conventional Saskatchewan Potash Mines	7
Figure 6-1: Location Map	16
Figure 6-2: Adjacent Dispositions	18
Figure 6-3: MineWorkings, Lease Boundary & Areas.....	19
Figure 6-4: Freehold Subsurface Mineral Rights.....	21
Figure 7-1: Surface Rights	23
Figure 8-1: Original Exploration Program.....	26
Figure 9-1: Idealized Stratigraphic Column.....	30
Figure 12-1: Seismic Exploration Programs	35
Figure 14-1: Local Stratigraphy in Relation to Mining Level	42
Figure 14-2: Sample Locations	46
Figure 15-1: Removing Sample Blocks from the Mine Wall	50
Figure 15-2: Section of Mine Wall with Samples Removed	51
Figure 15-3: Completed Channel Sample Location.....	52
Figure 16-1: 4-28-35-8-W3 Core.....	53
Figure 16-2: Comparison of 2000 Mine Site Lab Assays & 2009 SRC Assays.....	55
Figure 25-1: Borer Miner	72
Figure 25-2: Typical Entry System.....	73
Figure 25-3: Typical Production Panel	74
Figure 25-4: Concentrator Processing Steps	77

List of Illustrations

Illustration 26-1: Subsurface Mineral Lease Agreement & Schedule of Lands	82
Illustration 26-2: Operating Permits	86
Illustration 26-3: Cover Letter from the Stearns-Roger Engineering Study (1965)	91
Illustration 26-4: SGS Certificate of Accreditation	96
Illustration 26-5: Agrium Laboratory Quality Assurance Manual.....	101
Illustration 26-6: SRC Certificate of Accreditation	105
Illustration 26-7: Sample Shipment Packing Slip	106
Illustration 26-8: Shipment Receipt Notification	107
Illustration 26-9: SRC Sample Receipt Notification	108
Illustration 26-10: SRC Method Summary	109
Illustration 26-11: Reserve-Resource Estimation Calculations.....	110
Illustration 26-12: Vulcan Block Models.....	114

3 SUMMARY

Through AGRIUM, a general partnership comprised of Agrium Inc., and Agrium Products Inc. and Viridian Fertilizers Limited, all being wholly-owned subsidiaries of Agrium Inc, Agrium owns and operates Vanscoy Potash Operations (VPO), a potash mining and milling facility located in Vanscoy, Saskatchewan (southwest of Saskatoon, Figure 3-1). The operation has been in existence for 40 years and has produced over 41 million tonnes of muriate of potash.

In this Technical Report, unless the context otherwise indicates, “Agrium” refers to Agrium Inc., its subsidiaries and any partnership of which Agrium and its subsidiaries are partners. Agrium is a major retailer of agricultural products and services in North and South America, a leading global wholesale producer and marketer of agricultural nutrients and the premier supplier of specialty fertilizers in North America. Agrium produces and markets all three primary groups of nutrients: nitrogen, phosphate and potash, as well as controlled-release fertilizers and micronutrients. Agrium’s strategy is to grow through incremental expansion of its existing operations, acquisitions, development, commercialization and marketing of new products and international opportunities.

The Saskatchewan Ministry of Energy and Resources (SMER) has granted Agrium the exclusive right to mine potash on approximately 62,395 acres (252.5 km²) of crown land described in KL 114-R, last revised September 2005. The lease is located in the Province of Saskatchewan, Canada, in the rural municipalities and National Topographic System of Canada (NTS) blocks indicated in Table 3-1.

Table 3-1: Municipal & NTS Block Locations

R.M. NAME	R.M. NUMBER	NTS BLOCK
Corman Park	344	O73B03/02
Vanscoy	345	O72O14/O15

The Agrium Vanscoy Lease KL 114-R is located within townships 34 to 37 of ranges 7 to 9, west of the 3rd meridian.



Figure 3-1: Location of VPO & Other Conventional Saskatchewan Potash Mines

Canadian potash deposits are estimated to be among the largest in the world and are mostly located in a band that stretches over 700 km (450 miles) across Saskatchewan. The deposits lie diagonally across the southern plains of Saskatchewan, gently sloping from approximately 1000 m depth along a northwest line through Rocanville, Esterhazy and Saskatoon to more than 1,600 m depth at Belle Plaine and up to 3,000 m in depth in North Dakota. According to Holter (1969), the known deposits are massive, with “total recoverable reserves estimated at 107 billion tonnes”.

The Prairie Evaporite Formation forms part of the Elk Point Basin, a sub-basin of the Williston Basin centred on the northwest corner of North Dakota. The deposits are all sedimentary with the potash minerals representing the final stages of evaporation of a shallow inland sea. The depositional model described by Garrett as *sequential flow during evaporation*, suggests the Saskatchewan Sub-Basin, the Central Alberta Sub-Basin, and the Northern Alberta Sub-Basin were cut off from the seas by the Presqu’lle barrier reef. The potash salts are confined to the Saskatchewan Sub-Basin. There are three potash members occurring in the Prairie Evaporite: the Esterhazy Member (mined at Mosaic Esterhazy and Potash Corporation of Saskatchewan (PCS) Rocanville Division), the Patience Lake Member (mined in the Saskatoon area) and the Belle Plaine Member, which is not currently conventionally mined. The Esterhazy Member was the first potash bearing bed to be deposited and therefore is stratigraphically the deepest. However, the Rocanville/Esterhazy area mines are shallower than the younger Patience Lake Member mines in the Saskatoon area because of their proximity to the basin edge.

The VPO KL 114-R lease was initially developed by the Consolidated Mining and Smelting Company of Canada Limited (C.M.& S) of Trail, British Columbia, subsequently Cominco Ltd., based on a total of 23 drill holes completed in 1964. In the history of the operation, three additional drill holes and numerous seismic programs have been completed. Data from all potash exploration wells drilled in the province is stored at the Saskatchewan Ministry of Energy and Resources (SMER) Subsurface Laboratory or in geodata offices in Regina. Well data related to currently held leases is kept confidential. Mining operations at the site started in 1969 in the Patience Lake Member, with site ownership eventually evolving to Cominco Fertilizers Inc. and

finally to the separate entity, Agrium, in 1995. In the 40 years of mining history, production has resulted in the total extraction of 121.0 million tonnes at an average grade of 24.44 % K₂O and 4.67 % insolubles, yielding 41.3 million tonnes of muriate of potash.

Agrium commissioned ADM Consulting Limited (ADM) to assist Vanscoy Potash Operation's (VPO) personnel in the review of mine data and preparation of a Technical Report in accordance with NI 43-101, Form 43-101F1.

For reporting purposes KL 114-R has been divided into three areas: 1) the Unitized Area containing most of the mining to date; 2) the South Block to the south and east of the shafts (currently under development); and 3) the North Expansion Block north of the Unitized Area.

Table 3-2 summarizes the Mineral Resource and Mineral Reserves estimates for VPO that are the subject of this report.

Table 3-2: Agrium VPO Mineral Reserves & Resource Summary (as of August 31, 2009)

AREA	GRADE EST. % K ₂ O (TOTAL)	% INSOLS	MINERAL RESERVES – PROVEN AND PROBABLE (MILLIONS OF TONNES) (A)	MEASURED MINERAL RESOURCES (MILLIONS OF TONNES)	INDICATED MINERAL RESOURCES (MILLIONS OF TONNES)	INFERRED MINERAL RESOURCES (MILLIONS OF TONNES)
Unitized Area	24.4	4.7	70.0	0.0	0.0	0.0
South Block	24.9	4.8	54.1	77.1	35.9	125.1 (B)
North Expansion Block	24.4 (C)	4.7 (C)	0.0	0.0	0.0	75.5
TOTAL	--	--	124.1	77.1	35.9	200.6

(A) - Proven and Probable Mineral Reserves are combined in this report as probable reserves move to proven reserves at a significant rate as mining progresses and proven estimates would be soon outdated. Mineral Resources are reported exclusive of Mineral Reserves.

(B) - Due to the continuity of the deposit, it is appropriate to apply the South Block average grade to the South Block Inferred Resources.

(C) - Grades applied from 40 year historical averages.

It is the author's opinion that, after reviewing the geological information available for Agrium's VPO, the history of mining at the site, and the remarkable continuity displayed by the Prairie Evaporite Formation potash beds, that the lease areas can be reliably categorized as Proven and Probable Mineral Reserves, and Measured, Indicated, and Inferred Mineral Resources compliant with NI 43-101 definitions.

4 INTRODUCTION

Agrium is a major retailer of agricultural products and services in North and South America, a leading global wholesale producer and marketer of agricultural nutrients and the premier supplier of specialty fertilizers in North America. Agrium produces and markets all three primary groups of nutrients: nitrogen, phosphate and potash, as well as controlled-release fertilizers and micronutrients. Agrium's strategy is to grow through incremental expansion of its existing operations, acquisitions, development, commercialization and marketing of new products and international opportunities.

Agrium Inc. is headquartered in Calgary, Alberta and is incorporated under the Canada Business Corporations Act and listed on the Toronto and New York stock exchanges under the symbol "AGU". As of December 31, 2008, Agrium had sales revenue of \$10 billion USD and a market capitalization of more than \$5.4 billion USD, with 157 million shares (non-diluted) outstanding. As of August 31, 2009, approximately 65% of Agrium's shareholders are in Canada, 24% in the United States, and 11% in Europe and the rest of the world.

Agrium owns and operates Vanscoy Potash Operations (VPO), a potash mining and milling facility located in Vanscoy, Saskatchewan (southwest of Saskatoon). With the current potash market and demand, it has been determined that the VPO site is now a material property to Agrium and that Agrium is required to file this 43-101 Technical Report with Canadian provincial securities regulatory authorities. Agrium commissioned ADM Consulting Limited (ADM) to assist VPO's personnel in the review of mine data and preparation of this Technical Report in accordance with NI 43-101, Form 43-101F1.

Information contributing to the report includes:

- Original drill hole reports;
- Original engineering study documents;
- Geological data gathered over the life of the VPO operations including new drill holes, seismic information and underground sampling programs;
- 40 years of production data.

ADM is based out of Vanscoy, Saskatchewan and was founded in 1996 as a private consulting firm. A. Dave Mackintosh, P. Geo. is the founder, owner and president of ADM. Mr. Mackintosh is registered with the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) (member #9717) and holds a ‘Certificate of Authorization’ (#C845) and a ‘Permission to Consult’ in the field of geology and mining of evaporates (including rock mechanics, equipment selection, feasibility studies, and resource/reserve estimation). Having worked for Cominco and Agrium at the Vanscoy operation from 1969 to 1996, Mr. Mackintosh is intimately familiar with the geology and mining operations and is well qualified to prepare this Technical Report. As required by NI 43-101, the author has visited the VPO site on numerous occasions.

In August, 2000, the CIM Council adopted the Definitions and Guidelines prepared by the CIM Standing Committee On Reserve Definitions. The definitions for “mineral resource” and “mineral reserve” as described in the CIM Standards for Mineral Resources and Reserves are now those required in National Instrument 43-101 Standards of Disclosure for Mineral Projects. These definitions, as revised and adopted by CIM in December 2005 form the basis for this report. Reported Mineral Resources and Mineral Reserves are in-situ tonnes. Additional definitions referenced in this technical report can be found in Table 4-1.

Table 4-1: Definitions & Common Terms

Term	Formula	Definition
Carnallite	$\text{KCl} \cdot \text{MgCl}_2 \cdot 6\text{H}_2\text{O}$	An undesirable potassium and magnesium salt containing water in the molecule
Collapse Feature		Removal or dissolution of portions of the Prairie Evaporite resulting in the collapse or down faulting of bedding above.
Halite	NaCl	Common table salt – a waste product
Insolubles		Undesirable water insoluble impurities, predominately dolomite, anhydrite and quartz
Leached Area		An area where the potash and/or carnallitic mineralization has been removed due to percolation of waters under-saturated with respect to the minerals removed. Bedding normally remains intact.
K_2O		Potassium Oxide – commonly used to indicate product quality and grade. 100% KCl is equivalent of 63% K_2O . Reported as total K_2O .
Seismic acquisition		Geophysical technique for determining subsurface features through the application of a surface energy source and recording reflections from geological features. 2D utilizes energy and recording locations along single widely spaced lines. 3D utilizes energy and recording locations on a closely spaced grid.
Seismic anomaly		A structural change in the natural, uniformly bedded geology, primarily at the top of the Prairie Evaporite identified using seismic techniques.
Sylvinite		A mix of halite and sylvite commonly referred to as “ore”
Sylvite	KCl	Potassium Chloride – the saleable product. Commonly referred to as potash or muriate of potash.

5 RELIANCE ON OTHER EXPERTS

This report has been prepared for Agrium by A. Dave Mackintosh, P. Geo of ADM Consulting Limited and the findings and conclusions are based on information arising from a 40 year history of successful mining operations, drill hole assay data, underground sampling programs and specific information supplied by others as discussed below.

Since 1989, seismic acquisition and interpretation to identify anomalous features was managed by Boyd Exploration Consultants Ltd. of Calgary, Alberta. Previous to 1989, seismic acquisition and interpretation was conducted by other consultants. An estimate of tonnage lost to such features has contributed to the development, over the last 40 years, of an “all encompassing” historic extraction ratio.

Maptek Pty. Ltd. Vulcan software was used to create a 3D block model to estimate grades and tonnages for the different lease areas. Mr. Michael Cole of Maptek aided in the creation of maps and estimates used in this Technical Report.

Ms. Erika Stoner, Supervisor Mine Engineering, Agrium VPO, provided details on the mining methods, the lease and unit boundary maps, and prepared the resulting areas used in the estimation. Mr. Kevin Martina, Senior Supervisor, Metallurgy, Agrium VPO, provided details of the milling process and mine site laboratory methods used in VPO determined assays. Mr. Paul O’Hara, Manager of Environment, Health and Safety, VPO, and Mr. Emmanuel Strang, Team Leader Finance and Information Technology, VPO, provided the operating permits, land tenure data, marketing data and documentation on royalties, taxes and costs. Being familiar with the professionalism and quality of work produced by the people at Agrium VPO, and having intimate knowledge of the operation, the author accepted the data as presented.

Lease descriptions and status were obtained by Agrium from SMER as Subsurface Mineral Lease KL 114-R, dated September 20, 2005.

6 PROPERTY DESCRIPTION AND LOCATION

The Agrium Vanscoy Lease KL 114-R is within townships 34 to 37 of ranges 7 to 9, west of the 3rd meridian, approximately 25 km south west of Saskatoon, Saskatchewan, Canada and is an operating underground potash mining and milling facility with over 40 years of production history. Figure 6-1 shows the location of the lease with respect to surrounding towns, villages, lakes, rivers, railways and provincial highways, as well as NTS block designations. Table 6-1 lists the rural municipalities, municipal number and NTS block designations covered by KL 114-R and the legal land description containing the mine site.

Table 6-1: Municipal, NTS Block Locations & Minesite Legal Land Location

R.M. NAME	R.M. NUMBER	NTS BLOCK	MINE SITE LOCATION
Corman Park	344	O73B03/O2	n/a
Vanscoy	345	O72O14/O15	16-35-8W3

The KL 114-R lease, as granted by SMER under the Saskatchewan Subsurface Mineral Regulations (1960), forms one large contiguous area in excess of 93,225 acres (37,727 Ha). The Crown held minerals making up the leased lands total some 62,395 acres (25,250 Ha). The surface township and range grids were legally surveyed during the initial land survey of western Canada, generally between 1879 and 1884, and are the basis for the selection of the lease boundary as granted. Leases are granted for an initial term of twenty-one years, renewable for successive twenty-one year terms upon written application of the lessee. The lease and schedule of lands are included in Section 26 (see Illustration 26-1).

As per subsection 25(b)(3) of the Subsurface Mineral Regulations, 1960, Agrium can add additional acres to its lease on every fifth anniversary after 1990. The amount of additional acreage that may be acquired is governed by a published formula based on the production of the operation in question. Thus, the next opportunity to add to the lease area will be in 2010. As per section 20(1) of these regulations, the annual lease rental is payable annually in advance at the rate of \$2/acre or fraction thereof.



Figure 6-2 shows the location of the Agrium KL 114-R lease in relation to adjacent dispositions. Other than the PCS Cory lease KL 103-R, containing the Cory Division Mine site and tailings management area, the surrounding dispositions are all potash exploration permits. According to the PCS Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed with the United States Securities and Exchange Commission and the Canadian provincial securities regulatory authorities, Proven and Probable Mineral Reserves for the Cory Division Mine are reported at 224 million tonnes, grading 25.1% K₂O when a 26% extraction ratio is applied. Mineral Resources, exclusive of Mineral Reserves, total 958 million tonnes of Measure Resources, 266 million tonnes of Indicated Resources and 2.95 million tonnes of Inferred Mineral Resources, quoted as in-place tonnes. An agreement between Agrium and PCS provides a one-half mile (800 m) common pillar between the operations. Exploration on remaining adjacent dispositions is limited to widely spaced wildcat drilling or limited seismic surveys with no known mineral resource estimates.

The Upper Patience Lake Member mined at VPO is present throughout the lease and is categorized as Mineral Reserves and Mineral Resources depending on the definition of the area and the existence of 3D seismic and drill hole coverage. For reporting purposes KL 114-R has been divided into three areas referred to as the Unitized Area, the South Block, and the North Expansion Block as shown in Figure 6-3. Formalized royalty agreements exist for the Unitized Area and it is defined as a mining unit where the stakeholders will receive a royalty payment based on their percentage ownership of the mineral rights contained in the unit, no matter where in the unit mining is taking place. It is a vehicle for providing the Crown with a more predictable and uniform royalty income stream. The approximate areas for each are shown in Table 6-2. The other two areas have yet to establish unitization and/or royalty agreements.

Table 6-2: Area of Lease Subdivisions & Mineral Rights

KL 114-R	AREA (ACRES)	CROWN LANDS (ACRES)	FREEHOLD LANDS (ACRES)	AGRIUM LANDS (ACRES)
Unitized Area	31,473	19,906	0	11,569
South Block	43,919	32,835	2,885	8,199
North Expansion Block	17,828	9,672	7,854	303
TOTAL LEASE	93,225	62,413	10,739	20,071

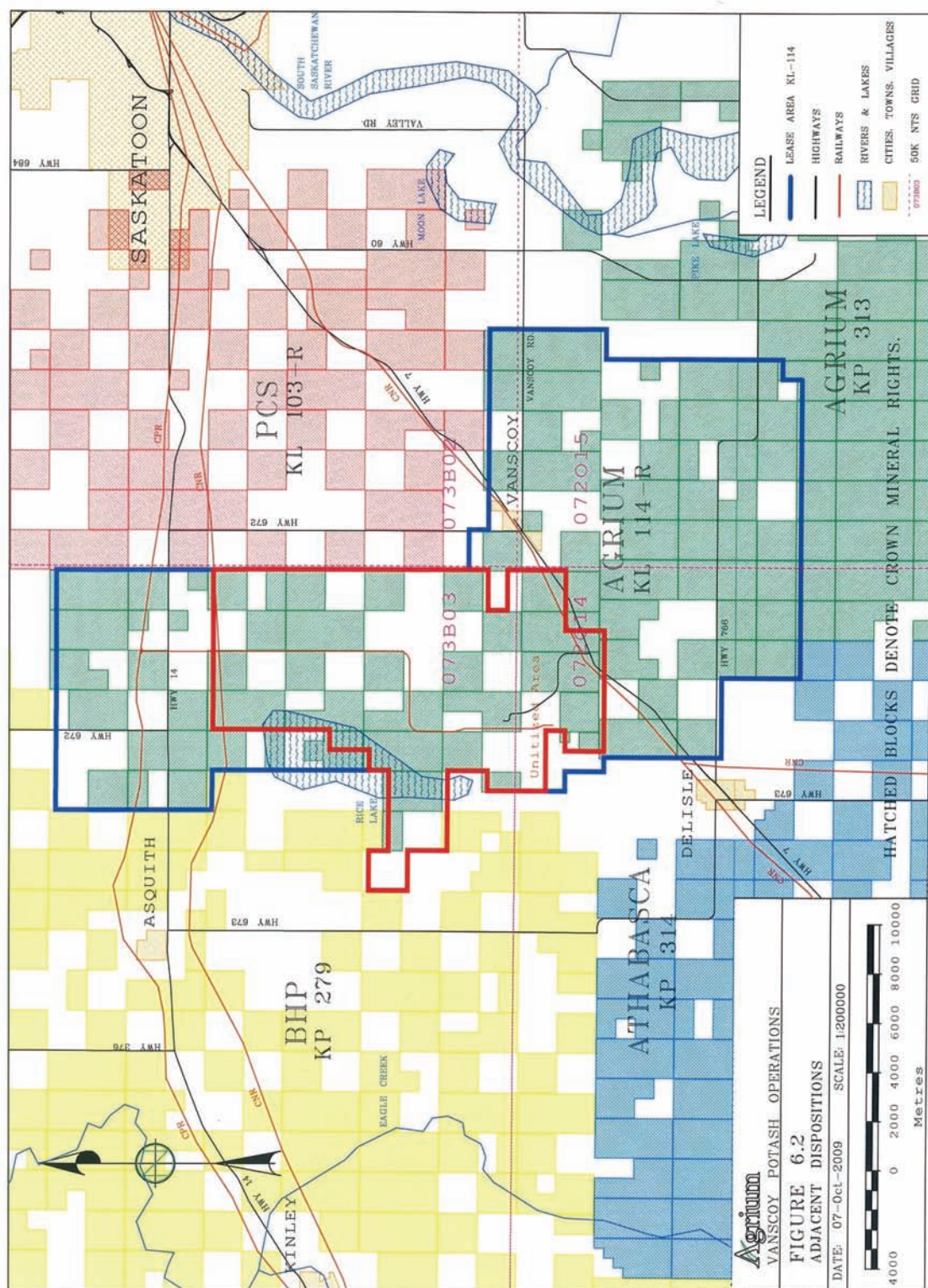


Figure 6-2: Adjacent Dispositions

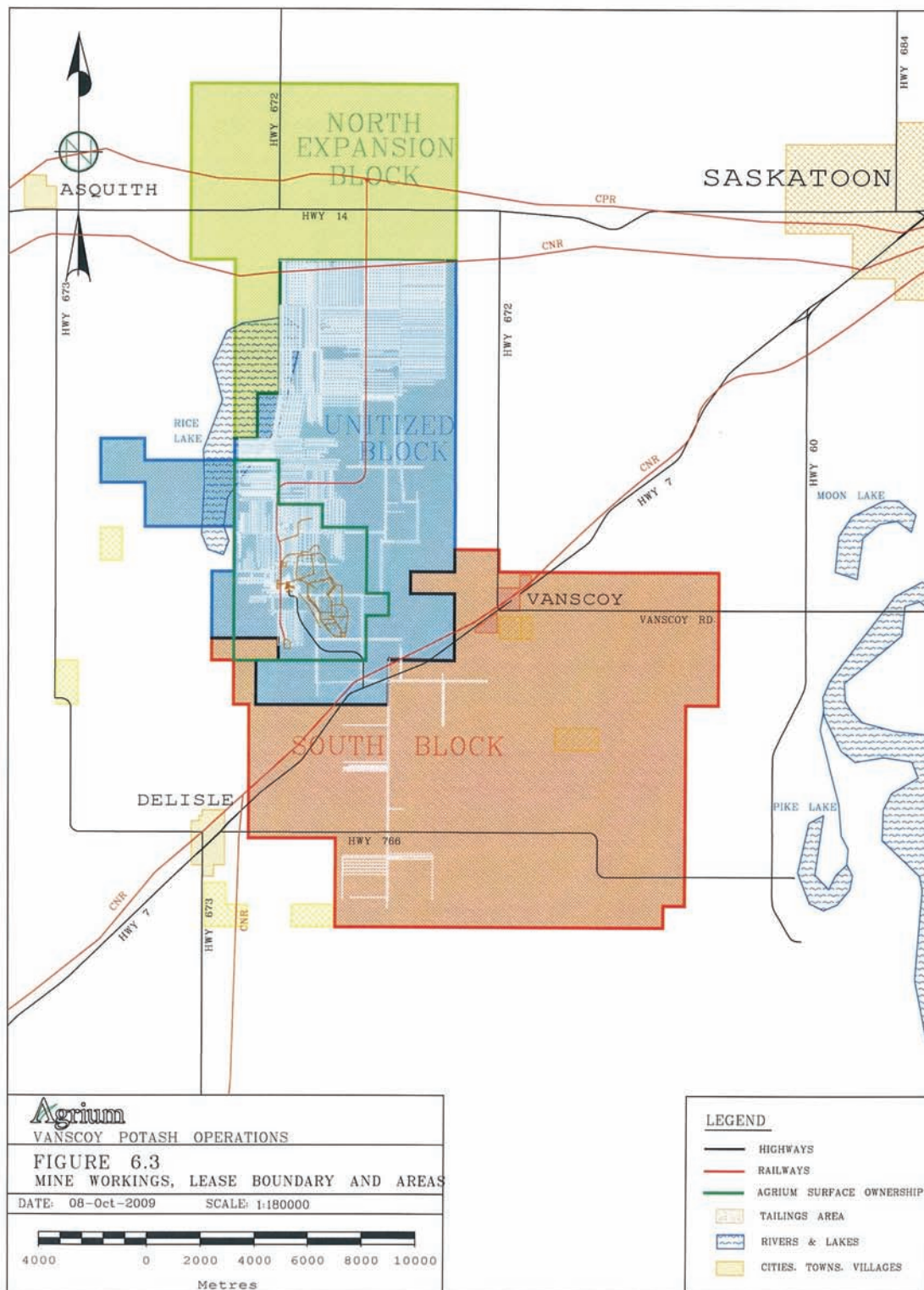


Figure 6-3: Mine Workings, Lease Boundary & Areas

Agrium owns the surface rights to 7,200 acres (2,914 Ha.) of land to accommodate the processing facility, tailings management area and provide a surrounding buffer. Useable farm land is rented to local farmers. In addition to the three reporting areas, Figure 6-3 also shows the location of existing mine workings, the relative areas, the tailings management area, and owned surface rights with respect to the lease boundary and surrounding infrastructure. Required permits for operation include the Subsurface Mineral Lease Agreement, Potash Unitization Agreement, Mine Hoist Operating Certificate, Approval to Operate a Pollutant Control Facility, Approval to Dispose of Waste Brine and the Approved Decommissioning and Reclamation Report, all of which are included in Item 26, Illustrations – Illustration 26-2.

Operating Saskatchewan potash mines contribute to an irrevocable line of credit for short term decommissioning and rehabilitation costs. VPO has contributed \$1,000,000 CDN. The purpose of this fund is to cover short term costs should a company walk away from a site without proper decommissioning. A decommissioning and reclamation report was submitted by Agrium to the provincial government in 2006. The qualifying acceptance letter from the government is shown in Illustration 26-2.

KL 114-R encompasses mineral rights held by Agrium, the Crown and various freehold interests. The freehold interests in the South Block and the North Expansion Block not yet under lease to Agrium are shown on Figure 6-4. Agreements for these lands must be in place before mining is undertaken.

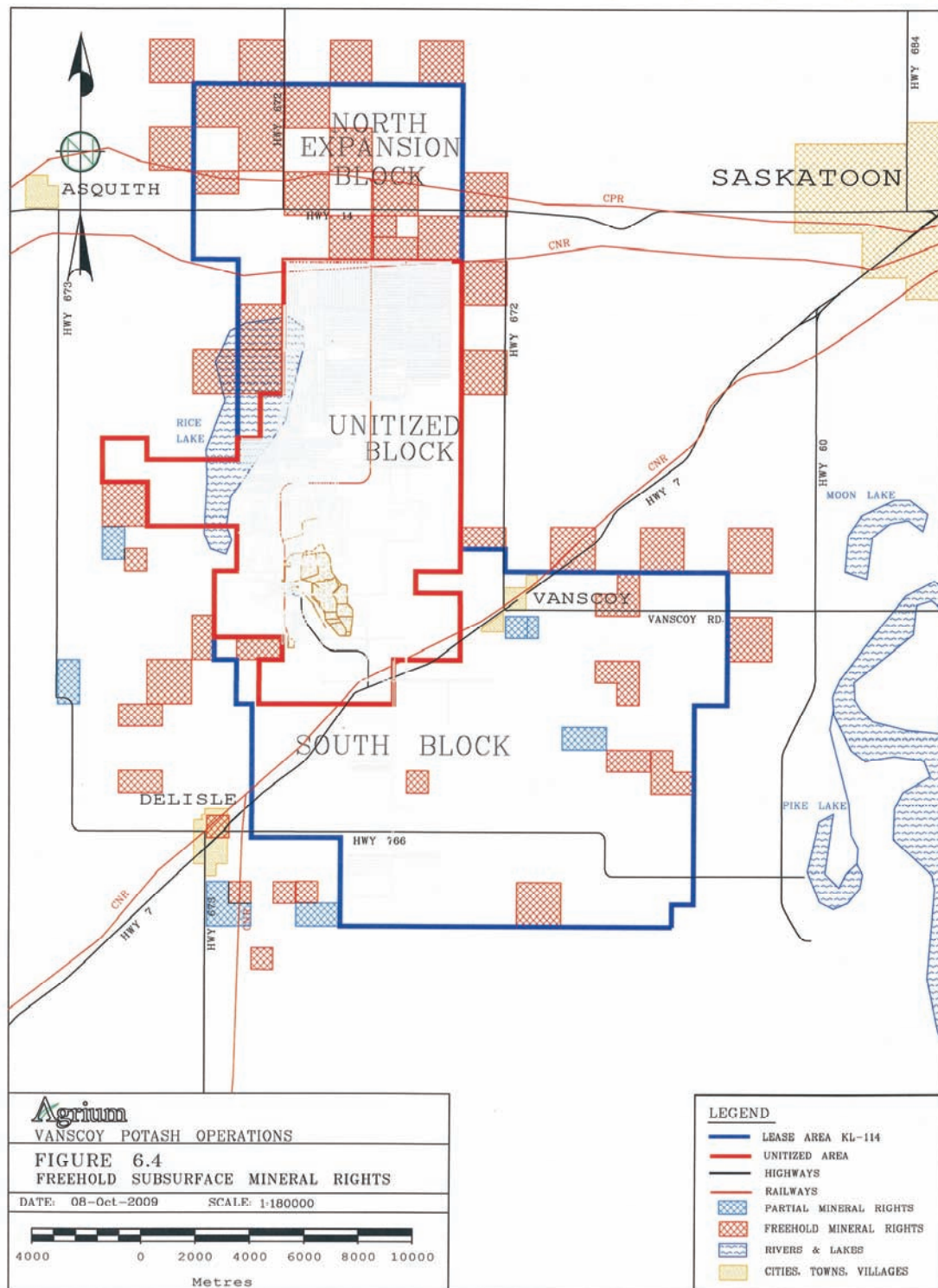


Figure 6-4: Freehold Subsurface Mineral Rights

7 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Agrium's VPO underlies the Saskatchewan Plains Region, which has elevations between 300 m and 600 m above sea level. Land use is almost totally agricultural, largely in cropland with some unimproved pasture and southern woodland. Prairie winters are long and cold with short, warm summers. Average daily mean temperatures range between -16°C in January to +20°C in July. Mean annual precipitation averages 430 mm with the majority occurring in the summer months. Winds are predominantly from the northwest throughout the year with mean annual wind speeds of 20 km/hr.

The Agrium lease is accessible by the Saskatchewan highway and municipal grid road system. Although grid roads may not have been built in all areas, a 20 m road allowance is provided every one mile (1.6 km) in an east-west direction and every two miles (3.2 km) in the north-south direction. The mine site is serviced by both national railways through one common spur line from the north of the lease. Services are provided by Saskatchewan public utilities with a dedicated 72 KVA electrical power transmission service and natural gas pipelines. Fresh water, provided by SaskWater, is delivered via pipeline from the South Saskatchewan River.

Mining and milling operations continue year round, utilizing a work force that commutes from nearby cities and towns or comes from the local farming community. The closest major population centre is Saskatoon, approximately 25 km northeast of the mine site. All operating licenses required by the provincial government, and permits to operate a tailings area or waste management facility, have been obtained. Two deep disposal wells are utilized to dispose of excess brines into the Deadwood Formation at depths in excess of 1,500 m.

Surface rights in Saskatchewan are separate titles from subsurface mineral rights. Agrium owns surface rights associated with KL 114-R totalling 7200 acres (2914 Ha.) including the mine site, tailings management area and a suitable environmental buffer. In order to carry out any exploration activity at the surface on other lands, be it a seismic survey or preparing a well site, access must be obtained from the surface land owner. 3D seismic surveys are carried out over planned mining areas on a regular basis and are shot in advance of mining to define major collapse features so they can be avoided by mine planning. It is the opinion of the author that 3D

seismic coverage is required to classify Mineral Resources as Measured. Figure 7-1 shows the owned surface rights and the relationship to the location of tails management areas, lease boundaries and infrastructure.

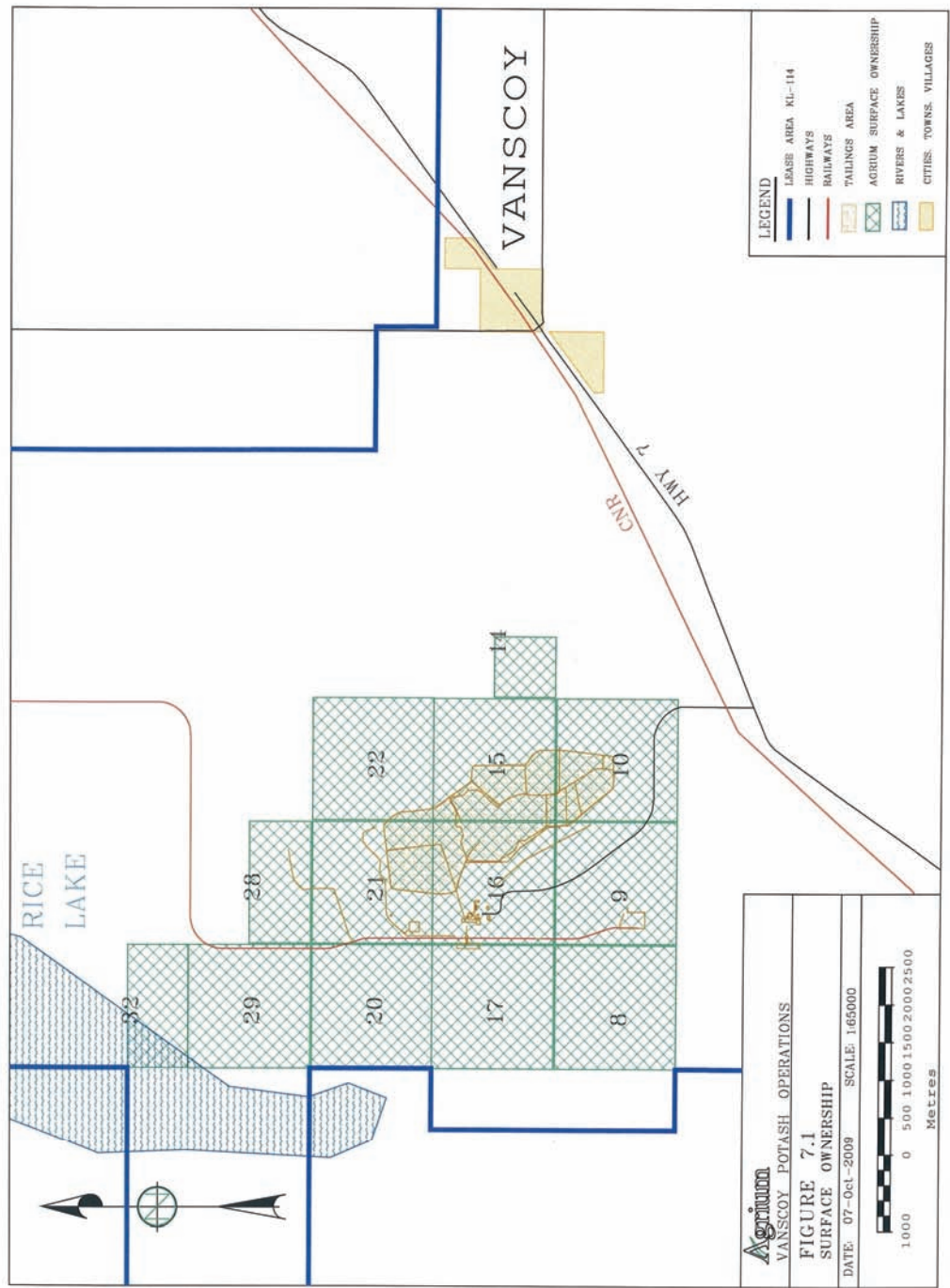


Figure 7-1: Surface Ownership

8 HISTORY

Imperial Oil first discovered potash in south-eastern Saskatchewan in 1942 during oil exploration activity in Norcanoils Radville No. 1 in 16-36-5-19-W2. It was again recognized in Ogema No. 1 in 4-24-7 23-W2 in 1943. The beds were at 2,333 m and 2,264 m respectively and were not considered of commercial interest due to relative depth. In 1946, 3.35 m of potash grading 21.6% K_2O was found at 1,056 m near Unity and commercial production was considered. In 1950, when oil exploration companies started routinely running gamma logs, the existence of potash rich beds over a vast area in southern Saskatchewan was indicated.

When interest in exploration for potash peaked in the 1950s and 1960s it consisted of widely spaced, oil exploration type drill holes, accompanied by 2D seismic surveys. Seismic lines were often on one mile (1.6 km) by one mile or one mile by two mile (3.2 km) grids. Technology at the time was such that these surveys did nothing more than indicate the continuity of the Prairie Evaporite formation.

Cominco (C.M.&S.) carried out an exploration program in 1964, drilling 23 holes in the vicinity of Vanscoy, Delisle, and Asquith, Saskatchewan. Drilling was carried out by Canamerican Drilling Corporation under the engineering supervision of E.D. Bietz of J.C. Sproule and Associates. Well site geological supervision was conducted by Dr. W.J. Pearson and D.M. Lane of C.M.&S. A 2D seismic survey carried out by Century Geophysical Corporation, also in 1964, covered township 35, ranges 8, 9 and the south half of range 7, and township 34 west half of range 7, range 8, and east half of range 9 on a 2 mile line spacing. The layouts of the original 23 drill holes and 2D seismic lines are shown in Figure 8-1.

Of the 23 drill holes, one hole (V4-30-35-8-W3), penetrated a major solution collapse feature where, although the Prairie Evaporite Formation is present, the potash beds are not. Stearns-Roger Canada Ltd. along with J.T. Boyd and Associates carried out an engineering study in 1965, and using the remaining 22 drill holes, indicated a “reserve of 771,758,328 tons grading 28.55 % K_2O with 6.1 % insolubles, using an average mining thickness of 10.2 ft on 25,970 acres” (excerpt from Stearns-Roger Canada Ltd. engineering study, 1965). The cover letter from the Stearns-Roger engineering study is included in Illustration 26-3. A similar capital and

operating cost estimate was also completed by Kilborn Engineering Ltd. in December 1965, and the mine went into production under C.M.&S. ownership in early 1969. The reader is cautioned that the term “reserve” used for the 1964 estimate of 771 million tonnes does not comply with the current CIM Standards and Definitions as they were not in use at that time. It appears that the Stearns-Roger’s estimate reported all potential resources as reserves, which varies from the definition of reserves supplied in NI 43-101. A detailed listing of the drill hole data is shown in Table 14-1 of Item 14, Sampling Method and Approach. The historical estimate is relevant and reliable given the 40 year history of the operation.

In 1993, Cominco Fertilizers Ltd. was formed as a separate entity from Cominco Ltd. In 1995 all Cominco involvement in Cominco Fertilizers Ltd. ceased and shares were transferred to the new entity, Agrium Inc.

In the site history, lease expansions occurred in 1993 and 2005 to enlarge the total area available for extraction. The 2005 lease expansion included lapsed exploration permit areas to the north of the mining area, now referred to as the North Expansion Block. This brought three additional drill holes into the lease area. The three exploration wells – 16-6-37-8-W3 by National Potash Co., 13-1-37-8-W3 by Christie, Mitchell Oil, and 13-22-36-8-W3 by Freeport Sulphur – were completed in 1955 and 1957. No known resource estimates have been found in the records for the North Expansion Block.

In the 40 years of operating life three additional drill holes, 2-16-36-8-W3 in 1989, 1-24-34-8-W3 in 1999, and 4-3-35-7-W3 in 2007, and numerous 2D and 3D seismic programs have contributed to understanding of the Prairie Evaporite Formation. Production in this time frame to August 31, 2009 was 41.3 million tonnes of muriate of potash from 121 million tonnes hoisted.

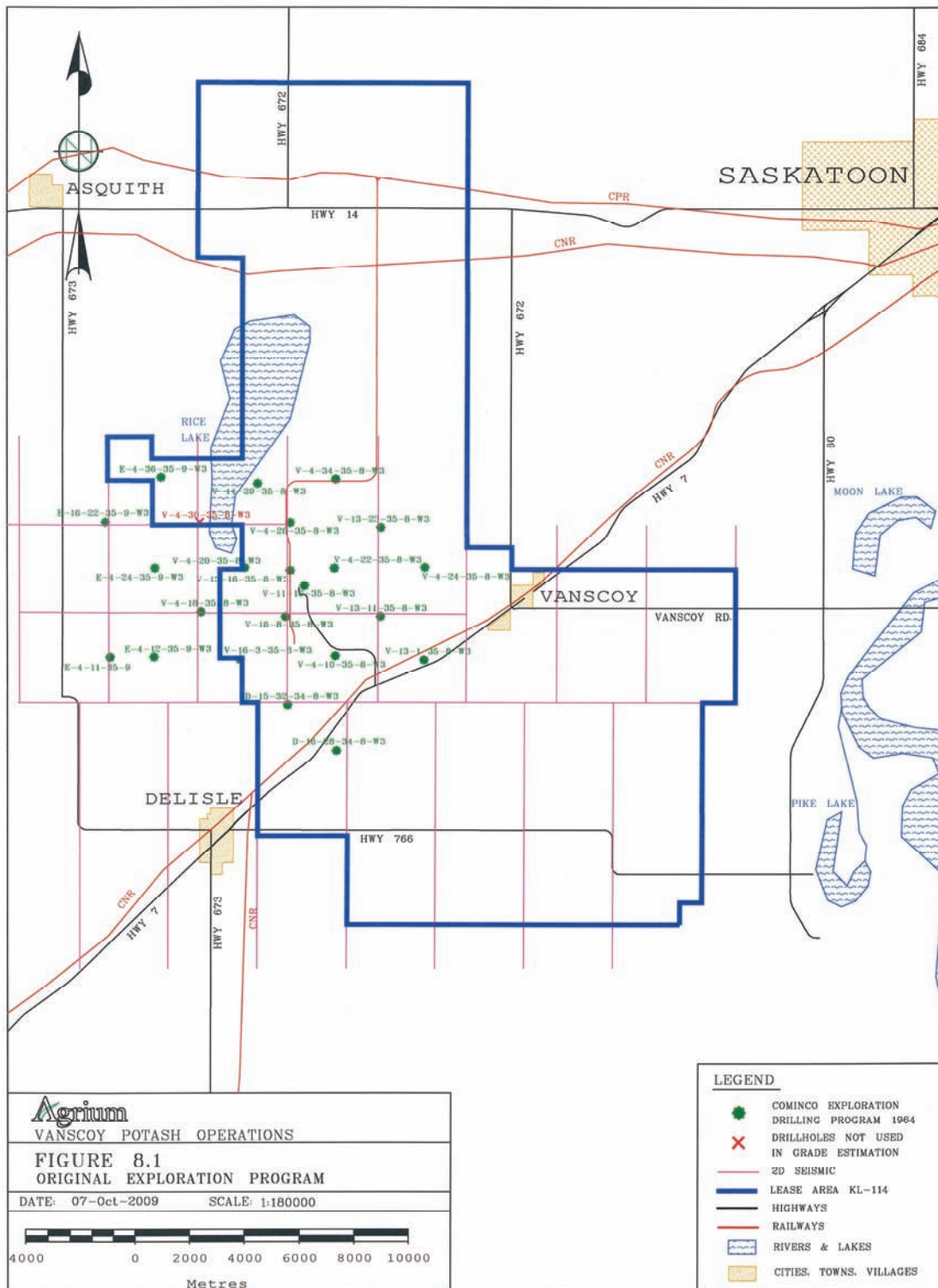


Figure 8-1: Original Exploration Program

9 GEOLOGICAL SETTING

Canadian potash deposits are estimated to be among the largest in the world, stretching some 720 km (450 miles) across Saskatchewan. The deposits lie diagonally across the southern plains of Saskatchewan gently dipping from approximately 1,000 m depth along a northwest line through Rocanville, Esterhazy and Saskatoon to more than 1,600 m depth at Belle Plaine and up to 3,000 m depth in North Dakota. According to Holter (1969), the known deposits are massive, with “total recoverable reserves estimated at 107 billion tonnes”.

The deposit is unique in the world in that the mineralization covers such a vast area. The same beds mined on the west side of Saskatoon are mined over 100 km to the east and can be traced into Manitoba, North Dakota, and Montana. Despite this remarkable continuity, potash deposits are not without interruption. Solution activity over geological time has resulted in barren or collapse features that have the potential to introduce water to the mining level from overlying formations. Exploration programs use 3D seismic techniques to locate such collapses so they can be avoided in mining operations. While useful in locating major collapse features, there is not enough contrast between the salt and the potash to be able to identify the actual potash beds using these seismic techniques. Additionally, changes in amplitude of the overlying rocks can give an indication of porosity and potential water bearing zones, and structural changes at the top and bottom of the salt can be readily identified. Structural changes at the top, particularly those resulting in down-faulting of formations above, will identify major mine threatening features (such as those resulting in major water inflows at the PCA Patience Lake mine and at the PCS Rocanville mine). Collapse features happening within the salt pile during or shortly after deposition are generally not mine threatening although they are a nuisance and an extra cost when encountered in main entry development. They cannot be identified using seismic techniques but are known to occur around the edges of highs in the rocks below the salt. Although it is known that these features occur around the edges, their exact location cannot be determined.

The Prairie Evaporite Formation forms part of the Elk Point Basin, a sub-basin of the Williston Basin centred on the northwest corner of North Dakota. The deposits are all sedimentary with the potash minerals representing the final stages of evaporation of a shallow inland sea. The

depositional model described by Garrett as *sequential flow during evaporation*, suggests the Saskatchewan Sub-Basin, the Central Alberta Sub-Basin, and the Northern Alberta Sub-Basin were cut off from the seas by the Presqu'ille barrier reef. Periodic ruptures or overflowing of the reef due to tectonic changes allowed sea water into the evaporating Elk Point Basin. Similar barriers at the Peace River Arch and the Meadow Lake Escarpment further restricted the amounts of water passing through into the Central Alberta and Saskatchewan Sub-Basins. By the time brines made it into Saskatchewan, most of the salt (halite) had been deposited in Alberta and the brines were highly concentrated in potash and carnallitic salts. The potash salts are confined to the Saskatchewan Sub-Basin.

The Prairie Evaporite Formation, deposited on the Winnipegosis Formation (limestone), varies in thickness from 120 m (400 ft) to over 210 m (700 ft) and is overlain by the 2nd Red Bed unit, the lower shale member of the Dawson Bay Formation (limestone).

There are four main potash layers in Saskatchewan. The first to be deposited was the Esterhazy Member which is the bed mined at Mosaic Esterhazy and PCS Rocanville. Above this is the White Bear Marker which is not thick enough, or of sufficient grade, to be of commercial value. This is followed by the Belle Plaine and finally the Lower and Upper Patience Lake. The Lower Patience Lake is mined by Lanigan and the Upper Patience Lake is mined by all other Saskatoon area mines. The Esterhazy Member, being the first potash bearing bed to be deposited, is stratigraphically the deepest. However, the Rocanville/Esterhazy area mines are shallower than the younger Patience Lake Member mines (Saskatoon area) because of their proximity to the basin edge.

The typical Esterhazy Member is characterized by a distinct lack of insolubles or mud seams. The crystal size is larger than in the other members, being typically over 2 to 3 cm (1") and there can be carnallite present in various percentages. The mining zone in the Esterhazy Member is usually 2.43 m to 2.74 m thick. The Upper and Lower Patience Lake Members are characterized by a multitude of mud seams that break up the formation into a series of beds of varying thickness and are the result of numerous cycles of deposition and dissolution. The crystal size is smaller than that in the Esterhazy Member, usually averaging from 6 mm to 12 mm. Carnallite

is rarely present in the Upper Patience Lake Member but can occur in the lower portions of the Lower Patience Lake. The Upper Patience Lake Member is mined using a 3.35 m mining height. The Lower Patience Lake mining zone can vary from 3.65 m to just over 5 m. The Belle Plaine Member is not conventionally mined in Saskatchewan.

The salt cover between the ore zone and the overlying 2nd Red Beds and Dawson Bay Formation varies from no cover near the evaporite edge in Manitoba to over 45 m (150 ft) in south-central Saskatchewan. Salt cover is relied upon to isolate the mining level from potential water-bearing limestone formations above the 2nd Red Beds. Similarly, the depth increases to the southwest from just over 800 m (2,600 ft) in Manitoba to over 1,200 m (4,000 ft) in south-central Saskatchewan.

The local geology of Vanscoy Potash Operations characteristically mirrors the regional geology. The Upper and Lower Patience Lake and Belle Plaine Members exist throughout the KL 114-R lease area. The Esterhazy Member does not exist in the area but is evidenced by a thin (5 cm thick) seam containing minor potash values. An idealized stratigraphic column showing the relative positions of the various members is shown in Figure 9-1. The mining zone in KL 114-R dips gently (less than 0.5°) to the southwest from roughly 500 m to 600 m below sea level. The depth below surface ranges from approximately 1,000 m (3,300 ft) in the northeast to over 1,100m (3,600 ft) in the southwest. The salt cover ranges from 12 m (40 ft) to just under 20 m (65 ft) across the lease area.

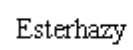


Figure 9-1: Idealized Stratigraphic Column

10 DEPOSIT TYPES

The potash deposit is generally a flat lying, bedded deposit dipping slightly to the southwest. It is amenable to mining using track mounted boring machines and floor or roof mounted conveyor systems and ancillary wheel mounted mining and transport equipment.

11 MINERALIZATION

The deposit is unique in the world in that the mineralization covers such a vast area of the province. The potash beds at the VPO site are entirely composed of sylvinite, a mixture of KCl and NaCl, and are within a stratigraphic sequence of halite beds. The same beds mined on the west side of Saskatoon are mined over 100 km to the east. These same beds can be traced into Manitoba, Montana and North Dakota. Continuity is such that a hole could be drilled almost anywhere within the region of potash deposition with every expectation of intersecting the potash beds.

Despite this remarkable continuity, potash deposits are not without interruption. Solution activity over geological time has resulted in barren or collapse features that have the potential to introduce water from formations above to the mining level. Mining company exploration programs use 3D seismic techniques to locate such collapse features so they can be avoided in mining operations.

12 EXPLORATION

The 1964 exploration program consisted of laying out drill holes spaced 2 miles (3.2 km) apart on east-west lines spaced 1 mile (1.6 km) apart north-south. Each east-west starting point was offset 1 mile (1.6 km) from the line north or south of it resulting in a linear drill hole spacing of approximately 2.3 km on an offset grid in a north-east and south-west direction. A regional 2D seismic program was also carried out in 1964 by Century Geophysical Corporation, covering township 35 – ranges 8, 9 and the south half of range 7, and township 34 – west half of range 7, range 8, and east half of range 9 on a 2 mile line spacing. Drilling was carried out by Canamerican Drilling Corporation for the predecessor of the issuer, under the engineering supervision of E.D. Bietz of J.C. Sproule and Associates. Well site geological supervision was by Dr. W.J. Pearson and D.M. Lane of C.M.&S. The original drill holes and seismic lines were shown previously in Figure 8-1.

Holes were drilled to a core point in the 2nd Red Beds, immediately overlying the Prairie Evaporite. Drill stem tests were carried out over the Dawson Bay Formation, a 40 m to 45 m thick limestone above the 2nd Red Beds that can contain large volumes of water in the upper section. Upon completion of the drill stem tests the Prairie Evaporite was cored through to just below the Belle Plaine Member. A full suite of geophysical logs were run and the holes were abandoned by plugging them with cement through to surface. The program confirmed that a viable potash deposit, amenable to conventional underground mining, was present at depths between 1,050 m and 1,100 m, grading between 24 % and 26 % K₂O.

Once mining was established, more recent exploration programs consisted of a number of 2D and 3D seismic acquisitions and the completion of three additional drill holes, 2-16-36-8-W3, 1-24-34-8-W3, and 4-3-35-7-W3. Hole 2-16-36-8-W3 was drilled in 1989 by Sedco Drilling on behalf of the issuer. Engineering and supervision was by Cavern Engineering Ltd., and well site geological supervision by was R.H. Brown Consulting Geologists Ltd. Hole 1-24-34-8-W3 was drilled in 1999 by Ensign Drilling Services Inc. on behalf of the issuer. Engineering and supervision was again by Cavern Engineering Ltd. and well site geological supervision was by North Rim Exploration Consultants Ltd. Hole 4-3-35-7-W3 was drilled in 2007 by Akita Drilling Ltd. on behalf of the issuer. Engineering and supervision was by Artisan Consulting and

geological supervision was by North Rim Exploration Consultants Ltd. These programs again confirmed that a viable potash deposit, amenable to conventional underground mining, was present at depths between 1,050 m and 1,120 m, grading between 24 % and 26 % K₂O in the new areas.

Expansion of the lease in 2005 brought three additional historic wells into the lease. The three exploration wells 16-6-37-8-W3 by National Potash Co., 13-1-37-8-W3 by Christie, Mitchell Oil, and 13-22-36-8-W3 by Freeport Sulphur, were completed in 1955 and 1957.

In addition to drilling, seismic exploration has been used to try and delineate solution collapse features to be avoided when mine planning. Initial 2D acquisition programs, on relatively sporadic time intervals, have been replaced by annual 3D programs that have recently been expanded to shoot the entire areas of interest en masse. Programs have confirmed the continuity of the Prairie Evaporite Formation and identified features to be avoided, greatly improving the successful completion of mine development entries. The history and evolution of seismic programs is shown in Table 12-1. It is the opinion of the author that 3D seismic coverage is required to classify Mineral Resources as Measured.

Table 12-1: VPO Past Seismic Programs

Seismic Exploration Programs			
Date	Type	Acquisition	Interpretation
1964	2-D	Century Geophysical	Century
1974	2-D	Century Geophysical	Dr. D. Gendzwill, University of Saskatchewan
1975	2-D	Century Geophysical	Dr. D. Gendzwill, University of Saskatchewan
1979	2-D	Northern Geophysical	Bediz Exploration Consultants
1989	3-D	Veritas Geophysical	Boyd Exploration Consultants Ltd.
1990	2-D	Century Geophysical	Boyd Exploration Consultants Ltd.
1995	2-D	Veritas Geophysical	Boyd Exploration Consultants Ltd.
1999	2-D	Datum Exploration Ltd.	Boyd Exploration Consultants Ltd.
2001	3-D	Arcis Geophysical	Boyd Exploration Consultants Ltd.
2005	3-D	Conquest Seismic	Boyd Exploration Consultants Ltd.
2006	3-D	Conquest Seismic	Boyd Exploration Consultants Ltd.
2007	3-D	Conquest Seismic	Boyd Exploration Consultants Ltd.
2008	3-D	Conquest Seismic	Boyd Exploration Consultants Ltd.

Figure 12-1 shows the relative location of these seismic programs.

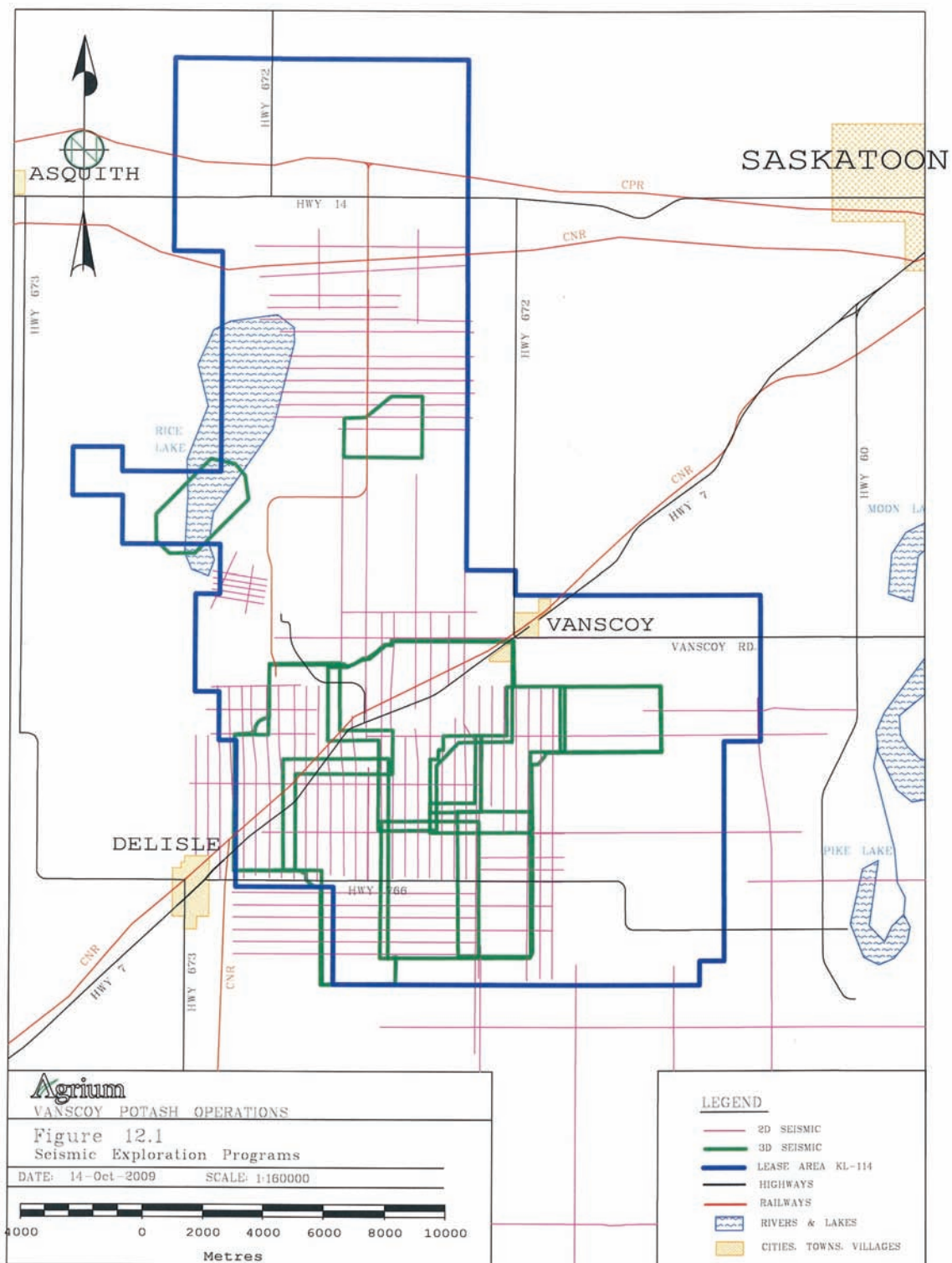


Figure 12-1: Seismic Exploration Programs

Currently, all seismic acquisition and interpretation is exclusively managed for Agrium's VPO by Boyd Exploration Consultants Ltd. and data is stored at Fugro Data Solutions in Calgary, Alberta.

In addition to drill holes and seismic programs, the issuer utilizes an underground sampling program to confirm thickness, grade and insolubles. These samples are treated as drill holes with all the applicable QA/QC procedures, utilizing an external assay laboratory.

13 DRILLING

True thickness of the mining zone is reflected in the assay reports due to the fact that all holes were drilled vertically and the deposit has a very shallow dip (0.5°).

Original C.M.&S. Drill Holes

All drilling was carried out following SMER regulations. Drilling was carried out by Canamerican Drilling Corporation under the engineering supervision of E.D. Bietz of J.C. Sproule and Associates. Well site geological supervision was conducted by Dr. W.J. Pearson and D.M. Lane of C.M.&S. The initial C.M.&S. program set a 10.75" (273 mm) diameter surface casing in a 15" (381 mm) diameter hole to a depth of 450 ft (137 m). From there, a 9" (228 mm) diameter hole was drilled to a core point just above the Prairie Evaporite Formation. Then, a 7" (177.8 mm) diameter intermediate casing was pinned into the Dawson Bay Formation. Coring was completed in a 6.125" (155 mm) diameter hole. Once complete, abandonment consisted of cementing the hole from the total depth to 150 ft (45 m) into the intermediate casing. The casing was cut off 40 ft (12 m) above the cement top and retrieved. Subsequent plugs were run from the cement top to approximately 65 ft (20 m) into the surface casing. The surface casing was then cut off 3 ft (1 m) below the surface, a cap was welded on, and the area was backfilled. A full suite of geophysical logs were run on each hole from surface to total depth.

Recent VPO Drill Holes

In 1989, hole 2-16-36-8-W3 in the Unitized Area was drilled by Sedco Drilling on behalf of the issuer. Engineering and supervision was performed by Cavern Engineering Ltd., and well site geological supervision was by R.H. Brown Consulting Geologists Ltd. A 244.5 mm diameter surface casing was cemented in to 146 m depth in a 349 mm diameter drill hole. From there, a long string 177.8 mm diameter casing was cemented the full length to 979 m depth in a 222 mm diameter hole. Drill stem tests were carried out in the Mannville, Dawson Bay and Winnipegosis Formations by Baker Oil Tools, Canada. Coring was completed by A&A Coring Ltd. of Estevan, Saskatchewan. Open and cased hole logging was by Halliburton Logging Services of Lloydminster, Saskatchewan. The hole confirmed the Vanscoy Potash Operations mining zone was present at 1,021 m depth. Although gamma logs indicate the presence of the mining beds at

1,021 m at mineable grades, the assay values derived from the core could not be located. It is sufficient to note that the drill hole is located in what is now a mined out area that produced 116 million tonnes at an average grade of 24.44 % K₂O over the last 40 years. On completion, the hole was plugged back to 1,005 m, and the casing was left open for future geophysical monitoring. At the time of writing, the hole is yet to be fully abandoned.

In 1999, hole 1-24-34-8-W3 in the South Block was completed by Ensign Drilling Services Inc. on behalf of the issuer. Engineering and supervision was completed by Cavern Engineering Ltd. and well site geological supervision was by North Rim Exploration Consultants Ltd. A 244.5 mm diameter surface casing was installed to 150 m depth in a 349 mm diameter hole. From there, a 222.3 mm diameter well was then completed “open hole” (without casings) to 1,229 m depth with inverted oil emulsion drilling mud. Drill stem tests were carried out in the Dawson Bay Formation by Baker Oil Tools, Canada. A total of seven core sections were taken of the complete Prairie Evaporite Formation from 1,090 m to 1,214 m. Coring was carried out by Sebco Coring of Estevan, Saskatchewan. Core recovery was 94 % with the losses occurring in core 4, well below the potash zones of interest. In core 2 (1,108 m to 1,126 m), which penetrated the potash zone of interest, the recovery was 100 %. A complete set of geophysical logs was run by Computalog Ltd. of Estevan, Saskatchewan. On completion the well was plugged back to surface and abandoned. Hole 1-24-34-8-W3 confirmed the potash beds mined at VPO existed at a depth of 1,110 m grading just over 25% K₂O with 4.5% insolubles.

In 2007, hole 4-3-35-7-W3 in the South Block was drilled by Akita Drilling Ltd. on behalf of the issuer. Well site engineering and supervision was by Artisan Consulting and geological supervision of the well site was by North Rim Exploration Consultants Ltd. A 244.5 mm diameter surface casing in a 349 mm diameter hole was cemented to 145 m depth. A 177.8 mm diameter intermediate casing in a 222 mm diameter hole was pinned into the Dawson Bay Formation at 1,092 m depth. Drill stem tests were carried out in the Dawson Bay Formation by Baker Oil Tools and geophysical logging was conducted by Schlumberger. The Prairie Evaporite Formation was cored by Sebco Coring from 1,092 m through to 1,140 m depth. The well was completed “open hole” (without casing) to 1,228 m total depth. Abandonment consisted of plugging the well back to 915 m with cement, cutting off the intermediate casing

and retrieving it as subsequent plugs were placed. The procedure proved difficult and time consuming but the hole was eventually plugged back to surface, the surface casing cut off, cap welded on and the surface restored. Although core recovery was 100%, 3.39 m from the top of core 1 and 5.91 m from the top of core 2 became jammed in the barrel. These portions were recovered at the top of core 3. Core was subsequently sent to the SRC's GeoAnalytical Laboratory, reorganized by fitting core breaks and stratigraphy, and sampled. The well confirmed the presence of the mining zone at 1,112 m, grading 28% K₂O with 6% insolubles.

North Expansion Wildcat Drill Holes

These holes, 16-6-37-8-W3, 13-1-37-8-W3, and 13-22-36-8-W3, were drilled between 1955 and 1957. Canamerican Drilling Company completed 16-6 and 13-22 and Rio Palmer drilled 13-1. Typically, a 10.75" diameter surface casing was installed in a 13.75" or 15" diameter hole to between 360 and 400 ft. depth. From there, a 5.5" or 7" diameter intermediate casing was installed in either a 7" or 9" diameter hole into the 2nd Red Beds near 3300 ft. depth with either cement or an anchor packer. The potash section was cored and the intermediate casing was recovered during abandonment. Of note is that the abandonment for these holes consisted of a plug from total depth to above the Dawson Bay Formation and then a series of bridge plugs to isolate formation water zones from the surface rather than completely filling the hole to surface. These three holes confirmed the presence of the mining zone within the Prairie Evaporite Formation.

14 SAMPLING METHOD AND APPROACH

The Upper Patience Lake Member mined at VPO is made up of a sequence of potash and halite beds separated by insoluble accumulations, or mud seams. These seams become parting planes and can present safety issues for mining rooms. The local stratigraphy in relation to the mine openings is shown in Figure 14-1. Although the preferred mining zone with the maximum grade is the 2.4 m thick interval designated as the B-5 beds in Figure 14-1, the overlying 0.9 m thick B-4 beds must be cut out as well or the mud seams would separate and collapse almost immediately upon being undercut when opening a room. Taking the B-4 beds as dilution reduces the effective mine grade and increases the insoluble content, but must be taken in order to provide a safe mining environment. The resulting practical room height is 3.35 m. This is the standard thickness cut by the 911 boring machine. In order to assure the top mud seam is cut out, history has shown the mining room is often cut 0.15 m (6") above the seam. Sampling intervals of the drill holes ensure that material above and below the mining horizon was included in all exploration programs carried out by the issuer or predecessor. This is not always the case in holes which were primarily drilled for oil exploration. Often only high grade bands were sampled with no consideration of intervening salt or insoluble beds.

Historic C.M.&S. Drill Holes

The 22 historic drill holes containing the potash members were located approximately 2.3 km apart along lines running diagonal to the township and range grid in township 35 – ranges 8 and 9, with two holes in township 34 range 8. In total, the drilling covered an effective area of approximately 150 sq. km. This area was derived by the author by drawing 2,000 m radius circles around each of the drill holes and determining the encompassed area. In the author's opinion, this radius is appropriate given the hole spacing used and the very small range in the assay composites. The locations of the original holes were previously shown in Figure 8-1.

Typically, coring started approximately 1.5 m (5 ft) above the top of the salt beds. Normally 1.5 m (5 ft) was cored and the core was broken. If the break was successful, coring continued an additional 8 m (approximately 25 ft) before it was pulled. Coring continued through the potash section in roughly 15m (50 ft) intervals and core recovery was 99.5% on average. Core was sent

to an on-site core shack for logging; and sampling was conducted on intervals ranging from approximately 0.18 m (0.59 ft) to 1.2 m (4 ft), averaging about 0.6 m (2 ft).

The drill hole listing and composites over a mining height of 3.35 m (11 ft) are shown in Table 14-1. The 3.35 m mining height is the standard boring machine height used in the Upper Patience Lake Member, and results in some dilution from the floor beds compared to the 3.1 m (10.2 ft) thickness used in the initial Stearns-Roger – J. T. Boyd engineering study in 1965.

Table 14-1: Composite Grade of Original Drill Holes Over a 3.35 m Thickness

Drill Hole ID	Composite From (ft)	Composite To (ft)	Comp. % NaCl	Comp. % KCl	Comp. % Insol	Comp. % K ₂ O
D15-32-34-8 *	3676.9	3687.9	82.2	10.3	5.9	6.5
D16-28-34-8	3653.9	3664.9	48.4	46.5	4.3	29.4
E04-11-35-9	3739.3	3750.3	52.1	38.8	7.1	24.5
E04-12-35-9	3714.1	3725.1	48.2	43.4	6.7	27.4
E04-24-35-9	3597.9	3608.9	45.5	46.2	7	29.2
E04-36-35-9	3554.2	3565.2	43.6	46	7.8	29.1
E16-22-35-9	3658.6	3669.6	46.4	47.4	5	29.9
V04-10-35-8	3532.1	3543.1	50.4	41.6	6.4	26.3
V04-18-35-8	3577.4	3588.4	52.1	40.8	5.6	25.8
V04-20-35-8	3531.8	3542.8	50.6	41.6	4.8	26.3
V04-22-35-8	3547.7	3558.7	48.8	47	3.5	29.7
V04-24-35-8 *	3541.9	3552.9	94.4	2.5	5.2	1.6
V04-28-35-8	3423.2	3434.2	51.9	44.5	2.7	28.1
V04-34-35-8	3453.2	3464.2	51.7	42.4	4.4	26.8
V11-16-35-8	3535.5	3546.5	51.5	41.3	5.6	26.1
V13-01-35-8	3594.9	3605.9	47.3	45.7	5.8	28.9
V13-11-35-8	3509.3	3520.3	47.7	45.3	5.5	28.6
V13-16-35-8	3525	3536	50.6	42	6	26.5
V13-23-35-8	3444.3	3455.3	49.5	45.8	3.9	28.9
V14-29-35-8	3437.4	3448.4	53.4	41	4.3	25.9
V16-06-35-8	3592.9	3603.9	50.8	43.4	4.3	27.4
V16-08-35-8	3555	3566	47.6	44.3	6.3	28
V04-30-35-8	No Data					
Count			22	22	22	22
Average			52.9	40.4	5.4	25.5
STD. DEV.			11.8	11.3	1.3	7.1
Minimum			43.6	2.5	2.7	1.6
Maximum			94.4	47.4	7.8	29.9

* - Notes: 43.8% KCl (27.7% K₂O) if 15-32 and 4-24 are deleted

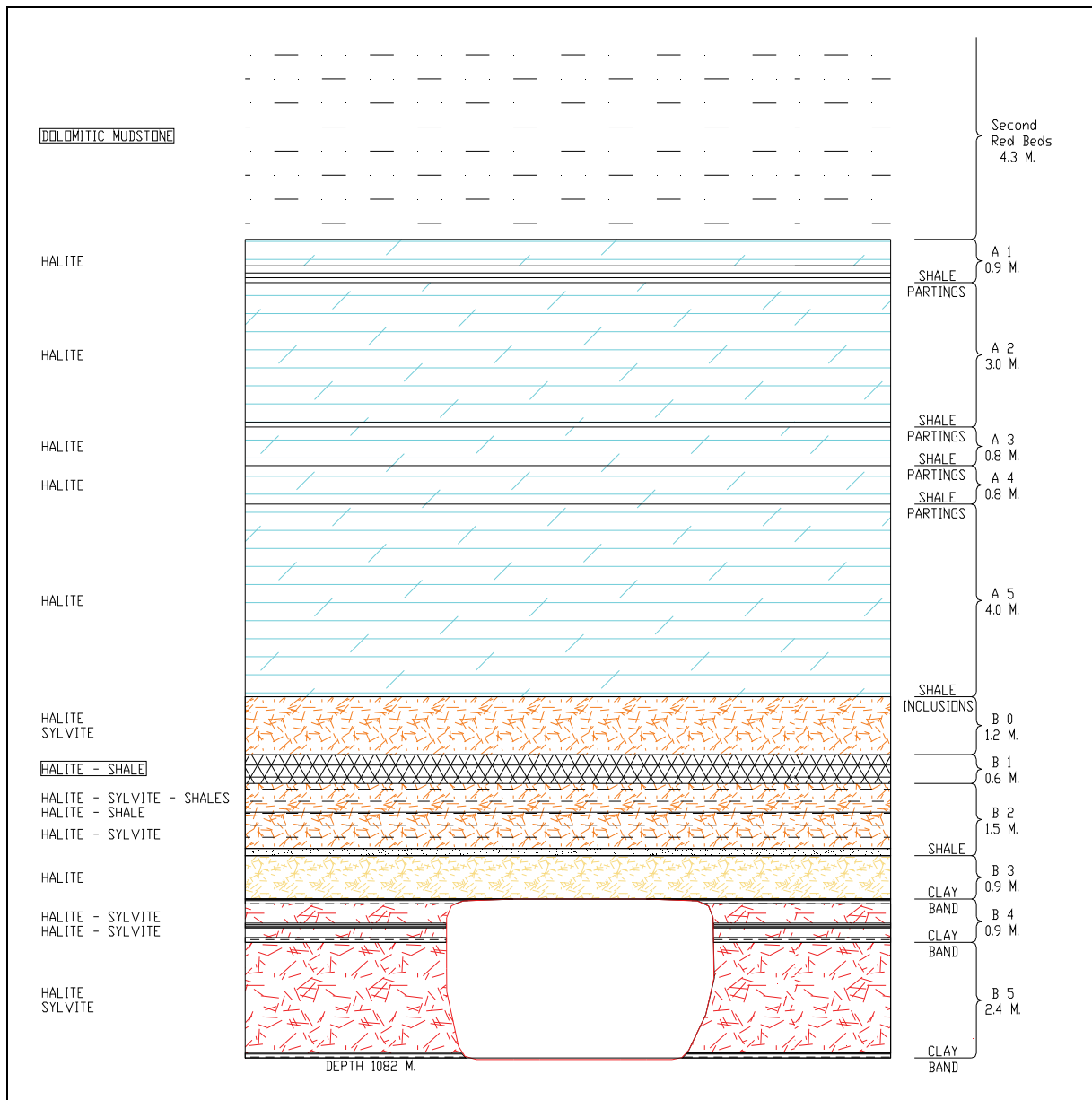


Figure 14-1: Local Stratigraphy in Relation to Mining Level

VPO Drill Holes

Hole 2-16-36-8-W3, completed in 1989, was drilled by Agrium's predecessor Cominco, near the centre of a 24 section expansion to the original mining unit area. The primary objectives were to determine the depth of the mining zone, salt cover thickness and water potential of the overlying Dawson Bay Formation, all of which were achieved. Although gamma logs indicate the presence of the mining beds at 1,021 m at mining grades, the assay values derived from the core could not be located. It is sufficient to say that the drill hole is located in what is now a mined out area that produced 116 million tonnes at an average grade of 24.44 % K₂O over the last 40 years.

Hole 1-24-34-8-W3 was drilled by the issuer in 1999. Sample assaying was carried out in-house at the mine site. The hole was located on a rough extension of one of the historic north-west south-east diagonals. The core was logged, sample intervals chosen based on stratigraphy and knowledge of the mining zones, and the assaying carried out by the mine site analytical laboratory. Samples were all retained and were recently submitted to the SRC's Geoanalytical Laboratory in Saskatoon, Saskatchewan. Composite grade over 3.35m was 25.7% K₂O and 4.3% insolubles.

Hole 4-3-35-7-W3 was drilled by the issuer in 2007 and was located in an area barren of any historical wells but again roughly lining up with an extension of the historic diagonal pattern to the west. Again samples were selected on intervals consistent with the stratigraphy and knowledge of the mining zone. Although core recovery was 100%, 3.39 m from the top of core 1 and 5.91 m from the top of core 2 became jammed in the barrel. These portions were recovered at the top of core 3. Core was reorganized by fitting core breaks and stratigraphy, before being sampled. The mining zone of interest was intact, however, the location within the stratigraphic column is suspect. This does not materially impact the accuracy and reliability of the assays and the geophysical logs were used to determine the depth of the mining zone at 1,112 m. Samples were cut from the core at the SRCs Geoanalytical Laboratory and immediately submitted for assay. Results indicate the presence of the mining zone, grading 27.9% K₂O with 6.2% insolubles.

North Expansion Wildcat Drill Holes

These holes were not drilled by the issuer or their predecessor. Hole 16-6-37-8-W3, drilled for National Potash of New Mexico, appears to have good assay data covering the mining zone of the Upper Patience Lake Member. There is no information on where the assay analysis was conducted or the quality control procedures that were used. The hole was also reviewed by A. Dave Mackintosh (ADM Consulting) and M.J. Sheetka (MJS) (Agrium Geologist) in 2005. The top of the salt horizon occurred at 1,009.45 m (3,310 ft). The ore zone was estimated at 1,023.4 m (3,356.7 ft) and the assays over the mining interval report 27.4 % K₂O with 3.88 % insolubles.

The core from 13-1-37-8-W3 was also reviewed by ADM and MJS in 2005 and indicated the normal VPO mining zone was present at 1,013.7 m (3,325 ft). Unfortunately, the assay information from just over 1 m (3 ft) of the mining zone was missing from the files stored at the SMER Geodata Centre in Regina, Saskatchewan. One can only speculate that the samples were removed for metallurgical testing. Based on the remaining mining zone samples and direct inspection of the core, it can be concluded that K₂O values are present in the area at mineable grades.

Hole 13-22-36-8-W3 was also inspected by ADM and MJS in 2005. The VPO mining zone was found to be present at a depth of 1,020 m (3,346 ft). Assay records stored at Geodata are complete and indicate a grade of 26.8 % K₂O with 1.97 % insolubles over the 3.35 m (11 ft) mining height.

Table 14-2 lists the drill holes and available composites from this area. The reader is cautioned that this data is only presented for comparison with results from predecessor or issuer drill holes and cannot be considered representative of the North Expansion Block. However, there is sufficient information to conclude that the VPO mining zone does continue into the North Expansion Block and that it does carry grade.

Table 14-2: Assay Composites from Wildcat Drill Holes

Drill Hole	% K ₂ O	Insolubles
13-22-36-8W3	26.8	2
16-6-37-8W3	27.4	3.9
13-1-37-8W3	NA	NA

Underground Sample Program

VPO utilizes a panel and pillar mining system that requires pre-cutting all first rooms in a mining block. Blocks are normally equivalent to a surface section, one mile by one mile (1.6 km by 1.6 km) and provide roughly five years of mining for one borer at historical productivity rates. First rooms are approximately 125 m apart. Samples are cut with an angle grinder every 200 m in the room and are submitted to the mine site analytical laboratory for assaying. Once all first rooms are cut, this rough sample grid of 200 m by 125 m provides a very good estimation of grade for production forecasting. The program is useful for day-to-day mining operations and forecasting but does not stand up to the scrutiny required by NI 43-101. Therefore, in addition to the production sampling program, a channel sampling program designed to mimic the sampling of a quarter core from a drill hole is carried out as mine development progresses. Sampling is conducted on intervals similar to an exploration drilling program spacing, such that when a 2.5 km radius circle is drawn around the data point, the overlap creates reasonable polygons for estimation. The samples are submitted to a third party and assaying is carried out by the SRC's GeoAnalytical Laboratory where it is subject to all the quality control procedures accompanying work submitted to the SRC.

Table 14-3 lists the composites from the VPO exploration holes and underground channel sampling program. The location of all the drill holes and underground sample points contributing to the estimate is shown on Figure 14-2.

Table 14-3: VPO Drill Holes & Underground Channel Sample Composites

Drill Hole/Sample	% K₂O	Insolubles
1-24-34-8-W3	25.7	4.3
4-3-35-7-W3	27.9	6.2
2-16-36-8-W3 *	24.4	4.7
3603-7	25.2	4.9
39 x-cut	28.5	3.8
3604-5 (700 x-cut)	19.9	4.1

* - Hole 2-16 is assigned the average grade and insol content from the 40 year historical production data.

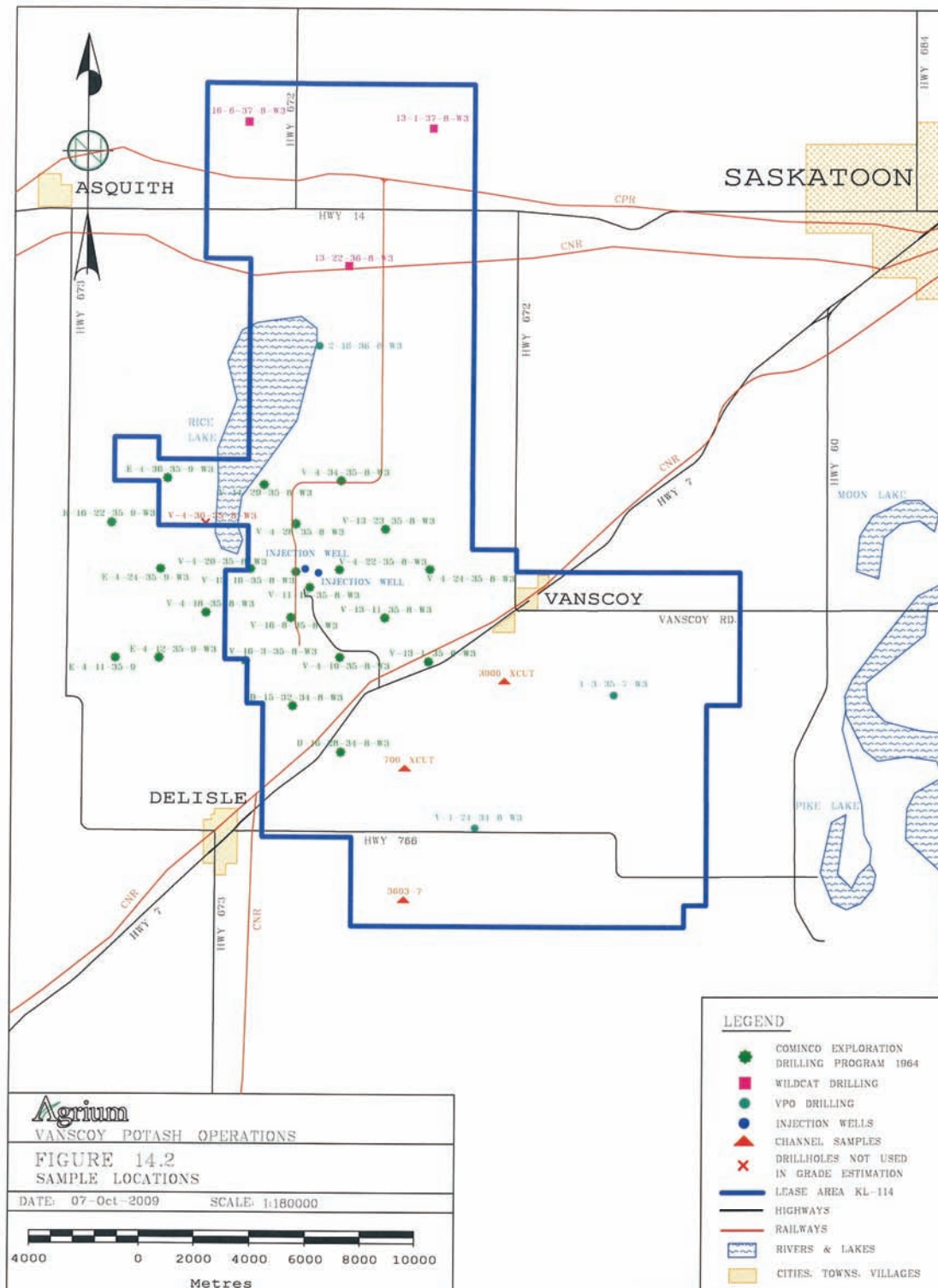


Figure 14-2: Sample Locations

15 SAMPLE PREPARATION, ANALYSES AND SECURITY

Potash is considered to be a low-value bulk material and, because the core has no meaningful value to the general public, no special provisions for sample security are normally practiced by the industry. Sylvite and particularly carnallite are hygroscopic and will pick up moisture from the air. Exposure to high humidity will cause the carnallite to “self-destruct” as it will give up the six water molecules, releasing a magnesium chloride brine and residual KCl. In order to protect the core from any possible dissolution during transport and storage the cores are often placed in plastic sleeves.

In general, the core was logged, convenient sample lengths of 0.25 m to 0.5 m were chosen based on geological changes and existing core breaks, and the intervals measured. A quarter core was removed either by cutting the core in half along the length of the sample, and one half cut into quarters, or a quarter cut out using a diamond bladed cut-off saw. The quarter core was numbered, bagged and tagged for assay purposes, and the remaining three quarters were returned to the core box.

Historic C.M.&S. Drill Holes

Core samples from the 22 historic potash exploration wells completed by C.M.&S. were sent to Core Laboratories Canada Ltd. in Calgary, Alberta for analysis. No documentation could be found to prove the lab’s certification in 1965. There is no record of any quality assurance/quality control (QA/QC) programs associated with the assay data. The author cannot provide an opinion as to the quality of the analysis or any QA/QC programs that may have been in place at the time. The author has no knowledge of whether or not any portion of the sample preparation was carried out by an employee, officer, or director of the predecessor to the issuer. The author can only state that the adequacy of sample preparation, security, and analytical procedures utilized when assaying the 22 historic drill holes is substantiated by the more than 116 million tonnes of material grading 24.4% K₂O that has been produced from the area over the last 40 years.

North Expansion Block Wildcat Holes

Similarly, there is no record of any QA/QC procedures associated with any assay data from the wildcat exploration wells associated with the North Expansion Block. Such programs are a recent addition given the requirements of NI 43-101, and the author would not expect to find much data available for holes in excess of 50 years old. Although there appear to be assay results for two of the three holes, it is inappropriate to apply the results to the resource estimates since there is no record of QA/QC procedures. Conversely, based on the 40 year mining history adjacent to this area, it is reasonable to apply the historical average grades to the resources in this block.

VPO Drill Holes

No record of the 1989 hole, 2-16-36-8-W3, assays or QA/QC procedures were found in the company records. This is not considered an issue as the hole is centred in a mined out section of the Unitized Area.

The 1999 hole, 1-24-34-8-W3, was initially assayed at the VPO process control laboratory. The method used involved determining the percent NaCl by flame emission, the gravimetric determination of percent insolubles, and subtracting these from the total to determine percent KCl. The percent KCl is then multiplied by 0.63177 to convert to percent K₂O. Samples are also analysed using X-Ray Fluorescence (XRF). In XRF analysis, the sample is ground to a fine powder, pressed into a pellet under 20,000 pounds of force and then bombarded with high energy X-rays. Each element in the sample will give off secondary X-rays, which are unique to that element. This secondary X-ray is measured as an electrical pulse and converted to a count rate. The higher the count rate the greater the concentration of the particular element.

None of the potash mine labs in Saskatchewan are certified by a standards association. If there is an issue which requires certification or verification, samples are sent to SGS Vancouver, British Columbia, who maintains their certification with the Standards Council of Canada. The Certificate of Accreditation is shown in Illustration 26-4.

Wet chemistry methods (STPB titration) are used on a regular basis to confirm the accuracy of the X-ray machine. Control standards are also analyzed on a daily basis using the same sample

preparation steps as for the unknowns. Preparation and analysis is carried out as outlined in the Saskatchewan Potash Producers Association manual and is reflected in Agrium's Laboratory Quality Assurance Manual (see Illustration 26-5).

In the 2007 hole, 1-24-34-8-W3, sample collection was carried out by an employee or associate of the issuer. Before transport, a packing slip was filled out identifying the drill hole and sample numbers being transported to the SRC's Geoanalytical Laboratories in Saskatoon, Saskatchewan. The SRC is accredited by the Standards Council of Canada. Illustration 26-6 shows the Certificate of Accreditation. Transport was primarily carried out by the issuer. The packing slip was signed by the SRC receiver and a copy returned to the issuer (see Illustration 26-7).

Upon receiving the samples, SRC acknowledges that the samples have been received and issues a "Sample Shipment Receipt Notification" followed soon after by a "Sample Receipt Report" indicating a complete sample listing, including total numbers and sample labels. Examples of both are included in Illustrations 26-8 and 26-9. At no time were samples not in the possession of a responsible person.

Complete details regarding sample preparation, assaying and analytical procedures used for potash analysis by the SRC Geoanalytical Laboratories are available in Illustration 26-10.

It is the author's opinion that the quality of sampling, sample preparation, security and analytical procedures associated with these results was very high.

In any future drill holes, it is anticipated that the above QA/QC procedures will be followed.

Underground Samples

Underground channel sampling programs are carried out by employees of the issuer. Samples are obtained by cutting two slots in the mine wall, approximately 5 cm apart and 3 cm deep, from approximately 15 cm above the normal mining zone down to below the normal mining height of 3.35 m. Horizontal slots are then cut across the verticals to isolate mud seams and noticeable changes in mineralogy to create blocks that are typically 7.5 to 10 cm long. The blocks are removed from the wall with a hammer and chisel. Often, a number of blocks (typically up to 3) are combined into one sample interval. The mass of material obtained for assay is very similar to

that obtained from a quarter core. Figure 15-1 shows removal of the sample material, Figure 15-2 shows a portion of the sampled wall and Figure 15-3 shows the completed channel.



Figure 15-1: Removing Sample Blocks from the Mine Wall



Figure 15-2: Section of Mine Wall with Samples Removed

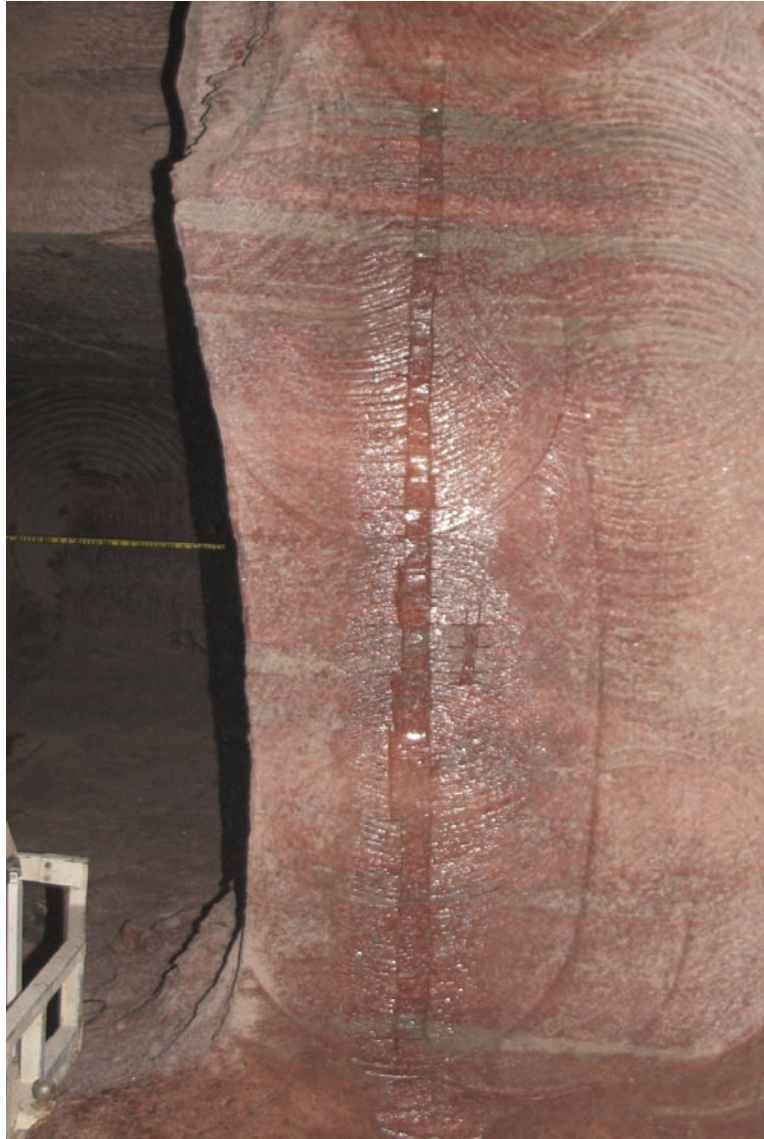


Figure 15-3: Completed Channel Sample Location

16 DATA VERIFICATION

No data verification procedures have been applied to any historic C.M.&S. holes or wildcat holes. There is no information regarding such procedures in the drill hole files and although the core is available, in many instances there is only one quarter core remaining and this must stay intact in the SMER core archive facility. Where three quarters of the core remains the author has verbal permission for selected re-sampling, however, given the condition of the core, and that the holes are largely in the region which has produced some 116 million tonnes of ore, the author considered such verification unnecessary.

The core from the mining zone and above in hole 4-28-35-8-W3 is shown in Figure 16-1. The condition of the core is readily evident. The mining zone core is placed in plastic sleeves to prevent deterioration due to humidity fluctuations.



Figure 16-1: 4-28-35-8-W3 Core

All samples from VPO drilled holes and underground samples are sent to the SRC GeoAnalytical Laboratory for analysis. The samples received by the SRC are then crushed, split, and a portion pulverized in a grinding mill. The remainder of the split is returned to the client. As part of their QA/QC procedures, one in every 40 samples is repeated and a comparison of these results is shown in Table 16-1. A prepared standard sample is also submitted with each batch of client samples. This is done to ensure repeatability of the analyses. The range in results is within the tolerance of the SRC's capabilities.

Table 16-1: Comparison of SRC Repeated Samples

SRC GeoAnalytical Lab Repeated Samples				
Sample	K₂O		Insolubles	
	Original	Repeated	Original	Repeated
VPO 36-16	1.9	1.8	31.5	31.4
VPO 700-11	12.3	12.4	5.8	5.9
VPO 700-19	6.5	6.2	0.1	0.2
VPO 36	1.4	1.4	12.8	12.9
VPO 38	1.8	1.8	7.6	7.6

In addition, it has been the issuer's practise to submit duplicate blind samples taken adjacent to the original channel location. This is done to ensure the repeatability of the sampling method. Table 16-2 compares duplicate samples submitted by VPO personnel. Given that the assay values of the VPO duplicate samples are within an acceptable tolerance, it is the opinion of the author that the sampling method provides a sample representative of in situ K₂O grades.

Table 16-2: Comparison of VPO Duplicate Channel Samples

VPO Duplicate Channel Samples				
Sample	K₂O		Insolubles	
	Original	Repeated	Original	Repeated
VPO 39-12	35.5	34.7	3.6	2.8
VPO 39-14	25.8	26.0	2.9	2.8
VPO 39-15	33.0	34.5	0.5	0.4

Hole 1-24-34-8-W3 was originally assayed in 2000 by the VPO mine site lab. Retained samples were resubmitted to the SRC in 2009 for processing as indicated above. The comparison of results is shown in Figure 16-2.

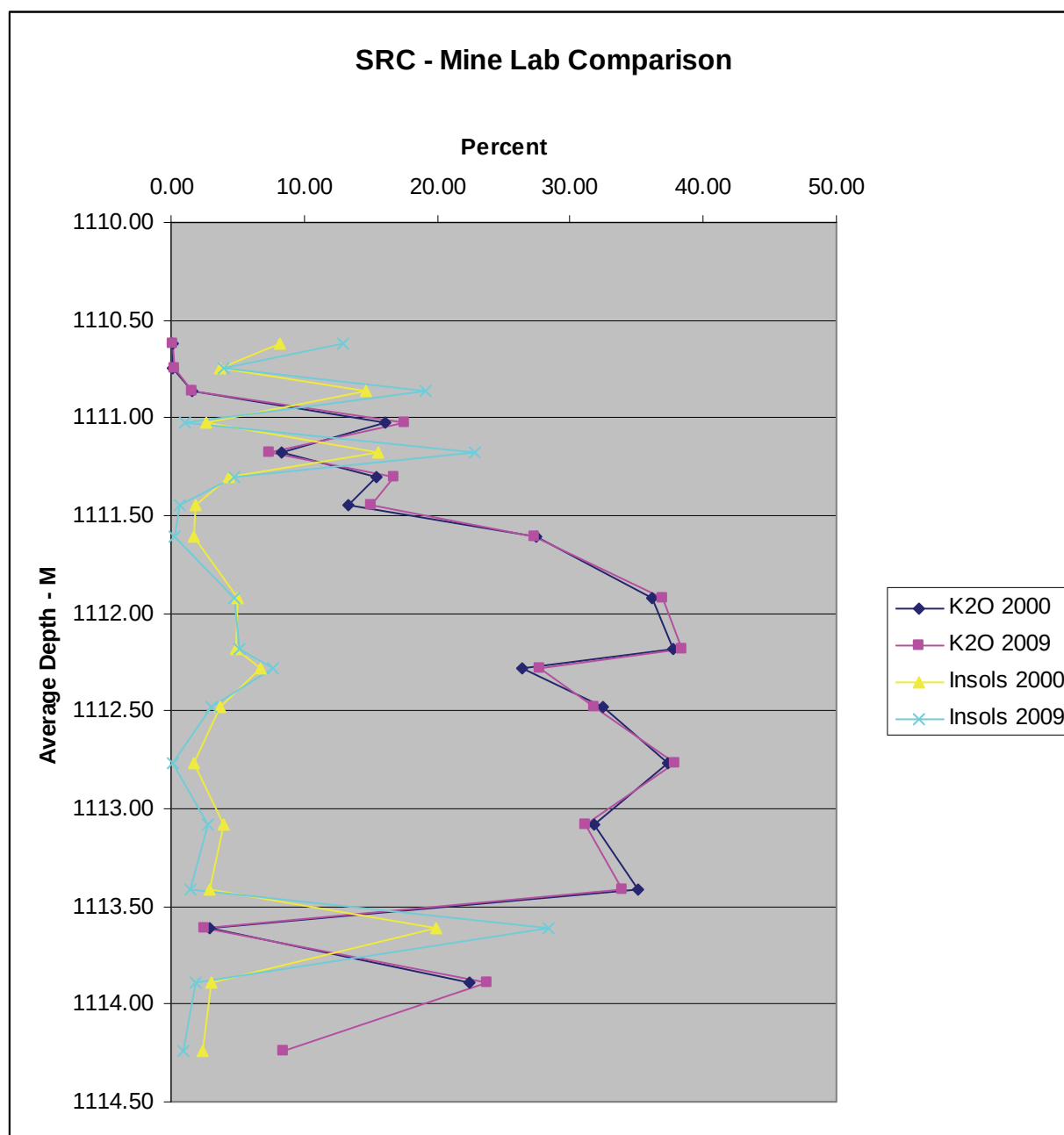


Figure 16-2: Comparison of 2000 Mine Site Lab Assays & 2009 SRC Assays

The SRC assays were carried out using Inductively Coupled Plasma (ICP) methods. Mine site lab samples were analysed using methods outlined in Agrium's Laboratory Quality Assurance Manual (see Illustration 26-5). It is the opinion of the author that the close correlation apparent between repeated and duplicated samples indicates the analysis supplied by SRC is representative of the in-situ grades.

17 ADJACENT PROPERTIES

Mining the same potash beds as VPO, the PCS Cory Division mine is located north east of VPO's KL 114-R lease. According to the company's Annual Report on Form 10-K for the year ended December 31, 2008 filed with the United States Securities and Exchange Commission and the Canadian provincial securities regulatory authorities, Cory Division produced 0.4 million tonnes of product from 1.68 million tonnes of ore grading 22.49 % K₂O. In each of 2006 and 2007, 0.7 million tonnes of muriate of potash was produced. The annual capacity is quoted at 1.36 million tonnes of product. Proven and Probable Mineral Reserves are reported at 224 million tonnes grading 25.1% K₂O when a 26% extraction ratio is applied. Mineral Resources, exclusive of Mineral Reserves, total 958 million tonnes of Measured Resources, 266 million tonnes of Indicated Resources and 2.95 billion tonnes of Inferred Mineral Resources. Resources are quoted as in-place tonnes.

Given that the information provided in the Form 10-K is subject to the requirements of the Securities and Exchange Commission and has been disclosed by PCS as having been prepared under the supervision of a "qualified person" under NI 43-101, the author has made no attempt to verify the information. The information is not necessarily indicative of the mineralization on the property that is the subject of this Technical Report.

18 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical testing was carried out during the Kilborn (December 3, 1965) and the Stearns-Roger (May 14, 1965) engineering studies for the issuer's predecessor, Cominco. A copy of the cover letter from the Stearns-Roger engineering study is included in Illustration 26-3. Although the details of such studies are long since lost in the 45 years since prepared, the validity of the results is confirmed by the 40 years of successful operation at the mine site. Testing continues at the mine site on an on-going basis and improvements are constantly being implemented in the milling process. A complete description of the process is provided in Item 25, Additional Requirements for Technical Reports on Development Properties and Production Properties.

19 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Key Assumptions and Parameters

- Property area is based on legal land descriptions and Saskatchewan land surveys.
- Calculated volumes are based on the standard 3.35 m mining height used at VPO.
- Calculated tonnages are based on an in-situ density of 2 tonnes/m³.
- Seismically determined collapse features, features encountered by mining operations and lease/seismic buffer zones have been removed from the estimate.
- Freehold lands owned by others are not included in the estimate. Tonnages associated with such lands will change as rights are obtained or royalty agreements are created.
- A 150 m diameter sterilized region around all drill holes is removed from the estimate.
- A cut-off determined by the 3.35 m mining height rather than a grade was used to determine the estimate. It is the author's experience that areas of low grade, referred to as leached zones, are of limited areal extent, and, where the bedding is still intact, are usually mined through to access good grade on the other side. For that reason the two historic holes with grades less than 15% K₂O have been retained in the estimate.
- Resource estimates will not be materially affected by environmental, permitting, legal, title, taxation, socio-economic marketing and political issues.
- The KL 114-R lease is broken into three areas and are shown in Figure 6-3:
 - The Unitized Area is defined as the Crown accepted mining unit for royalty purposes.
 - The South Block is defined as the area of the lease south and east of the Unitized Area.

-
- The North Expansion Block is defined as the most recent lease expansion (2005) north of the Unitized Area.
 - Lands within 1 mile (1,600 m) of mine development are considered a Probable Mineral Reserve. Probable Mineral Reserves will move to Proven Mineral Reserves once the first rooms of panels in a production block are completed and there is no question of the tonnes and grade available.
 - Lands within a 2.5 km circle drawn around a sample point are considered Measured Mineral Resources if accompanied by 3D seismic coverage. Lands within the 2.5 km circle but not covered by 3D are considered Indicated Mineral Resources.
 - Inferred Mineral Resources cover the remainder of the lease. They exist in two areas, the North Expansion Block in townships 36 and 37 range 8 and the south east corner of the South Block. In the North Expansion Block, the only information is from three widely spaced drill holes and the boundary with adjacent mined out areas. In the South Block, there is widely spaced 2D seismic information and drill hole 2-2-34-7-W3, a wildcat Hudson Bay Oil and Gas hole outside the lease boundary to the south east, where the gamma log indicates the ore zone is present at approximately 1,121 m (3,678 ft).
 - Additionally, all lands within the Unitized Area are considered a Mineral Reserve since no matter where in the unit mining is taking place, the stakeholders will receive a royalty payment based on their percentage ownership. In defining a unit, mining companies have every expectation of successfully obtaining a tonnage based on extraction rate and some allowance for geological disturbances and mining contingencies. The Unitized Area boundaries were created to retain the same percentage Crown ownership in the unit as in the township. As a result of the unit/lease boundary and past mining, some areas have been made inaccessible to future mining and have been removed from the estimate.
 - Proven and Probable Reserves are combined in this report as they move from Probable to Proven on a regular basis as mining development expands. The rate of transfer can be

significant at times and although tracked by VPO personnel, any attempt to separate the two in this report would be soon outdated.

- The historical extraction ratio of 27.9 % has been applied to the in-situ tonnes to arrive at the estimates. Although not normally applied to Inferred Mineral Resources due to lack of geological information, the 2D seismic coverage showing the continuity of the Prairie Evaporite, the presence of the mining zone in 2-2-34-7-W3, and for that matter, the mining of the same zone at mines many miles to the east, was sufficient to apply the historical extraction rate. The reader is cautioned that this was done at the request of the issuer to provide a more conservative estimate that could be used to compare mine life at various production rates.
- Mineral Reserves are not included in Mineral Resource estimates.
- K₂O estimates will not be materially affected by metallurgical factors and surface infrastructure.

Table 19-1 summarizes the mineral resource and reserve estimates regarding Agrium VPO.

Table 19-1: Agrium VPO Mineral Reserve & Resource Summary as of August 31, 2009

AREA	GRADE EST. % K ₂ O (TOTAL)	% INSOLS	MINERAL RESERVES – PROVEN AND PROBABLE (MILLIONS OF TONNES) (A)	MEASURED MINERAL RESOURCES (MILLIONS OF TONNES)	INDICATED MINERAL RESOURCES (MILLIONS OF TONNES)	INFERRED MINERAL RESOURCES (MILLIONS OF TONNES)
Unitized Area	24.4	4.7	70.0	0.0	0.0	0.0
South Block	24.9	4.8	54.1	77.1	35.9	125.1 (B)
North Expansion Block	24.4 (C)	4.7 (C)	0.0	0.0	0.0	75.5
TOTAL	--	--	124.1	77.1	35.9	200.6

(A) - Proven and Probable Mineral Reserves are combined in this report as probable reserves move to proven reserves at a significant rate as mining progresses and proven estimates would be soon outdated. Mineral Resources are reported exclusive of Mineral Reserves.

(B) - Due to the continuity of the deposit, it is appropriate to apply the South Block average grade to the South Block Inferred Resources.

(C) - Grades applied from 40 year historical averages.

Details of the Mineral Resource and Mineral Reserve calculations are shown in Illustration 26-11.

20 OTHER RELEVANT DATA AND INFORMATION

The Canadian Industry of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves do not stipulate the distances between points of observation (drill holes and channel samples) as this would be significantly different for a vein deposit compared to an industrial mineral or coal mine. The CIM definitions can be applied verbatim when describing a new ore body or when developing feasibility studies on new properties. However, in Saskatchewan an established mining history has developed with most mines in excess of 40 years old. These mines were developed long before any NI 43-101 requirement, and as such, were often developed with exploration data densities that were satisfactory to the developing company itself rather than any external governing body. Although it can be assumed that detailed feasibility studies were completed prior to going into production, such studies are often lost in subsequent changes in ownership or even internal company house cleaning. Production decisions were often made based on very few, widely spaced drill holes. Assays were often done in house and any quality control or quality assurance procedures are long lost making any discussion of quality control measures and data verification procedures almost impossible. Sufficient evidence that the data used to make production decisions was valid is the 40 year history of successful mining operations.

Since the same ore beds are mined at a number of properties separated by in excess of 160 km (100 miles), the demonstrated continuity between widely spaced observations points is extremely good and one can reasonably extrapolate grade and thickness to several miles from observation points and consider the result a Measured Resource when accompanied by 3D seismic data. Generally, within the industry long term mining layouts are produced, conveyor systems designed and large expenditures authorized to develop these areas based on limited drill holes and seismic evaluations. Therefore, others might consider these areas Probable Reserves.

Within a unit, mining companies have every expectation of successfully obtaining a tonnage based on historic, all encompassing extraction rates and some allowance for geological disturbances and mining contingencies. For the purposes of this report lands within the VPO Unitized Area are considered a Mineral Reserve since no matter where in the unit mining is taking place, the stakeholders will receive a royalty payment based on their percentage

ownership. Reserves will move from Probable to Proven on a regular basis as mining development expands.

Areas within 1 mile (1,600 m) of a mine development entry are considered Probable Mineral Reserve. The mining method utilized at VPO requires the pre-cutting of the first rooms in each panel. Once this is complete a very accurate estimate of the tonnage and grade in a mining block can be prepared and thus can be categorized as Proven Mineral Reserve.

Indicated Mineral Resources are considered the area produced when creating polygons from intersecting 2.5 km radius circles drawn around drill hole or sample locations. Where accompanied by 3D seismic coverage these areas are considered a Measured Mineral Resource. Tonnages are calculated by multiplying the area by the mining height (3.35 m used in this report) and multiplied by 2 tonnes/cubic metre. Being an estimate, a tonnage factor of 2 rather than a calculated factor based on grade is considered sufficient.

An estimate of tonnages lost to seismic anomalies based on the area determined by the 3D seismic programs is removed from the estimates for the South Block 3. Similarly, areas have been removed from the Unitized Area when calculating the Mineral Reserve Estimate based on the 3D programs, underground mining experience, and inaccessibility.

Agrium's VPO site has been operating since 1969. As of August 31, 2009, over 41 million tonnes of muriate of potash have been produced from 121 million tonnes of ore grading 24.4% K₂O. Vulcan software was used by Maptek's Michael Cole to re-create an estimate based on the original 22 drill holes. Historical operating results have validated the Vulcan grade estimate for the 22 drill holes. Therefore it is reasonable that Vulcan software be used to estimate the grade and tonnage of the South Block area. The historical grade and Vulcan estimates are compared in Table 20-1.

Table 20-1: Comparison of Vulcan & Historical Grade Estimates

Data Source	% K₂O	% Insol
Historic Production (to August 31/09)	24.4	4.6
Vulcan 22 Drill Hole Area	24.8	5.4
Vulcan South Block Area	24.9	4.8

The block models produced by Maptek are shown in Illustration 26-12. They are the basis for developing the South Block estimates.

In the fall/winter of 2009/2010, the remaining South Block area of the lease will be entirely covered with 3D seismic acquisition.

In Saskatchewan mining history, with the exception of PCS Allan Division, all potash mines have experienced brine inflows. In 1985, a brine inflow occurred on the western edge of the mine in the order of 125 USGPM. This appears to be the maximum productive capability of the Dawson Bay Formation in the Saskatoon region. It is considered a nuisance brine inflow, unlike the high volume, mine threatening inflows that have occurred at PCS Rocanville, Mosaic Esterhazy and PCS Patience Lake. Brine chemistry and flow rate have remained essentially unchanged since 1985. Although an additional cost to the operation due to the continued maintenance of access entries to monitor and manage, it is considered of minimal risk to the remaining reserve and resource estimates.

21 INTERPRETATION AND CONCLUSIONS

After 40 years of production, Agrium's VPO has a Mineral Reserve remaining of 124.1 million tonnes, after applying the historical extraction ratio of 27.9 %. With a concentration factor of 2.82 this is sufficient for 21 years of mining at the current rate of 2.05 million tonnes product per year. The Measured and Indicated Resources provide a further estimated 113 million tonnes, also after applying the extraction rate. Indicated Mineral Resource tonnes routinely move to Measured Mineral Resources as annual 3D seismic programs are completed. Continued underground development into these areas will move Measured Mineral Resources to Probable Mineral Reserves, also on an annual basis. The combined Mineral Reserves, Measured Mineral Resources and Indicated Mineral Resources provide a mining life of over 40 years at current production capacity. Further exploration into the east portions of the South Block and/or the North Expansion Block, whether by additional drill holes or by detailed underground sampling programs will reclassify Inferred Mineral Resources.

22 RECOMMENDATIONS

If Agrium chooses to upgrade the resource classifications for the South Block, Agrium needs to complete the 3D seismic acquisition (planned for the fall and winter season of 2009/2010) and complete six exploration drill holes. These six holes will upgrade the South Block so that 96% of the current Inferred Mineral Resources can be classified as a Measured Mineral Resource. As the mine continues to develop, the company could utilize the underground sampling program in place of some of the exploration holes. This will slow the rate of reclassification of resources.

If Agrium chooses to upgrade the resource classifications for the North Expansion Block, Agrium needs to complete the 3D seismic acquisition, re-assay the existing wildcat holes (if allowed by SMER) and perform additional drilling. With the completion of a feasibility study, these resources could be updated to reserves.

It is recommended that the channel sampling method and 3rd party assaying to satisfy NI 43-101 QA/QC requirements be formalized and adopted.

It is highly recommended that all government approvals, permits and essential documentation, including critical renewal dates, be centrally located and stored in a dedicated file.

23 REFERENCES

Agrium production records, financial records, environmental permitting and process documentation.

Agrium website.

CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines. December, 2005.

Drill hole records for all holes associated with the KL 114-R lease – Agrium contained.

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National Instrument 43-101: Standards of Disclosure for Mineral Projects. 2005.

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24 CERTIFICATION AND DATE

The following are the signed and dated Certificate of Qualifications and Consent of Author of the person who prepared this report.

CERTIFICATE OF AUTHOR

I, Andrew David Mackintosh, P. Geol., do hereby certify that:

1. I am President of:
ADM Consulting Limited
Box 32, Vanscoy, Saskatchewan, Canada
S0L 3J0
2. I graduated with a degree in geology from the University of Saskatchewan in 1985.
3. I am a member of the Association of Professional Engineers and Geoscientists of Saskatchewan with permission to consult, the Canadian Institute of Mining, Metallurgy and Petroleum, the Canadian Rock Mechanics Association, and the International Society for Rock Mechanics.
4. I have worked as a geologist for a total of 24 years since my graduation from university.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am responsible for the preparation of all sections of the technical report titled “Potash Mineral Reserves and Resources, Agrium Vanscoy Potash Operations, Vanscoy, Saskatchewan” dated November 6th, 2009 (the “Technical Report”) relating to the Agrium KL 114-R mining lease. Most recently, I visited the property for the day of October 26th, 2009.
7. I have had prior involvement with the property that is the subject of the Technical Report having worked for Agrium Inc. (“Agrium”) both as an employee from 1969 to 1996, and as a consultant since 1996. In these capacities I have visited all the conventional Saskatchewan potash mines on numerous occasions, none of which were related to this Technical Report.
8. As of the date hereof, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required for the purposes of NI 43-101 to be disclosed in order to make this Technical Report not misleading.
9. I am not independent of the issuer when applying Part 3.5(1)(g) of the Companion Policy 43-101CP.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 6th day of November, 2009.

Original signed and sealed by
“A. Dave Mackintosh”
Signature of Qualified Person

A. Dave Mackintosh
Print name of Qualified Person

CONSENT of AUTHOR

TO: British Columbia Securities Commission
Alberta Securities Commission
Saskatchewan Financial Services Commission
The Manitoba Securities Commission
Ontario Securities Commission
Autorité des Marchés Financiers
Nova Scotia Securities Commission
New Brunswick Securities Commission
Securities Commission of Newfoundland and Labrador
Prince Edward Island Securities Office

I, A. Dave Mackintosh, do hereby consent to the filing of the Technical Report titled “Potash Mineral Reserves and Resources, Agrium Vanscoy Potash Operations, Vanscoy, Saskatchewan” and dated November 6, 2009 (the “Technical Report”) and any extracts from or a summary of the Technical Report with the securities regulatory authorities referred to above.

Dated this November 6, 2009.

“A. Dave Mackintosh”

Signature of Qualified Person

A. Dave Mackintosh

Print name of Qualified Person

25 **ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES**

Mining Operations

In the mine, borer style miners such as the one shown in Figure 25-1 are used to mechanically excavate the rock and load it directly onto conveyor belts. The broken ore is then transported to #1 Shaft where it is hoisted from underground to surface at a capacity of 993 tph and fed to the mill. The mine is accessed using a fleet of 4x4 trucks and a network of roads that stretches 9 km north, 11 km south and 7 km east of #1 Shaft. The borer miners are 3.35 m high, 5.5 m wide and use two, three armed rotors to cut the rock. The miners can advance at about 30 cm (1 ft) per minute and will mine tunnels up to 1600 m long and 10.2 m wide. The potash ore being mined contains about 40% potassium chloride (potash), 55% sodium chloride (common salt) and 5% clay.

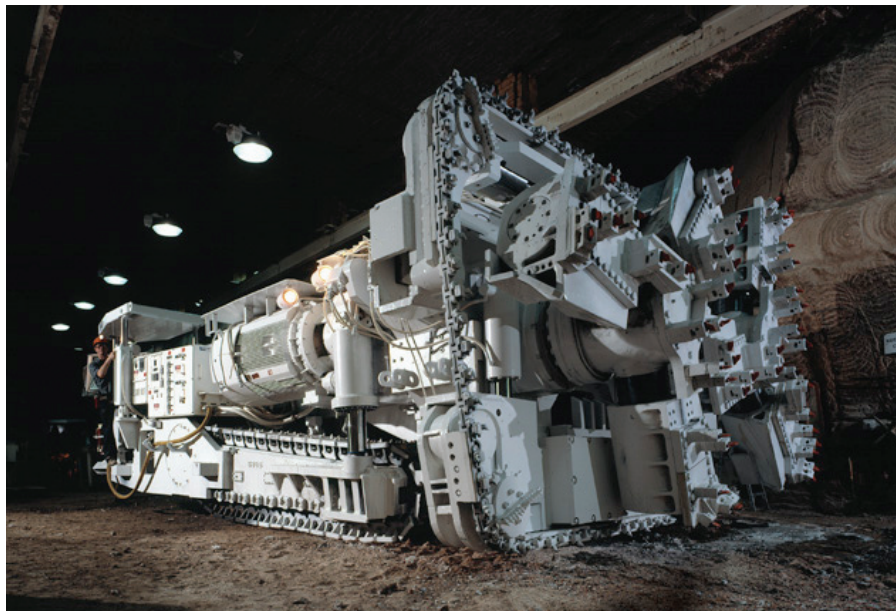


Figure 25-1: Borer Miner

Mine excavations generally fall into two classes:

- 1) Entry systems are used to house conveyor belts, serve as travelways and are designed to remain open for many years provided that scaling and other maintenance programs are performed.

-
- 2) Production panels are cut to extract ore from the mine as quickly and efficiently as possible.

Entry systems are cut using a 5 room system where the outside two rooms are designed to fail and cave in. These are called relief drifts as they provide stress-relief for the central protected rooms. The protected entries typically include 2 travelways which are used to access the mining areas and one conveyor belt entry which is used to transport ore from the mining machines to #1 Shaft. Figure 25-2 shows a typical entry system that would be used to access the mine.

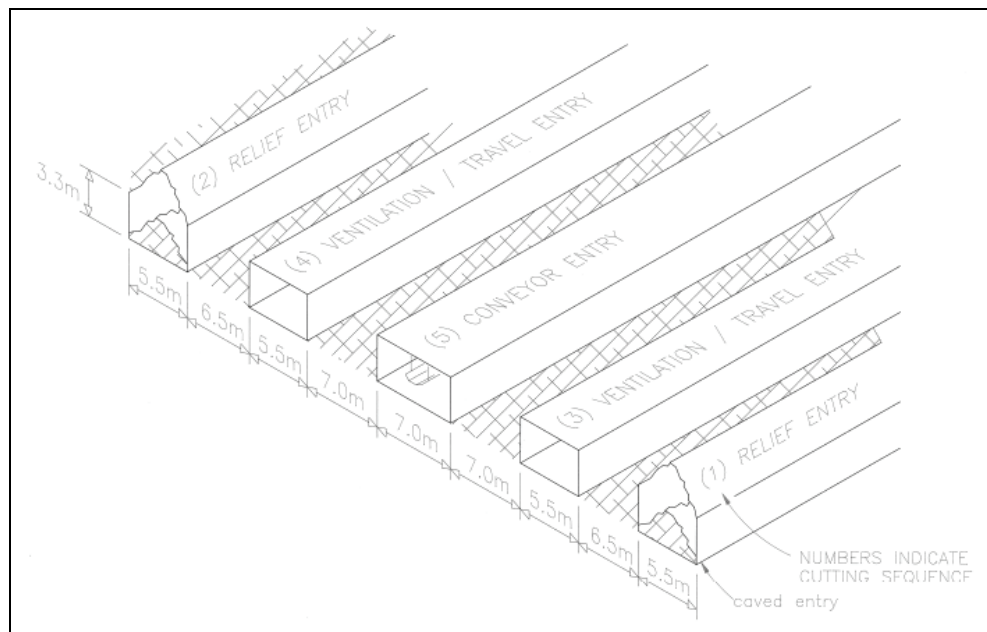


Figure 25-2: Typical Entry System

Production panels consist of a set of 5 rooms cut double-wide. These rooms are cut in a sequence from left to right with a two month delay between consecutive rooms. Typically these rooms will fail and cave in within a period of months after being cut. Maintaining a long-term opening in these rooms is not a priority provided employee safety is maintained while the room is being worked in. The purpose of production panels is to remove potash ore from the mine as quickly and efficiently as possible. Figure 25-3 shows a typical 5 room production panel.

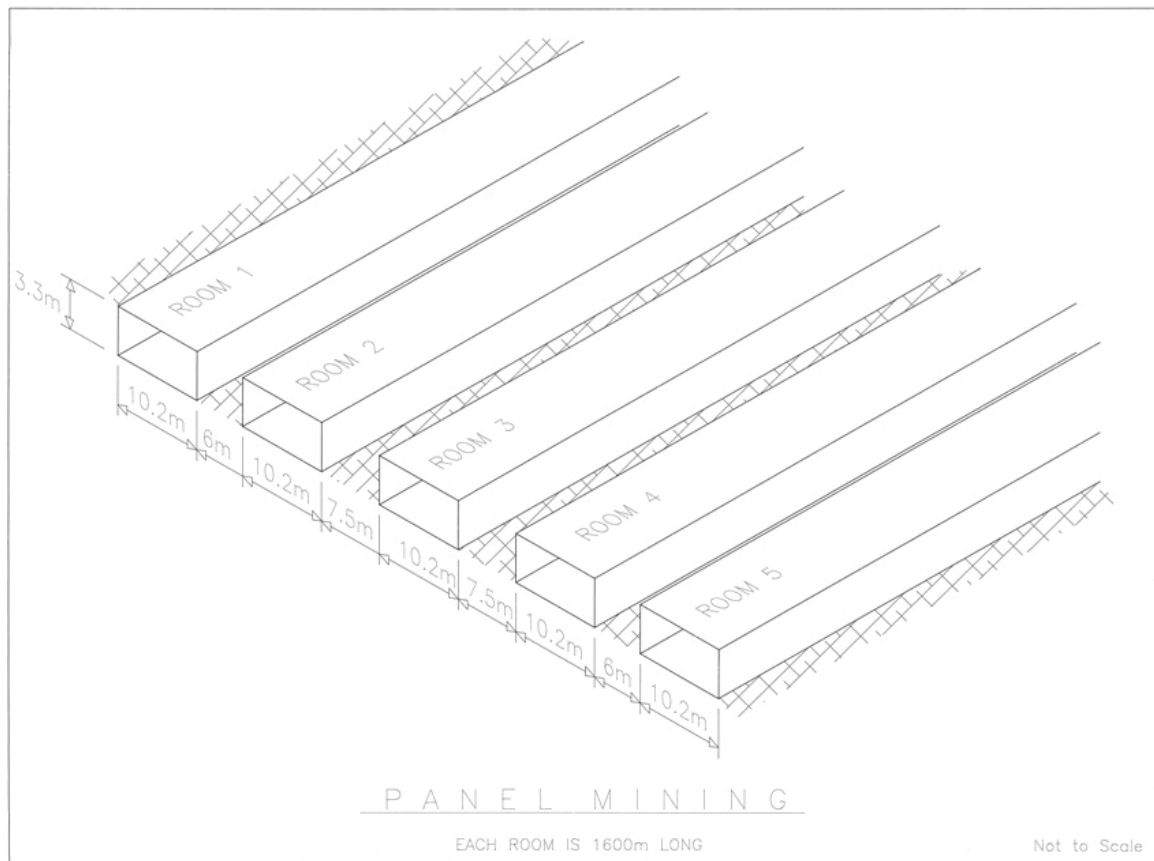


Figure 25-3: Typical Production Panel

Recoverability

The mill produces muriate potash product by removing the clay and salt minerals contained in the ore that is transported from underground. The ore is crushed until it is less than 3.3mm in size and is then combined with brine to facilitate treatment. Because the potash is soluble, the entire milling process is performed using saturated brine.

The potash ore slurry is sent to Scrubbing, where through vigorous agitation the clay and insoluble minerals are liberated from the potash ore particles. The slurry is screened (Wet Screening) to separate the large (+20 mesh) potash and salt particles from the slurry. The large potash and salt particles are re-slurried and sent to Coarse Potash Flotation. The slurry containing fine (-20 mesh) potash ore, clay and insoluble minerals is sent for separation of the

clay and insoluble minerals via flotation (Insol Flotation). With the use of chemical reagents, the clay and insoluble minerals attach to air bubbles which float to the surface of the flotation cells. Skimmers are used to collect the floating clay and insoluble minerals (overflow) and flow with saturated brine to a thickener. The clay and insoluble minerals are thickened and sent to tailings while clean brine is recovered from the thickener overflow and recycled to the milling process. The underflow from the Insol Flotation (which is fine potash ore slurry) is sent to Fine Potash Flotation.

In the Coarse Potash Flotation and Fine Potash Flotation steps, chemical reagents are used to enable the separation of potash from the ore slurry via flotation. The potash particles attach to air bubbles, float to the surface of the flotation cells and are skimmed off and collected. The tailings from the Fine Potash Flotation step are de-brined and sent to the tailings pile. The tailings from the Coarse Potash Flotation are further ground up and sent through another series of Regrind Insol Flotation and Regrind Potash Flotation to recover any potash that did not float in the Coarse Potash Flotation step. The tails from the Regrind Potash Flotation step are sent to the tailings pile. The potash that is collected from the flotation steps is then sent for Drying.

In the Drying step, the potash slurry is centrifuged to remove the majority of the process brine then sent to the fluidized bed dryer (natural gas fired). The effluent brine from centrifuging is re-processed to recover the fine potash particles. The exhaust from the fluidized bed dryer is scrubbed to recover any potash dust. The dried product from the Drying step is sent to the Screening and Compaction steps.

Potash dust is collected throughout the mill using baghouses and scrubbing systems; the dust is used as feed to a Crystallization step. The dust is dissolved into hot brine and then cooled in a series of four evaporation stages to control the rate of potash crystal precipitation. The crystallized product is sent to the Drying step. The evaporated water is condensed in brine. This “return brine” is less saturated and is returned to the brine pond. The mill cannot use all the return brine, therefore a portion of the brine is injected into a deep well aquifer (the Deadwood Formation, 5,600 ft. below surface).

In the Screening and Compaction steps, the product from the Drying step is sized into four different granular product sizes using a series of vibrating screens, roll compactors, crushers and product sizing screens. The final products are conveyed to the product storage building and loaded on rail cars or trucks for distribution.

The amount of potash that is extracted from the raw ore is called recovery. Recovery is calculated by multiplying the total tonnes of product by the %K₂O in the product and dividing this by the total tonnes of mill feed ore multiplied by the %K₂O in the ore. The average yearly recoveries are shown in the table below.

Table 25-1: Average Potash Recovery Factors for VPO Mill

Year	Average Recovery (%K ₂ O)	Year	Average Recovery (%K ₂ O)	Year	Average Recovery (%K ₂ O)	Year	Average Recovery (%K ₂ O)
1969	66.00	1980	81.78	1991	91.57	2002	83.76
1970	66.85	1981	81.74	1992	90.98	2003	83.99
1971	Flood	1982	80.60	1993	90.05	2004	84.47
1972	60.69	1983	79.98	1994	89.09	2005	85.57
1973	76.44	1984	85.81	1995	89.06	2006	82.76
1974	84.26	1985	86.36	1996	86.52	2007	82.28
1975	83.02	1986	88.66	1997	87.17	2008	82.68
1976	83.37	1987	86.94	1998	84.64	2009 YTD	81.56
1977	83.04	1988	88.15	1999	82.36		
1978	83.01	1989	92.67	2000	79.33		
1979	81.94	1990	87.09	2001	79.54		

CONCENTRATOR PROCESSING STEPS

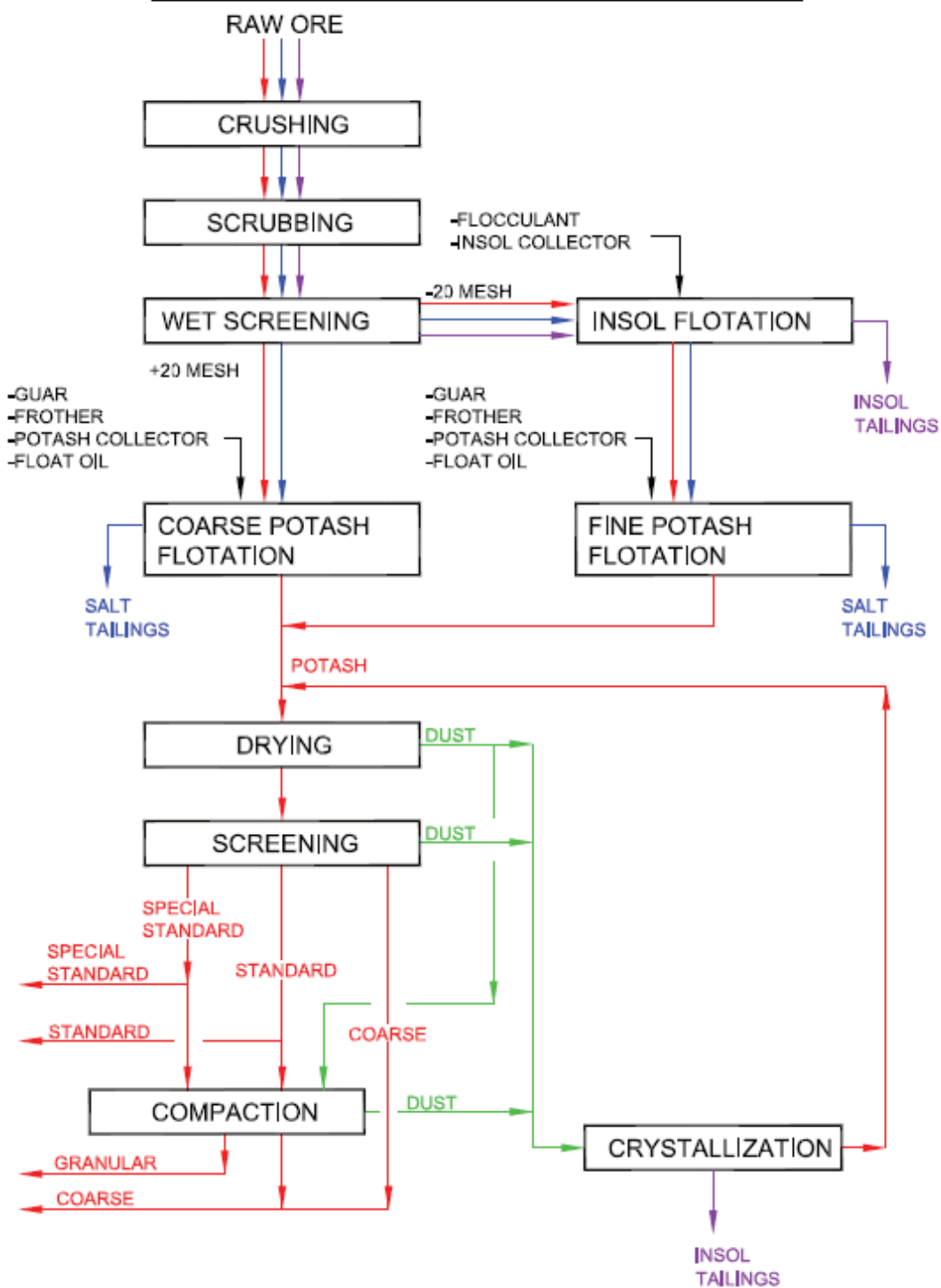


Figure 25-4: Concentrator Processing Steps

Markets

Agrium sells approximately half of its potash production domestically to more than 50 North American customers. To meet the company's agricultural customers' highly seasonal demand, Agrium has developed an extensive transportation, storage and warehousing system to optimize deliverability during peak demand periods. Agrium also has a significant number of railcars under long-term lease. The remainder of the company's potash is exported and sold internationally.

Contracts

Agrium's international potash sales are marketed through Canpotex, the offshore marketing agency for potash produced in the Province of Saskatchewan. Canpotex is wholly-owned by the three major potash producers in Canada. Agrium's share of Canpotex's total sales is approximately 9%. The remainder of Agrium's potash is sold in the domestic North American market on a best efforts basis.

Environmental Considerations

Operating Saskatchewan potash mines contribute to an irrevocable line of credit for short term decommissioning and rehabilitation costs. Contribution is prorated based on production levels and VPO has contributed \$1,000,000 CDN. The purpose of this fund is to cover short term costs should a company walk away from a site without proper decommissioning. The second part of the financial assurance is the long term funding. Representatives from each operating site in the Potash industry are presently negotiating this with the provincial government.

A decommissioning and reclamation report was submitted by Agrium to the provincial government in 2006. The qualifying acceptance letter from the government is shown in Illustration 26-13.

Taxes

Agrium pays federal and provincial income taxes based on profits from operations. Royalties are paid to the Province of Saskatchewan based on muriate tonnes produced, the raw ore grade and the weighted average net selling price of potash for the production month in question. In addition, Agrium pays a Potash Production Tax and a resource surcharge to the Government of Saskatchewan. The Potash Production Tax is calculated based on profit per K₂O tonne at a rate of 15% up to \$40 per tonne indexed to 1989 GDP (approximately \$60 per tonne for 2008) and 35% on the remainder of the profits. As part of the Potash Production Tax, Agrium may be subject to a base payment. The base payment amount is \$11.00 to \$12.33 per K₂O tonne. Allowable deductions include royalties and 1% of gross revenue for the year. In 2008, the base payment amount was zero. Property taxes are paid according to property values and were \$3.8 million in 2008. Currently, Saskatchewan provincial sales tax is 5%.

Capital and Operating Cost Estimates

VPO has been in production for 40 years and the original capital costs have been fully depreciated. The budget for sustaining capital and operating costs is determined on an annual basis. A summary of the margin performance and sustaining capital expenditures from the last five years and 2009 year to date at September 30, 2009 is shown in Table 25-2 below.

Table 25-2: Previous Five Year Financial Performance

PerTonne Amounts in U.S. Dollars	2009 YTD *	2008	2007	2006	2005	2004	2004 to 2008 Average
Sales tonnes (000s)	410	1,686	1,684	1,279	1,611	1,796	1,611
Sales (\$/tonne)	482	484	181	167	158	119	222
Cost of product (\$/tonne) **	205	98	82	90	61	60	78
Margin (\$/tonne)	277	386	99	77	97	59	144
Normalized Sustaining CAPEX (\$/tonne)	28	17	11	13	9	8	12
Before Tax Free Cash Flow	249	369	88	64	88	51	132

* Actuals at September 30/09.

** Cost of product is before depreciation.

Economic Analysis

Economic evaluation normally would utilize the current year profitability to develop an expectation for future economic viability. However, calendar year 2009 has been a highly unusual year with global demand severely impacted by the global credit crisis and associated economic uncertainty. As such, margin per tonne information is not representative in the current year. Therefore, rather than use 2009 figures to generate an economic forecast, a conservative approach has been taken to ascertain economic viability by using historical average profitability levels.

For this analysis, VPO has assumed that profitability can be represented by a proxy for before-tax free cash flow determined as gross margin before depreciation and after normalized sustaining capital. Over the five year period from 2004 to 2008 the average gross margin before depreciation for VPO was \$144/tonne (\$US). Subtracting from this amount, normalized sustaining capital of \$12/tonne (\$US), Agrium received an average before-tax free cash flow amount of \$132/tonne (\$US).

This analysis demonstrates that VPO has been very viable in a historic context. This viability can reasonably be expected to continue in the future as supported by the following circumstances:

- o Agrium's previous successful 40 year operating history;
- o Remaining combined Reserves and Measured and Indicated Mineral Resources are available to sustain operations for another 40 years. Additionally, Inferred Mineral Resources have the potential to add a further 34 years;
- o Increasing fertilizer demand from global markets due to a growing world population with decreasing land area available for crop production.

Payback

VPO has been in production for 40 years and all associated capital costs have been fully paid back.

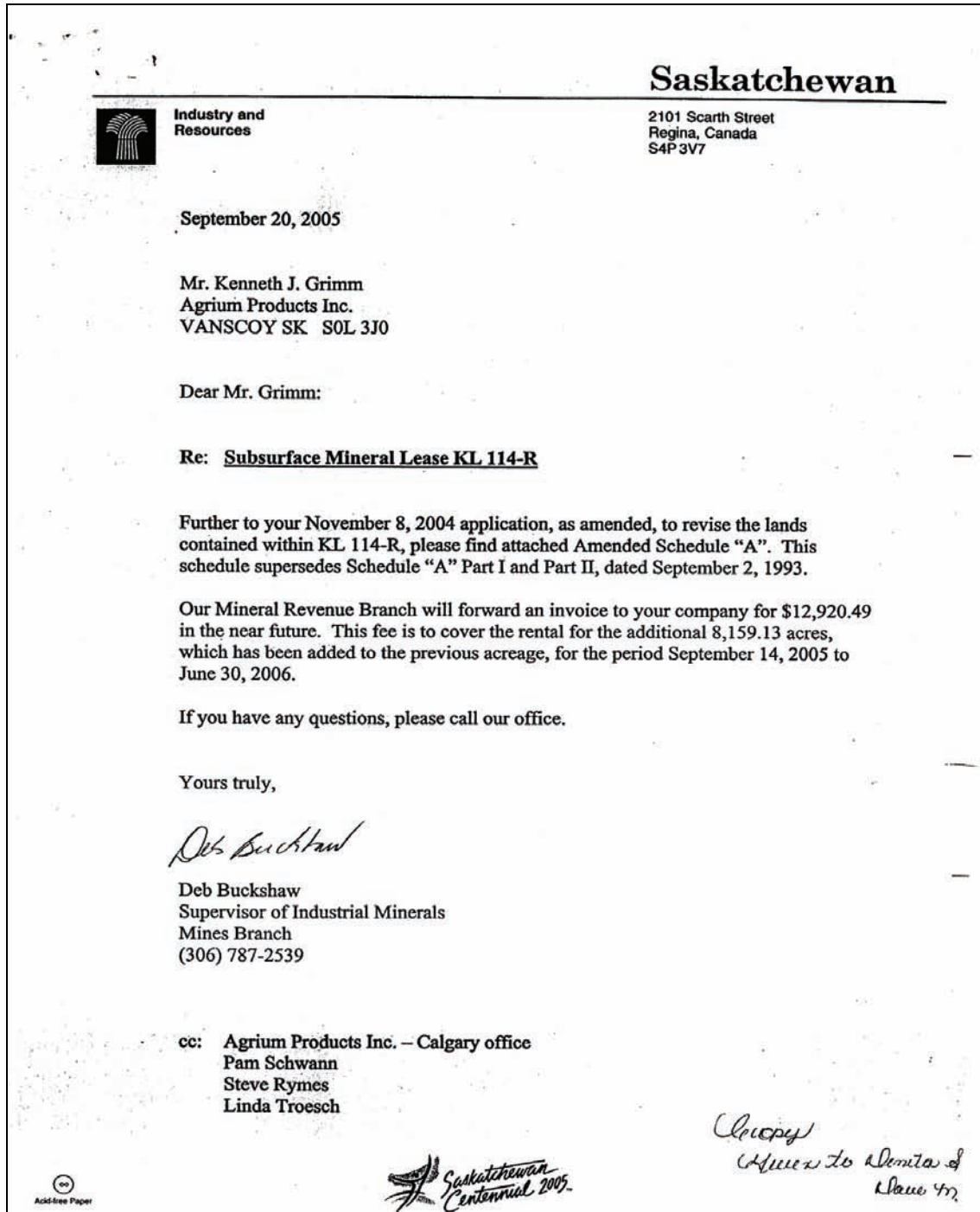
Mine Life

Current production capacity of 2.05 million tonnes of product requires 5.8 million tonnes of feed at a grade of 24.4% K₂O and a milling recovery of 85%. The estimate of 124.1 million tonnes of Proven and Probable Mineral Reserves and 113.0 million tonnes of Measured and Indicated Resources provides a mine life of just over 40 years at current production rates. Inferred Mineral Resources of 200 million tonnes have the potential to add a further 34 years at current rates. Detailed mine life calculations are shown in Illustration 26-11.

Agrium has been granted exploration permit KP 313 to the east and south of the KL 114-R mining lease. Preliminary 2D seismic indicates the continued presence of the Prairie Evaporite Formation, although depths to the south become prohibitive. Thus the permit provides some potential for expansion to the east when required.

26 ILLUSTRATIONS

Illustration 26-1: Subsurface Mineral Lease Agreement & Schedule of Lands



**AMENDED
SCHEDULE "A"**
Attached to Subsurface Mineral Lease KL 114-R
Between HER MAJESTY, THE QUEEN and AGRUM PRODUCTS INC.

Portion of Sectional Land	Sec	Twp	Rge	M	Crown Sectional Land (acres)	South (acres)	Crown Road Allowances West (acres)	Intersection (acres)
All	7	34	7	3	637.92	0.00	8.00	0.00
All (Freehold)	8	34	7	3	0.00	0.00	8.00	0.00
All	9	34	7	3	638.52	0.00	8.00	0.00
All	10	34	7	3	638.76	0.00	8.00	0.00
Southwest Quarter	11	34	7	3	159.77	0.00	4.00	0.00
North Half	11	34	7	3	319.58	0.00	4.00	0.00
All	14	34	7	3	638.96	7.99	8.00	0.10
All	15	34	7	3	638.12	7.98	8.00	0.10
All	16	34	7	3	638.40	7.98	8.00	0.10
South Half	17	34	7	3	319.12	7.98	4.00	0.10
Northwest Quarter	17	34	7	3	159.56	0.00	4.00	0.00
All	18	34	7	3	637.72	7.97	8.00	0.10
All	19	34	7	3	638.04	0.00	8.00	0.00
All	20	34	7	3	638.24	0.00	8.00	0.00
Southwest Quarter (Freehold)	21	34	7	3	0.00	0.00	4.00	0.00
Northwest Quarter	21	34	7	3	159.60	0.00	4.00	0.00
Northeast Quarter - All that portion covered by the waters of a certain lake as shown on a plan of survey dated January 26, 1885, containing 10 acres, more or less.	21	34	7	3	10.00	0.00	0.00	0.00
All	22	34	7	3	638.20	0.00	8.00	0.00
All	23	34	7	3	638.48	0.00	8.00	0.00
South Half (Freehold)	26	34	7	3	0.00	7.98	4.00	0.10
Northwest Quarter (Freehold)	26	34	7	3	0.00	0.00	4.00	0.00
Northeast Quarter	26	34	7	3	159.67	0.00	0.00	0.00
South Half	27	34	7	3	319.08	7.98	4.00	0.10
North Half (Freehold)	27	34	7	3	0.00	0.00	4.00	0.00
All	28	34	7	3	638.20	7.98	8.00	0.10
All	29	34	7	3	638.08	7.98	8.00	0.10
All	30	34	7	3	638.08	7.98	8.00	0.10
South Half	31	34	7	3	318.92	0.00	4.00	0.00
North Half (Freehold)	31	34	7	3	0.00	0.00	4.04	0.00
All	32	34	7	3	640.19	0.00	8.03	0.00
All (Freehold)	33	34	7	3	0.00	0.00	8.03	0.00
All	34	34	7	3	639.83	0.00	8.02	0.00
All (Freehold)	35	34	7	3	0.00	0.00	8.03	0.00
All	1	35	7	3	641.84	2.15	8.00	0.10
All	2	35	7	3	641.92	8.02	8.01	0.10
Southeast Quarter (Freehold)	3	35	7	3	0.00	4.01	0.00	0.00
Southwest Quarter	3	35	7	3	161.10	4.01	4.02	0.10
North Half (Freehold)	3	35	7	3	0.00	0.00	4.00	0.00
All	4	35	7	3	643.24	8.02	8.03	0.10
All (Freehold)	5	35	7	3	0.00	8.02	8.03	0.10
All	6	35	7	3	644.05	8.02	8.04	0.10
All (Freehold)	7	35	7	3	0.00	0.00	8.00	0.00
Southwest Quarter (Freehold)	8	35	7	3	0.00	0.00	4.00	0.00
Northwest Quarter - An undivided one-half interest, excepting 0.88 acres for the right of way and corner as shown on Plan E 4207.	8	35	7	3	79.69	0.00	4.00	0.00
All	9	35	7	3	641.12	0.00	8.00	0.00
All	10	35	7	3	641.12	0.00	8.00	0.00
All	11	35	7	3	641.12	0.00	8.00	0.00
All	12	35	7	3	641.16	0.00	8.00	0.00
All	13	35	7	3	641.12	8.01	8.00	0.10
All	14	35	7	3	640.96	8.01	8.00	0.10
All (Freehold)	15	35	7	3	0.00	8.01	8.00	0.10
All	16	35	7	3	640.76	8.01	8.00	0.10
All (Freehold)	17	35	7	3	0.00	8.01	8.00	0.10

Portion of Sectional Land	Sec	Twp	Rge	M	Crown Sectional Land (acres)	South (acres)	Crown Road Allowances West (acres)	Intersection (acres)
All	18	35	7	3	640.80	8.01	8.00	0.10
Southwest Quarter (Freehold)	19	35	7	3	0.00	0.00	4.00	0.00
All	10	34	8	3	638.36	0.00	0.00	0.00
All	11	34	8	3	638.36	0.00	8.00	0.00
All	12	34	8	3	638.36	0.00	8.00	0.00
All	13	34	8	3	638.12	7.98	8.00	0.10
All	14	34	8	3	638.12	7.98	8.00	0.10
All	15	34	8	3	638.12	7.98	0.00	0.00
All	20	34	8	3	637.88	0.00	0.00	0.00
All (Freehold)	21	34	8	3	0.00	0.00	8.00	0.00
All	22	34	8	3	637.88	0.00	8.00	0.00
All (Freehold)	23	34	8	3	0.00	0.00	8.00	0.00
All	24	34	8	3	637.88	0.00	8.00	0.00
All	25	34	8	3	637.64	7.97	8.00	0.10
South Half (Freehold)	26	34	8	3	0.00	7.97	4.00	0.10
Northwest Quarter (Freehold)	26	34	8	3	0.00	0.00	4.00	0.00
Northeast Quarter	26	34	8	3	159.40	0.00	0.00	0.00
South Half (Freehold)	27	34	8	3	0.00	7.97	4.00	0.10
Northwest Quarter	27	34	8	3	159.40	0.00	4.00	0.00
All	28	34	8	3	637.64	7.97	8.00	0.10
All	29	34	8	3	637.64	7.97	0.00	0.00
All	32	34	8	3	637.20	0.00	0.00	0.00
All (Freehold)	33	34	8	3	0.00	0.00	8.00	0.00
All	34	34	8	3	638.56	0.00	8.01	0.00
All	35	34	8	3	639.23	0.00	8.02	0.00
All	36	34	8	3	639.87	0.00	8.03	0.00
All	1	35	8	3	643.48	8.03	8.00	0.10
All	2	35	8	3	642.56	8.03	8.01	0.10
All	3	35	8	3	642.56	8.03	8.00	0.10
All	4	35	8	3	643.56	8.03	8.04	0.10
Southeast Quarter	5	35	8	3	162.06	4.01	0.00	0.00
Southwest Quarter (Freehold)	5	35	8	3	0.00	1.39	0.00	0.00
Northeast Quarter - All that portion commencing at the NE corner, thence westerly along the northern boundary 292 feet and 2 inches, thence southerly and parallel with the eastern boundary 292 feet and 2 inches, thence easterly and parallel with the northern boundary 292 feet and 2 inches to a point on the east boundary, thence northerly along the eastern boundary 292 feet and 2 inches to the point of commencement, said portion containing 2 acres, more or less.	5	35	8	3	2.00	0.00	0.00	0.00
All (Freehold)	8	35	8	3	0.00	0.00	8.00	0.00
All (Freehold)	9	35	8	3	0.00	0.00	8.00	0.00
All	10	35	8	3	642.08	0.00	8.00	0.00
All	11	35	8	3	642.08	0.00	8.00	0.00
All	12	35	8	3	642.08	0.00	8.00	0.00
All (Freehold)	13	35	8	3	0.00	8.03	8.00	0.10
All	14	35	8	3	641.60	8.03	8.00	0.10
All (Freehold)	15	35	8	3	0.00	8.03	8.00	0.10
All	16	35	8	3	641.96	8.03	8.00	0.10
All (Freehold)	17	35	8	3	0.00	8.03	8.00	0.10
East Half	18	35	8	3	320.90	4.01	0.00	0.00
All	20	35	8	3	641.72	0.00	0.00	0.00
West Half (Freehold)	21	35	8	3	0.00	0.00	8.00	0.00
East Half	21	35	8	3	320.86	0.00	0.00	0.00
All	22	35	8	3	641.12	0.00	8.00	0.00
All (Freehold)	23	35	8	3	0.00	0.00	8.00	0.00
All	24	35	8	3	642.92	0.00	8.00	0.00
All (Freehold)	25	35	8	3	0.00	8.04	8.00	0.10

Portion of Sectional Land	Sec	Twp	Rge	M	Crown Sectional Land (acres)	South (acres)	Crown Road Allowances West (acres)	Intersection (acres)
All (Freehold)	26	35	8	3	0.00	8.00	8.00	0.10
All (Freehold)	27	35	8	3	0.00	8.01	8.00	0.10
All	28	35	8	3	641.63	8.02	8.00	0.10
All	29	35	8	3	641.55	8.02	8.01	0.00
All	30	35	8	3	641.25	0.00	8.00	0.00
South Half	31	35	8	3	320.52	0.00	4.00	0.00
South Half	32	35	8	3	320.84	0.00	4.01	0.00
North Half	32	35	8	3	320.64	0.00	0.00	0.00
West Half - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated January 13, 1885, containing 10 acres, more or less.	33	35	8	3	10.00	0.00	8.02	0.00
All	34	35	8	3	641.16	0.00	8.00	0.00
All (Freehold)	35	35	8	3	0.00	0.00	8.00	0.00
All	36	35	8	3	641.76	0.00	8.00	0.00
All (Freehold)	1	36	8	3	0.00	8.02	8.00	0.10
All	2	36	8	3	641.04	8.02	8.00	0.10
All (Freehold)	3	36	8	3	0.00	8.02	8.00	0.10
All	4	36	8	3	641.95	8.02	8.01	0.10
All	5	36	8	3	640.73	8.00	0.00	0.00
Lsd 2; NE and SE quarters of Lsd 3; SE quarter of Lsd 6; and SE, SW and NW quarters of Lsd 7.	8	36	8	3	100.00	0.00	0.00	0.00
West Half - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated January 13, 1885.	9	36	8	3	255.00	0.00	8.01	0.00
All	10	36	8	3	640.92	0.00	8.00	0.00
All	11	36	8	3	640.56	0.00	8.00	0.00
All	12	36	8	3	640.56	0.00	8.00	0.00
South Half	13	36	8	3	320.14	8.00	4.00	0.10
North Half (Freehold)	13	36	8	3	0.00	0.00	4.00	0.00
All	14	36	8	3	640.36	8.00	8.00	0.10
All (Freehold)	15	36	8	3	0.00	8.01	8.00	0.10
All	16	36	8	3	641.14	8.01	8.01	0.10
South Half - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated January 13, 1885.	17	36	8	3	207.00	8.02	0.00	0.00
All	20	36	8	3	640.78	0.00	0.00	0.00
All	21	36	8	3	640.66	0.00	8.01	0.00
All	22	36	8	3	640.56	0.00	8.00	0.00
All (Freehold)	23	36	8	3	0.00	0.00	8.00	0.00
All	24	36	8	3	640.08	0.00	8.00	0.00
Southeast Quarter - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated January 13, 1885.	25	36	8	3	53.00	4.00	0.00	0.00
West Half (Freehold)	25	36	8	3	0.00	4.00	8.00	0.10
South Half (Freehold)	26	36	8	3	0.00	8.01	4.00	0.10
Northwest Quarter (Freehold)	26	36	8	3	0.00	0.00	4.00	0.00
Northeast Quarter	26	36	8	3	160.08	0.00	0.00	0.00
All (Freehold)	27	36	8	3	0.00	8.01	8.00	0.10
All	28	36	8	3	640.24	8.00	8.00	0.10
All	29	36	8	3	640.24	8.00	7.99	0.00
All	30	36	8	3	639.42	0.00	0.00	0.00
North Half - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated January 13, 1885.	31	36	8	3	65.00	0.00	0.00	0.00
All	32	36	8	3	640.08	0.00	7.99	0.00
All (Freehold)	33	36	8	3	0.00	0.00	8.00	0.00
All	34	36	8	3	640.12	0.00	8.00	0.00
West Half (Freehold)	35	36	8	3	0.00	0.00	8.00	0.00

Portion of Sectional Land	Sec	Twp	Rge	M	Crown Sectional Land (acres)	South (acres)	Crown Road Allowances West (acres)	Intersection (acres)
Northeast Quarter - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated January 13, 1885.	35	36	8	3	12.00	0.00	0.00	0.00
All	36	36	8	3	640.00	0.00	8.00	0.00
All	1	37	8	3	639.84	8.00	8.00	0.10
All	2	37	8	3	639.88	8.00	8.00	0.10
South Half (Freehold)	3	37	8	3	0.00	8.00	4.00	0.10
Northwest Quarter - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated September 9, 1885.	3	37	8	3	6.00	0.00	4.00	0.00
All	4	37	8	3	639.88	8.00	8.00	0.10
All (Freehold)	5	37	8	3	0.00	8.00	8.00	0.10
All	6	37	8	3	639.88	8.00	0.00	0.00
All (Freehold)	8	37	8	3	0.00	0.00	8.00	0.00
South Half - All that portion covered by the waters of a certain surveyed lake as shown on a plan of survey dated September 9, 1885.	9	37	8	3	55.00	0.00	4.00	0.00
North Half (Freehold)	9	37	8	3	0.00	0.00	4.00	0.00
All	10	37	8	3	639.64	0.00	8.00	0.00
All	11	37	8	3	639.64	0.00	8.00	0.00
All	12	37	8	3	639.52	0.00	8.00	0.00
South Half	36	35	9	3	320.33	0.00	4.00	0.00
Total Lease Area					60,864.86	523.81	1,000.45	5.80

Aggregating 62,394.92 acres, more or less, all in the Province of Saskatchewan.

Amended September 14, 2005.

- This schedule supercedes Schedule "A" Part I and Part II, dated September 2, 1993, attached to Subsurface Mineral Lease KL 114-R as amended.


Pamela L. Schwann
Director, Mines Branch

Illustration 26-2: Operating Permits



Ministry of
Environment

Environmental Protection Branch

Saskatchewan

102 -112 Research Drive
Saskatoon SK S7K 2G6
306-933-7940 Phone
306-933-8442 Facsimile

File: S25005-50/V/06

January 28, 2009

Tom Diment, General Manager
Agrium – Vanscoy Operation
VANSKOY SK S0L 3J0

Dear Tom:

The Saskatchewan Ministry of Environment has reviewed the Decommissioning and Reclamation report submitted by Agrium in 2006. Significant activity has occurred in the potash mining sector over the past few years and is especially noted in the significant number of expansion proposals for existing operations as well as a number of Greenfield proposals in the works in Saskatchewan. Upon review of your latest D & R submission and in the interest of avoiding further delay in responding, we will accept your proposal with the following provisions.

- Dissolving and injecting salt tails is currently viewed as an acceptable disposal option for brine and salt tailings. In the next D & R submission, which is due in 2011, the ministry expects industry to make significant efforts to evaluate and present alternative decommissioning options. The decommissioning options proposed should be ones that can be completed within a significantly compressed time frame as well as minimizing water use for disposal. These are consistent with the direction given to new Greenfield proposals.
- The groundwater models were reviewed separately and the comments and questions have been or will be relayed to you. These concerns shall be addressed through an addendum to the modeling submission or in the 2011 report as appropriate.
- If there are any site specific issues pertaining to your facilities decommissioning and reclamation plan they will be communicated with you by the project officer for your site
- It is expected that the 2011 submission will have significantly different values for life of existing tailings management areas as well as total decommissioning costs due to the increased production and proposed expansions at many of the existing operating mine sites.

Please do not hesitate to contact me or your project officer should you have any questions.

Yours Sincerely,

Wes Kotyk, P.Eng.
Manager, Industrial, Potash, Coal and Spills Unit
Environmental Protection Branch

cc ✓ Paul O'Hara – Agrium Vanscoy
Sarah Keith/Ralph Bock – Ministry of Environment



Saskatchewan
Environment

**APPROVAL TO OPERATE POLLUTANT
CONTROL FACILITIES**

Issued pursuant to *The Environmental
Management and Protection Act, 2002, and
The Clean Air Act.*

**APPROVAL NO.: PO07-073
FILE NO: S25005-50/V/03/O**

**Agrium Vanscoy Potash Operations, of Vanscoy, Saskatchewan, hereinafter called
the "Company"**

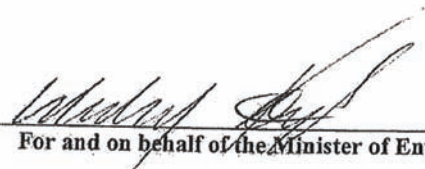
**is hereby authorized to operate the mining site, referred to as the Vanscoy Mine,
located in LSD 11 sections 16, Township 35, Range 8, West of the Third meridian.**

This authorization includes facilities for the collection, containment, transport, treatment
and disposal of: tailings; brine; industrial effluent; sewage works; mine water; storm
water; and site drainage water. The operation of air pollution abatement equipment,
industrial and domestic refuse disposal grounds, domestic water treatment and
distribution and the storage of hazardous substances and waste dangerous goods is also
authorized.

**This Approval expires March 31, 2012 unless sooner terminated and is subject to
the conditions contained herein or attached hereto. In order to renew this
Approval, an application for renewal as described in Section 9 of The Mineral
Industry Environmental Protection Regulations, 1996 and Section 6(1) of The Clean
Air Regulations must be submitted at least 60 days prior to the expiry date.**

Dated at Saskatoon, Saskatchewan this 31 day of May 2007.


Recommended


For and on behalf of the Minister of Environment

MINISTER'S ORDER

MRO 722/07

Under The Oil and Gas Conservation Act

Vanscoy Area – Salt Water Disposal

Pursuant to section 17.1 of *The Oil and Gas Conservation Act*, approval is granted to Agrium Vanscoy Potash Operations to dispose of waste brine recovered from potash operations by injection into the Deadwood Formation through the directional well with surface coordinates in legal subdivision 3 of Section 21-35-8 W3M and bottom hole coordinates in legal subdivision 15 of Section 16-35-8 W3M, in accordance with plans filed with the department as Document No. S.W.D. 1129, and subject to the following:

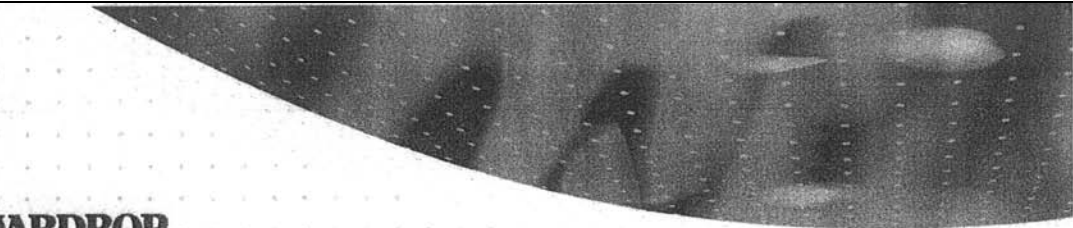
1. Installations shall be subject to the approval of a department field representative prior to the commencement of waste brine injection and subsequent to any modifications to such installations.
2. The wellhead injection pressure shall be limited to a maximum of 13,500 kilopascals.
3. All injection volumes shall be metered with an approved department method.
4. The injection packer shall be set within 5 m of the open-hole portion of the well.
5. The tubing and production casing annulus shall be filled with a satisfactory corrosion inhibiting fluid.
6. For the purpose of evaluating hydraulic isolation, injection/disposal operations shall not commence until a cement bond log has been run and three copies submitted to the Sedimentary Geodata Section of Saskatchewan Industry and Resources. The logs must be accompanied by a detailed interpretation of the cement top and the condition of cement behind casing, including channeling. Insufficient hydraulic isolation will require remedial work to be performed to the satisfaction of the department.
7. A lease of space agreement for the Deadwood Formation shall be executed with the Crown prior to the commencement of waste brine injection.
8. Annual pressure fall-off tests shall be conducted in a manner satisfactory to the department.

This approval does not authorize the applicant to dispose of waste brine without the consent of all mineral owners, other than the Crown, that might reasonably be adversely affected by such disposal.

Dated at Regina, Saskatchewan, September 13, 2007.



Trevor Dark, Assistant Deputy Minister
Petroleum and Natural Gas
Saskatchewan Industry and Resources



WARDROP

Document Control Number - 0535840104-CER-R0002-00

MINE HOIST OPERATING CERTIFICATE

**Agrium Inc.
Vanscoy Mine, No. 1 Shaft
Balanced Skipping Service**

Hoist Description **Westinghouse Direct Driven Koepe Hoist,
Stock order: 1S 1375
2 x 3000 HP Motors
Four Westinghouse Disk Brake Calipers on Two
Disks**

Total Suspended Load **340,000 pounds**

Maximum Unbalanced Load **68,200 pounds**

Required Brake Test Effort, **7,800 amps**
Total of three weakest brake calipers

Allowable Personnel Load, removable deck **12 persons**

Subject to non-destructive testing of Koepe wheel within three months of inception of hoisting at this loading condition. Assuming these test show no cracking, non-destructive testing thereafter at intervals not greater than 12 months. In the event of a rope-breaking incident the hoist wheel shall be checked for damage or deformation.

Bearing lubricant to be monitored regularly for abnormal increase in metal content.

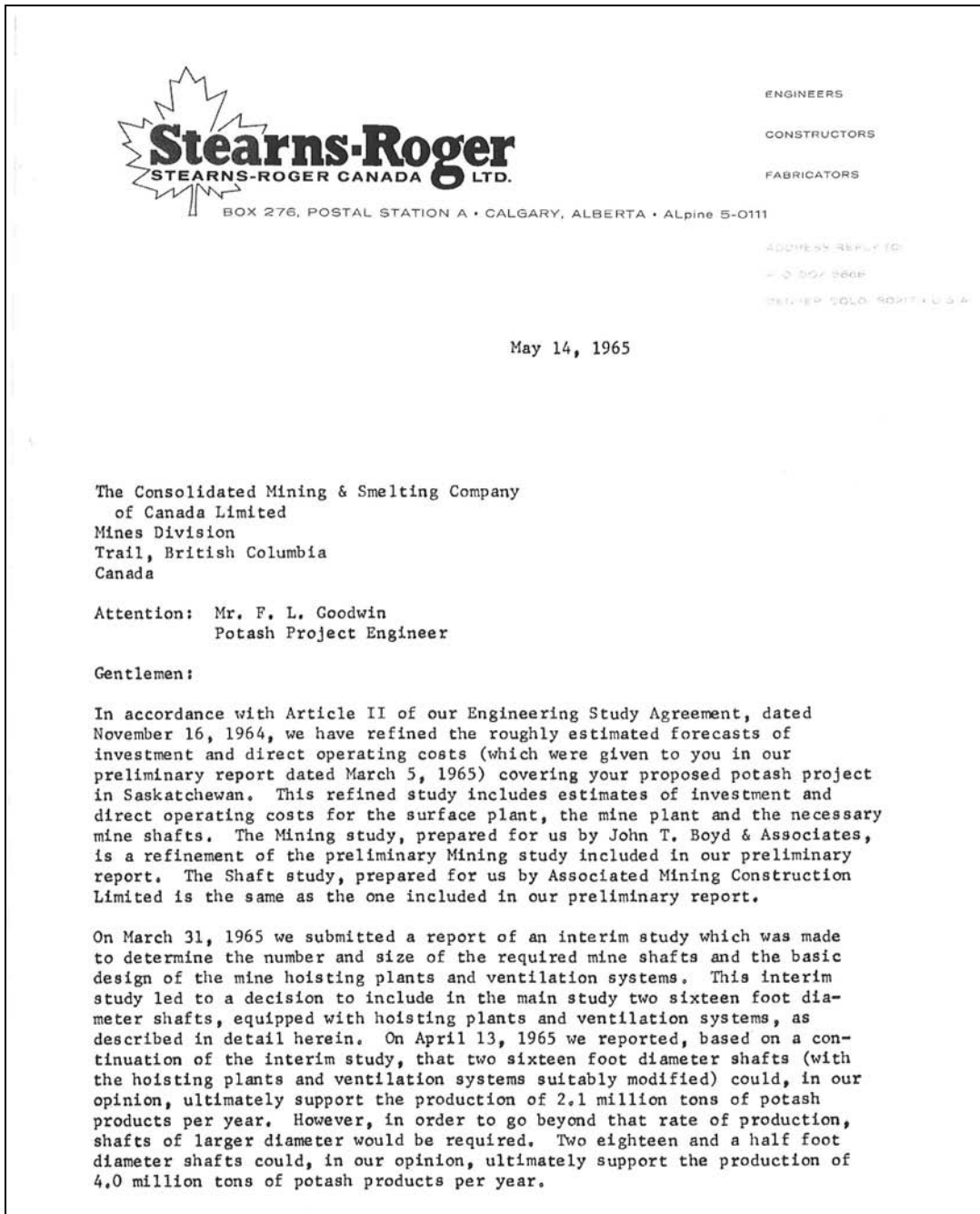
Temperatures of motors and electrical drive components to be monitored continuously with alarms and interlocks to hoist control.

Prepared by:
Wardrop Engineering Inc.



J.R. Morris, P.Eng.
2006/10/24

Illustration 26-3: Cover Letter from the Stearns-Roger Engineering Study (1965)





The Consolidated Mining & Smelting Company
of Canada Limited
May 14, 1965

Since the Mining study and the Plant study had to be made concurrently, it was necessary to make certain assumptions regarding the grade and characteristics of the ore in order to design a flow sheet, calculate material balances and size equipment, before the actual grade and characteristics of the ore to be mined could be determined by the Mining study. Based on two composite samples, each made up of quarter splits of each of ten 3-1/2 inch diameter drill cores (one quarter split representing a 7.5 foot thick ore zone and the other representing an overlapping 9.0 foot thick ore zone) available for metallurgical test work at the Colorado School of Mines Research Foundation, it was determined that the ore to be mined would contain either 31.2% K₂O and 2.8% H₂O Insol or 27.9% K₂O and 3.8% H₂O Insol. For the purposes of flowsheet design and equipment specifications, an average of the above ore analyses was used namely 29.5% K₂O and 3.3% H₂O Insol. On April 22, 1965 it was apparent from the Mining study that, based on the average of nineteen drill cores, the ore to be mined would contain either 32.20% K₂O and 4.10% H₂O Insol, if mined from a 7.50 foot thick zone, or 28.55% K₂O and 6.10% H₂O Insol, if mined from a 10.20 foot thick zone.

The Mining study, by John T. Boyd and Associates, indicates a preference for the use of a conventional mining method in a 10.20 foot thick ore zone, over the use of a continuous mining method in a 7.50 foot thick ore zone. While the processing plant as presently designed could easily handle feed ranging from 28.55% K₂O to 32.2% K₂O it could not handle, on a sustained basis, feed containing in excess of 3.8% H₂O Insol. In order to handle feed containing 6.1% or even 4.1% H₂O Insol, it would be necessary to increase the size of the scrubbers, the secondary SiphonSizer, the hot thickener, the slime thickener and the slime centrifuge units. However, the additional cost of this equipment would tend to be offset by savings in other areas of the plant which would be made possible on account of the higher grade of the ore feed.

Before the plant design is finalized, it will be necessary to run new material balances, and to adjust equipment sizes accordingly, based on the desired production rate and the actual grade and characteristics of the ore to be mined.

All estimated costs herein are expressed in Canadian dollars and they can be converted to U. S. dollars by applying a factor of 0.925.

The scope of the work covered by our investment cost estimates includes all required improvements within the plantsite area but does not include land, permits, rights-of-way, production royalties, drilling and exploration costs. Neither does it include the necessary railroad spur connecting the main line

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of Canada Limited
May 14, 1965

to the included yard trackage, nor the roadway connecting the main highway to the included parking areas and the roadways within the plantsite area. Housing which might be required for either temporary or permanent employees is not included. However, the cost of travel time and subsistence allowance where required has been included in our estimate of construction labor.

The cost of pumping water from the river to the plantsite to supply the water requirements of the plant is included. The costs of the power transmission lines and the natural gas pipeline required to serve the plant are included within the rates charged for those utilities by the Saskatchewan Power Corp.

Our estimated investment cost estimates, include allowances for the Saskatchewan Education and Health Tax, the Canadian Federal Sales Tax, and applicable import duties. We have made certain assumptions in calculating the taxes and duties. These assumptions are based on our past experience in Saskatchewan and on our best present knowledge, and are as follows:

1. All equipment and materials used in the project - mine, shaft, and surface plant - are subject to the Saskatchewan Education and Health Tax of 4%.
2. All equipment and materials used in the mine, shaft, hoisting facilities, and mine ventilation and heating facilities, are subject to the Federal Sales Tax of 11%.
3. All surface plant buildings are subject to the Federal Sales Tax.
4. All surface plant facilities not used directly for the production of potash are subject to the Federal Sales Tax. Included in this category are product loadout facilities, standby power generation, shop equipment, mobile equipment, lighting, space heating, office and laboratory equipment, etc.
5. Surface plant equipment and materials used directly and exclusively for the production of potash are exempt from the Federal Sales Tax. (The ore and service hoists and mine ventilation and heating equipment are not included in this category but in Item 2, above.)
6. All equipment and materials used in the mining and manufacture of potash are exempt from import duties.



The Consolidated Mining & Smelting Company
of Canada Limited
May 14, 1965

7. Ancillary equipment and materials not included in Item 6, above, are subject to import duties ranging to 22-1/2%. (In general, for items of this kind such as the fire pump, mobile equipment, etc., we have used Canadian prices rather than U. S. prices plus duty.)

Our direct operating cost estimates include supervision and clerical, product control, plant operating and maintenance labor, operating supplies, maintenance supplies, and utilities. They exclude all indirect costs, administrative and sales expense, income taxes, depreciation, interest, possible process royalties, and similar charges. A discussion of indirect operating cost and an example showing how they were estimated on a similar project was given in our letter of April 29, 1965 addressed to Mr. Robinson M. Porter.

We believe that our estimates of investment and direct operating costs for each of the two plants will prove to have an overall degree of accuracy of plus or minus ten percent for the investment costs and plus or minus fifteen percent for the operating costs. The estimates are based on current wage rates and material prices and include no allowance for escalation. We suggest that in your long range financial planning, a special contingency allowance be established by you to provide for possible changes in the national economy during the course of the project.

As stated in our letter of February 19, 1965, it is doubtful if an optimum potash process flowsheet could be designed to avoid all claims under existing potash process patents and patent applications. The treatment of potash ores has been, and continues to be, covered by an increasing number of unexpired patents and patent applications, both Canadian and U. S. None of these patents are owned or controlled by Stearns-Roger. Our function in preparing this engineering study for you has been to select, from all of the techniques which are known to us, those which we consider likely to be most suitable for use in the exploitation of your potash ore deposit. In doing so, we have made no deliberate attempt up to this point, either to use or avoid the use of techniques covered or alleged to be covered by Canadian or U. S. patents. At the present time we are in the process of studying the proposed flowsheet for known or suspected patent infringements. The results of this study will be transmitted to you in the near future.

We hope that we will have the continuing opportunity of working with you in the broad areas of overall time scheduling and economic evaluation (both for the mining and the processing plant) as well as the more specific areas of



NO. OF SHEET -5-

The Consolidated Mining & Smelting Company
of Canada Limited
May 14, 1965

process development, equipment selection, and the preparation of the final
mining and processing plant designs, as these services are required in the
orderly development of the overall project.

Very truly yours,

STEARNS-ROGER CANADA LIMITED

N. C. Croome
N. C. Croome, P. Eng. *NC*

STEARNS-ROGER CORPORATION

Philip R. Asel
Philip R. Asel
Project Executive

J. A. Lorenz
J. A. Lorenz
Project Manager

PRA
JAL/mc

Illustration 26-4: SGS Certificate of Accreditation



Standards Council of Canada
Conseil canadien des normes

200-270, rue Albert St.
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K1P 6N7

Canada

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Fax: +1 613 569 7808

E-mail/Courriel: info@scc.ca

Internet: http://www.scc.ca

SCOPE OF ACCREDITATION

SGS

SGS LAKEFIELD RESEARCH LIMITED – MINERALS SERVICES

P.O. Box 4300, 185 Concession Street

Lakefield, ON

K0L 2H0

Accredited Laboratory No. 184

(Conforms with requirements of CAN-P-1579, CAN-P-4E (ISO/IEC 17025:2005))

CONTACT: Ms. Valerie Murphy
TEL: (705) 652-2044
FAX: (705) 652-2162
EMAIL: val.murphy@sgs.com

CLIENTS SERVED: All interested parties

FIELDS OF TESTING: Chemical/Physical

PROGRAM SPECIALTY AREA: Mineral Analysis

ISSUED ON: 2009-03-26

VALID TO: 2013-03-06

METALLIC ORES AND PRODUCTS

Concentrates, Metallic Liquors and Other Process Products:

Metallic Ores:

Metal Powders
Precious Metals
Rocks and Ores
Sediments

The approved and most recent version of this document can be viewed on the SCC website at <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>

Page 1 of 5

Mineral Analysis Testing:

Assay, Umpire assay work
Contract Settlement Assaying
Geotechnical Testing
Mineral Assaying

8.0.1; based on SGS-Lakefield Research	Extraction and Recovery of Diamonds by Caustic Dissolution
8.3.1; based on SGS-Lakefield Research	Preparation of mineral concentrated by size classification, gravity and magnetic separation, and chemical leaching
8.3.2; based on SGS-Lakefield Research	Extraction and Recovery of Diamond Indicator Minerals
8.5.1; based on Hutchison, 1974, Craig & Vaughan 1981, Ramhdor, 1986	Determination of Precious Metal Department in crushed ores, composites and metallurgical products using Mineralogical Techniques
8.8.1; based on Hutchison, 1974	Qualitative Mineral Identification By X-ray Diffraction Using Pulverized Grain Mounts
8.9.1; based on SGS-Lakefield Research	Selection and Identification of Diamonds
8.9.2; based on Hutchison, 1974	Selection and Identification of Diamond Indicator Minerals
9.11.1; based on ISO 9389	Preparation and Determination of Cobalt by Acid digestion; Titration and Atomic Absorption Spectrometry [Co, AAS]
9.11.12; based on Young 1971, ISO 12169; Hillebrand 1953	Preparation and Determination of Nickel by Electrogravimetry and Atomic Absorption Spectrometry [Ni, AAS]
9.11.15	Preparation and Determination of Silver in Concentrates and Ores by Acid Digest and Atomic Absorption Spectroscopy [Ag, AAS, HNO ₃ , HCL, HCLO ₄ , HF]
9.11.17; based on Young 1971; Hillebrand 1953	Preparation and Determination of Arsenic, Antimony, Selenium, Cadmium, Lead and Zinc in Ores and Concentrates by Microwave Digest and Inductively Coupled Plasma – Optical Emission Spectroscopy [As, Sb, Se, Cd, Pb, Zn ICP-OES]
9.11.3; based on Hillebrand 1962; Young 1971	Preparation and Determination of Zinc by Acid digestion; Titration and Atomic Absorption Spectrometry [Zn, AAS]
9.11.4; based on ISO 13545	Preparation and Determination of Lead by Precipitation, Titration, Fusion and Atomic Absorption Spectrometry [Pb, AAS]
9.11.40; based on Hatch, 1972; SGS-Lakefield and Varian	Preparation and Determination of Mercury in Ores, Concentrates, Metallurgical and exploration samples by Strong Acid digest and Cold Vapour-Atomic Absorption Spectrometry [Hg, CV-AAS]
9.11.6; based on Young 1971; Scott 1939	Preparation and Determination of Total Copper by Short Iodide Titration and Atomic Absorption Spectrometry [Cu, AAS]

9.11.62; based on Applied Inorganic Analysis and SGS-Lakefield Research	Preparation and Determination of Arsenic and Antimony in Ores and Concentrates by Strong Acid Digest and Inductively Coupled Plasma – Optical Emission Spectroscopy [As, Sb, ICP-OES]
9.11.69	Preparation and Determination of Antimony, Arsenic, Bismuth, Iron, Lead, Nickel, Selenium, Silver, Tellurium and Tin in Electrolytic copper cathode by Acid digestion followed by Graphite Furnace Atomic Absorption Spectroscopy [Sb, As, Bi, Fe, Pb, Ni, Se, Ag, Te, Sn; GFAAS]
9.11.7; based on ISO 10469	Preparation and Determination of Total Copper by Electrogravimetry and Atomic Absorption Spectrometry [Cu; AAS]
9.11.70	Preparation and Determination of Total Molybdenum in Molybdenite and Ferromolybdenum by Separation, Precipitation and Gravimetric Finish [Mo]
9.11.8; based on Young 1971; Scott 1939	The Preparation and Determination of Iron in Ores, Concentrates and Metallurgical Products by Fusion, Separation and Titration [Fe, AAS]
9.25.11	Preparation and Determination of Uranium in Highly Mineralized Samples by Strong Acid Digest and ICP-MS (ores, concentrates and metallurgical test products) [U, ICP-MS]
9.3.1; based on Beamish & van Loon, 1977, Smith 1947	Preparation and Determination of Gold, Platinum and Palladium by Lead Fusion and Atomic Absorption Spectrometry [Au, Pt, Pd; AAS]
9.3.10	Preparation and Determination of Platinum, Palladium, Rhodium, Ruthenium and Iridium by Nickel Sulfide Fusion and Inductively Coupled Plasma – Mass Spectroscopy [Pt, Pd, Rh, Ru, Ir; ICP-MS]
9.3.13; based on Beamish and van Loon, 1977; Varian AAS	Preparation and Determination of Platinum, Palladium and Rhodium in Automotive and Petroleum Catalysts by Sodium Peroxide Fusion, Tellurium collection and Atomic Absorption Spectrometry [Pt, Pd, Rh; Na ₂ O ₂ ; AAS]
9.3.14; based on Beamish and van Loon, 1977; Varian Vista	Preparation and Determination of Platinum, Palladium and Rhodium in Automotive and Petroleum Catalysts by Sodium Peroxide Fusion, Tellurium collection and Inductively Coupled Plasma – Optical Emission Spectroscopy [Pt, Pd, Rh; Na ₂ O ₂ ; ICP-OES]
9.3.3; based on Beamish & van Loon, 1977, Smith, 1947	Preparation and Determination of Gold and Silver by Lead fusion, Gravimetric and Atomic Absorption Spectrometry [Au, Ag; AAS]
9.3.4; based on Beamish & van Loon, 1977; Bugbee 1938; Varian and SGS-Lakefield	Preparation and Determination of Gold, Platinum and Palladium by Lead Fusion and Inductively Coupled Plasma – Optical Emission Spectroscopy [Au, Pt, Pd; ICP-OES]
9.3.5; based on Beamish & van Loon, 1977; Varian AAS	Preparation and Determination of Gold in Party-Umpire Samples by Lead Fusion and Atomic Absorption Spectrometry [Au; AAS]

9.4.40; based on Bock, 1971; Varian Vista Multi-Element	Preparation and Determination of Thirty (30) Elements in Highly Mineralized Samples by Strong Acid Digest and ICP-OES (ores, concentrates and metallurgical test products) [silver, Ag; aluminum, Al; arsenic, As; barium, Ba; beryllium, Be; bismuth, Bi; cadmium, Cd; calcium, Ca; chromium, Cr; cobalt, Co; copper, Cu; iron, Fe; potassium, K; lithium, Li; magnesium, Mg; manganese, Mn; molybdenum, Mo; sodium, Na; nickel, Ni; phosphorous, P; lead, Pb; antimony, Sb; selenium, Se; tin, Sn; strontium, Sr; thallium, Tl; titanium, Ti; vanadium, V; yttrium, Y; zinc, Zn; ICP-OES]
9.6.1; based on Claisse 1995; Rouseau 1990	Determination of Major Element Oxides, LOI and Rare Earth Oxides by Borate Fusion and Xray Fluorescence Spectrometry [SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃ , MgO, CaO, Na ₂ O, K ₂ O, P ₂ O ₅ , MnO, TiO ₂ , Cr ₂ O ₃ , La ₂ O ₃ , Ce ₂ O ₃ , Nd ₂ O ₃ , Pr ₂ O ₃ , Sm ₂ O ₃ , BaO, SrO, ZrO ₂ , HfO ₂ , Y ₂ O ₃ , Nb ₂ O ₅ , ThO ₂ , Ta ₂ O ₅ , SnO, WO ₃ , U ₃ O ₈ , V ₂ O ₅ ; Co; Ni; LOI; XRF]
9.6.2; based on Bertin 1970; in-house	Determination of Arsenic, Tin, Antimony, Tantalum, Thorium and Uranium by Xray Fluorescence Spectrometry using Internal Standard Addition [As, Sn, Ta, Th, U; XRF]
9.6.6; based on Bertin, 1970; Willis 1995; Rouseau 1990	Determination of Base Metals (Copper, Nickel, Cobalt, Iron, Lead, Zinc, Chromium, Manganese and Molybdenum) in Sulphide Ores by Potassium Pyrosulfate Fusion and Xray Fluorescence Spectrometry [Cu, Ni, Co, Fe, Pb, Zn, Cr, Mn, Mo; XRF]
9.8.51; In-house; Varian	Preparation and Determination of Refractory Metals (Aluminum, Beryllium, Calcium, Cadmium, Copper, Chromium, Iron, Magnesium, Manganese, Silicon, Tin, Titanium, Vanadium, Tungsten) in Geological Samples, Mill Products and Ores by Sodium Peroxide Fusion and Atomic Absorption Spectrometry [Al, Be, Ca, Cd, Cu, Cr, Fe, Mg, Mn, Si, Sn, Ti, V, W; AAS]
9.8.53	Preparation and Determination of Mercury in Ores, Geological Samples, Metallurgical samples by CETAC Cold Vapor Atomic Absorption Spectroscopy [Hg, CETAC CVAAS]
9.8.56; based on SGS-Lakefield; Varian AAS	Preparation and Determination of Low Level Metals (silver, bismuth, cadmium, cobalt, copper, indium, nickel, lead, zinc) in Metallurgical and Geological Samples by Triple Acid Digestion and Atomic Absorption Spectrometry [Ag, Bi, Cd, Co, Cu, In, Ni, Pb, Zn; AAS]
9.8.71; In-house; Varian AAS	Preparation and Determination of Cadmium, Cobalt, Copper, Iron, Nickel and Zinc in Acidic Metallurgical Process Solutions by Atomic Absorption Spectrometry [Cd, Co, Cu, Fe, Ni, Zn; AAS]
9.9.1; based on ASTM E1915-01	The Preparation and Determination of Sulfur and Carbon in Ores, Concentrates, Exploration, Metallurgical and Metal Samples by Combustion – Infrared Detection [S,

C; IR]

Notes:

The physical sample preparation involving accredited test methods as listed on the scope of accreditation may be performed at SGS Minerals Services – Lakefield laboratory or at off site sample preparation locations that are monitored regularly for quality control and quality assurance practices.

CAN-P-4E (ISO/IEC 17025:2005): General Requirements for the Competence of Testing and Calibration Laboratories (ISO/IEC 17025: 2005)

CAN-P-1579 Guidelines for the Accreditation of Mineral Analysis Testing Laboratories

P. Paladino, P. Eng., Director, Conformity Assessment

Date: 2009-03-26

Number of Scope Listings: 37

SCC 1003-15/254

Partner File #0

Partner: SCC

Illustration 26-5: Agrium Laboratory Quality Assurance Manual

Note the Manual is 60 pages therefore the title page and table of contents is presented here.



Laboratory Quality Assurance Manual

Original July 1990
Last Revision July 2003

Revised by: J.P. (John) DeCorby – Supervisor, Analytical Laboratory

Reviewed by: R.M. (Ross) Mireau – Quality Assurance Superintendent
D.A. (Alex) Cormode – Process Consultant

Table of Contents

	<u>Page</u>
Preface	3
Section 1 Introduction	
1.1 General Information	4
1.2 Fields of Testing	4
1.3 Resource Information	5
1.3.1 Organizational Chart	5
1.3.2 Resume	5
1.3.3 Laboratory Instruments and Equipment	6
1.3.4 Laboratory Floor Plan	6
Section 2 Sample Handling	
2.1 Scope	8
2.2 Sample Collection	8
2.2.1 Loadout Sampling Procedure	8
2.3 Sample Receiving and Identification	10
2.3.1 Shipment Samples	10
2.3.2 Production Samples	10
2.3.3 Exchange Samples	10
2.4 Sample Dividing	11
2.4.1 Shipment Samples	11
2.4.2 Production Samples	11
2.5 Sample Grinding	12
2.5.1 Shipment Samples	12
2.5.2 Production Samples	12
2.6 Sample Pelletizing	12
2.7 Sample Storage and Disposal	12
Section 3 Methodology	
3.1 X-Ray Fluorescence	13

.....cont'd over

Table of Contents.....cont'd

	<u>Page</u>
3.2 Wet Chemistry	
3.2.1 Potassium	14
3.2.2 Sodium	19
3.2.3 Water Insolubles	22
3.2.4 Chloride	26
3.2.5 Sulfate	30
3.2.6 Calcium and Magnesium	35
3.2.7 Chloroform Extractables	41
3.2.8 Aliphatic Amine	45
3.2.9 Moisture	49
3.3 Physical Testing	
3.3.1 Screen Analysis	51
3.3.2 Degradation	56
3.3.3 Dust	60

Preface

This Quality Assurance Manual has been prepared to ensure that Agrium's customers receive consistent, high quality potash fertilizer products at a reasonable cost. Our purpose is to provide documentation to show that the planned and systematic actions carried out will provide the customer with adequate confidence in the services performed.

A Quality Assurance Manual will:

1. Provide documentation to show that quality control procedures are established and implemented.
2. Assure that the accountability of the analytical data is maintained.
3. Facilitate the traceability of the analytical data to the analyst, method, and status of the analytical system at the time of analysis.
4. Ensure that reasonable precautions will be taken to protect the data from loss, theft, or tampering

In essence, you may practice quality control, but without documentation, you have no quality assurance.

Illustration 26-6: SRC Certificate of Accreditation

CERTIFICATE OF ACCREDITATION Standards Council of Canada Conseil canadien des normes	CERTIFICAT D'ACCREDITATION
ACCREDITED TESTING LABORATORY having been assessed by the Standards Council of Canada (SCC) and found to conform with the requirements of ISO/IEC 17025:2005 (CAN-P-4E) and the conditions for accreditation established by SCC is hereby recognized as an	LABORATOIRE D'ESSAIS ACCRÉDITÉ ayant fait l'objet d'une évaluation réalisée par le Conseil canadien des normes (CCN) et été jugé conforme aux exigences énoncées dans ISO/CEI 17025:2005 (CAN-P-4E) et aux conditions liées à l'accréditation établies par le CCN, est, en vertu du présent certificat, reconnu comme étant un
Saskatchewan Research Council GEOANALYTICAL LABORATORIES 125 - 15 Innovation Blvd., Saskatoon, Saskatchewan	pour les essais ou types d'essais énumérés dans la portée d'accréditation approuvée par le CCN et figurant dans le site Web du CCN à www.ccn.ca.
This accreditation is the formal recognition of the technical competence of the laboratory, for the approved scope. In addition, this laboratory has demonstrated that they operate a quality management system (refer to the SCC website for the full ISO-ILAC-IAF Communiqué dated 2005-06-16). This certificate is the property of the Standards Council of Canada (SCC) and must be returned on request; reproduction is prohibited except on written approval of the SCC. Ce certificat est la propriété du Conseil canadien des normes (CCN) et doit lui être remis sur demande; toute reproduction est interdite sans l'autorisation écrite du CCN.	Accredited laboratory number: / Numéro de laboratoire accrédité : 537 Accreditation date: / Date d'accréditation : 2004-04-14 Issued on: / Délivré le : 2008-04-30 Expiry date: / Date d'expiration : 2012-04-14 <i>N. P. K.</i> Chairman (SCC) / Président (CCN)

Illustration 26-7: Sample Shipment Packing Slip

Agrium Inc..

PACKING SLIP
 Agrium Mine Site
 16 Agrium Road
 Vanscoy, Sask.
 S0L 3J0
 306-683-1365

DATE: Sept. 24/09

Well Site: VPO samples from 700 cross-cut, 3600-7 & 3900 cross-cut

Samples Numbered	
QUANTITY	DESCRIPTION
27	-potash samples - VPO 39-1 to VPO 39-23
18	-potash samples - #1 - #18 with footage intervals
19	-potash samples - VPO 700-1 to VPO 700-19
17	-potash samples - VPO 36-1 to VPO 36-17
Total: 81	Print _____ signature  Date _____

Illustration 26-8: Shipment Receipt Notification

SRC Geoanalytical Laboratories

125 - 15 Innovation Blvd.
Saskatoon, Saskatchewan
S7N 2X8
Phone: (306) 933-8118
Fax: (306) 933-5656

Sep 24, 2009

Sample Shipment Receipt Notification

Agrium
13131 Lake Fraser Dr. SE.
Room 4616
Calgary, Alberta T2J7E8

A shipment was received on Sep 24, 2009 comprising of 2 pails. The sample(s) have been assigned group # G-2009-1376.

A complete sample number receipt verification shall be e-mailed when the samples are ready for processing.

Shipment Received by: Dinah Buhl

Illustration 26-9: SRC Sample Receipt Notification

Geoanalytical Laboratories

Sample Receipt Report

Group # 09-1376

Sep 24, 2009

Agrium

13131 Lake Fraser Dr. SE.
Room 4616
Calgary, Alberta T2J7E8

The following is a record of sample numbers received, sorted in their respective radiation levels.

Potash samples with Radiation Level: Normal

#1	#2	#3	#4
#5	#6	#7	#8
#9	#10	#11	#12
#13	#14	#15	#16
#17	#18	VPO 13a	VPO 36-1
VPO 36-2	VPO 36-3	VPO 36-4	VPO 36-5
VPO 36-6	VPO 36-7	VPO 36-8	VPO 36-9
VPO 36-10	VPO 36-11	VPO 36-12	VPO 36-13
VPO 36-14	VPO 36-15	VPO 36-16	VPO 36-17
VPO 39-1	VPO 39-2	VPO 39-3	VPO 39-4
VPO 39-5	VPO 39-6	VPO 39-7	VPO 39-8
VPO 39-9	VPO 39-10	VPO 39-11	VPO 39-12
VPO 39-12 a	VPO 39-13	VPO 39-14	VPO 39-14 a
VPO 39-15	VPO 39-15 a	VPO 39-16	VPO 39-17
VPO 39-18	VPO 39-19	VPO 39-20	VPO 39-21
VPO 39-22	VPO 39-23	VPO 700-1	VPO 700-2
VPO 700-3	VPO 700-4	VPO 700-5	VPO 700-6
VPO 700-7	VPO 700-8	VPO 700-9	VPO 700-10
VPO 700-11	VPO 700-12	VPO 700-13	VPO 700-14
VPO 700-15	VPO 700-16	VPO 700-17	VPO 700-18
VPO 700-19			

Number of Potash Normal samples was: 81

Total number of samples was: 81

EXTRA SAMPLE:
VPO 13a

Sample Receipt Report prepared by: Dinah Buhl

Page 1 of 1

Illustration 26-10: SRC Method Summary

SRC Geoanalytical Laboratories

Method: POT

Method Reference: The multi-element analysis of Potash samples by ICP-OES

Method Summary:

Basic Potash Exploration Package

Sample Preparation: Rock samples are jaw crushed to 80% @ -2mm and 100-200g sub sample split out using a riffler. The sub sample is pulverized to 90% @ -106 microns using a puck and ring grinding mill. The pulp is then transferred to a labeled plastic snap top vial

Soluble digestion and ICP-OES analysis:

An aliquot of pulp is placed in a test-tube with 15 mls of 30°C DI water. The sample is shaken. The soluble solution is then analysed by ICP-OES. The method is suitable for the soluble analysis of potash samples for the determination of commercial potash (Sylvite). The analysis will not be suitable for the determination of insoluble salts minerals which may be present (e.g. Anhydrite, Kieserite).

Soluble Detection Limits (ICP-OES)

Element	DL	Element	DL	Element	DL
Al ₂ O ₃	0.01%	Ag	0.2 ppm	Nd	1 ppm
CaO	0.01%	Ba	1 ppm	Ni	1 ppm
Fe ₂ O ₃	0.01%	Be	0.2 ppm	Pb	1 ppm
K ₂ O*	0.01%	Cd	1 ppm	Pr	1 ppm
MgO	0.01%	Ce	1 ppm	Sc	1 ppm
MnO	0.01%	Co	1 ppm	Sm	1 ppm
Na ₂ O*	0.01%	Cr	1 ppm	Sn	1 ppm
P ₂ O ₅	0.01%	Cu	1 ppm	Sr	1 ppm
S	0.01%	Dy	0.2 ppm	Ta	1 ppm
TiO ₂	0.01%	Er	0.2 ppm	Tb	1 ppm
		Eu	0.2 ppm	Th	1 ppm
		Ga	1 ppm	U	2 ppm
		Gd	1ppm	V	1 ppm
		Hf	1 ppm	W	1 ppm
		Ho	1 ppm	Y	1 ppm
		La	1 ppm	Yb	0.1 ppm
		Li	1 ppm	Zr	1 ppm
		Mo	1 ppm	Zn	1 ppm
		Nb	1 ppm		

*K₂O soluble estimation of measurement uncertainty for the following ranges:

20-39% ± 1.0 wt%
40-59% ± 1.5 wt%
>60% ± 2.0 wt%

*Na₂O soluble estimation of measurement uncertainty for the following ranges:

20-39% ± 1.0 wt%
40-59% ± 1.5 wt%
>60% ± 2.0 wt%

The reported uncertainty is expanded using a coverage factor k=2 for a level of confidence of approximately 95% assuming a normal distribution.

Quality Document: Method POT Summary
Effective: 20 October 2008
Distribution of this document is uncontrolled

Page 1 of 4



Illustration 26-11: Reserve – Resource Estimation Calculations

Tonnage Summary - KL 114-R

	Grade Estimated % K2O	% Insolts	Mineral Reserves - Proven and Probable (Millions of Tonnes)	Measured Mineral Resources (Millions of Tonnes)	Indicated Mineral Resources (Millions of Tonnes)	Inferred Mineral Resources (Millions of Tonnes)
Unitized Area	24.44	4.67	70.027	0.000	0.000	0.000
South Block	24.90	4.83	54.097	77.075	35.925	125.113
North Expansion Block	24.44	4.67	0.000	0.000	0.000	75.520
TOTAL	--	--	124.125	77.075	35.925	200.633

Mine Life Calculations - KL 114-R

*** Based on the inclusion of all Mineral Reserves, Measured Mineral Resources and Indicated Mineral Resources.**

- * Utilizing ore supply tonnages of 6 mtpy to simulate 2.00 mtpy product (85% recovery, 24.5% ore grade, 60.5% product grade)
- * Utilizing ore supply tonnages of 9 mtpy to simulate 3.00 mtpy product (85% recovery, 24.5% ore grade, 60.5% product grade)

At 6 mtpy ore capacity (2.0 mtpy product): **40 years**
At 9 mtpy ore capacity (3.0 mtpy product): **26 years**

*** Based on the inclusion of all Mineral Reserves, Measured Mineral Resources, Indicated Mineral Resources and Inferred Mineral Resources.**

- * Utilizing ore supply tonnages of 6 mtpy to simulate 2.00 mtpy product (85% recovery, 24.5% ore grade, 60.5% product grade)
- * Utilizing ore supply tonnages of 9 mtpy to simulate 3.00 mtpy product (85% recovery, 24.5% ore grade, 60.5% product grade)

At 6 mtpy ore capacity (2.0 mtpy product): **73 years**
At 9 mtpy ore capacity (3.0 mtpy product): **49 years**

Prepared by EDS
October 7, 2009
Vanscoy Office

Unitized Area Resource / Reserve Calculations

Calculation Factors:

Density	2 tonnes/cubic metre
Mining Height (11')	3.35 m
Acre	4046.85642 square metres
Historical Extraction Ratio	27.9%

Tonnage Calculations:

TOTAL UNITIZED AREA:	
Total Enclosed Area	127,366,423.00
Total Enclosed Volume	426,677,517.05
Total Enclosed Tonnage	853,355,034.10

AREAS REMOVED FROM WITHIN UNITIZED AREA:

Total Enclosed Area	27,704,787.59
Total Enclosed Volume	92,811,038.43
Total Enclosed Tonnage	185,622,076.85

Mineral Rights Issues:

- NONE. Unitization of the area has secured all freehold mineral rights contained under a contract.

MINING WITHIN UNITIZED AREA:

Total Mined Tonnage	116,270,440.00	- from monthly and annual calculations breaking down production between the unitized area and outside of it ("Historical Annual Tonnage Breakdown-Oct6.09.xls") (all from reserves)
---------------------	----------------	--

ESTIMATED RESERVES REMAINING:

Inferred Resources	-	- from total tonnes remaining, including historical extraction rate
Indicated Resources	-	- from total tonnes remaining, including historical extraction rate
Measured Resources	-	- from total tonnes remaining, including historical extraction rate
Proven/Probable Reserves	70,027,055.07	- from total tonnes remaining, including historical extraction rate
Total Tonnage	70,027,055.07	

= (TOTAL TONNES - TONNES REMOVED - MINERAL RIGHTS ISSUES) x Historical Extraction - PAST MINING

Definitions:

Total Enclosed Area: determined in Vulcan from the "Area" function associated with the polygon of interest

Total Enclosed Volume: calculated using the area resulting from above and the mining height

Total Enclosed Tonnage: calculated using the volume resulting from above and the density

South Block Resource / Reserve Calculations

Calculation Factors:

Density	2 tonnes/cubic metre
Mining Height (11')	3.35 m
Acre	4046.85642 square metres
Historical Extraction Ratio	27.9%

Tonnage Calculations:

TOTAL SOUTH BLOCK:

Classification	Total	Reserves	Measured Resources	Indicated Resources	Inferred Resources
Total Enclosed Area	177,735,260.12	32,878,255.93	44,468,903.26	23,982,097.80	74,877,258.57
Total Enclosed Volume	595,413,121.40	110,142,157.37	148,970,825.92	80,340,027.63	250,838,816.21
Total Enclosed Tonnage	1,190,826,242.80	220,284,314.73	297,941,651.84	160,680,055.26	501,677,632.42

AREAS REMOVED FROM WITHIN SOUTH BLOCK:

Seismic/Experience Related:

Classification	Total	Reserves	Measured Resources	Indicated Resources	Inferred Resources
Total Enclosed Area	3,346,184.29	650,639.70	1,282,842.63	1,253,351.26	159,350.70
Total Enclosed Volume	11,209,717.37	2,179,643.00	4,297,522.81	4,198,726.72	533,824.85
Total Enclosed Tonnage	22,419,434.74	4,359,285.99	8,595,045.62	8,397,453.44	1,067,649.69

Mineral Rights Issues:

- The equivalent of 10 sections are unsecured.

Location	Area	NW	NE	SW	SE	Tonnes
8-34-7	2,589,988.11	F	F	F	F	17,352,920.33
26-34-7	1,942,491.08	F	C	F	F	13,014,690.25
27-34-7	1,294,994.05	F	F	C	C	8,676,460.16
33-34-7	1,294,994.05	A	A	a	a	8,676,460.16
26-34-8	647,497.03	A	C	A	F	4,338,230.08
3-35-7	1,942,491.08	F	F	C	F	13,014,690.25
8-35-7	327,147.87	a	a	A	A	2,191,890.75
15-35-7	1,942,491.08	C	F	F	F	13,014,690.25
19-35-7	-	F	F	A	A	-
8-35-8	1,294,994.05	A	A	F	F	8,676,460.16
Total	11,982,094.36					88,956,492.39

From Inferred Resources	52,177,297.14
From Indicated Resources	23,517,471.21
From Measured Resources	13,090,502.08
From Proven/Probable Reserves	4,917,643.69
Total Tonnage	93,702,914.12

MINING WITHIN SOUTH BLOCK:

Total Mined Tonnage 4,773,572.00 (all from reserves)

ESTIMATED RESOURCES / RESERVES REMAINING:

Inferred Resources	125,112,719.28	- from total tonnes remaining, including historical extraction rate
Indicated Resources	35,925,471.44	- from total tonnes remaining, including historical extraction rate
Measured Resources	77,075,453.06	- from total tonnes remaining, including historical extraction rate
Proven/Probable Reserves	54,097,488.43	- from total tonnes remaining, including historical extraction rate
Total Tonnage	292,211,132.20	

= (TOTAL TONNES - TONNES REMOVED - MINERAL RIGHTS ISSUES) x Historical Extraction - PAST MINING

Definitions:

Total Enclosed Area: determined in Vulcan from the "Area" function associated with the polygon of interest

Total Enclosed Volume: calculated using the area resulting from above and the mining height

Total Enclosed Tonnage: calculated using the volume resulting from above and the density

North Expansion Block Resource / Reserve Calculations

Calculation Factors:

Density	2 tonnes/cubic metre
Mining Height (11')	3.3528 m
Acre	4046.85642 square metres
Historical Extraction Ratio	27.9%

Tonnage Calculations:

TOTAL NORTH EXPANSION BLOCK:

Total Enclosed Area	72,148,408.48
Total Enclosed Volume	241,899,183.95
Total Enclosed Tonnage	483,798,367.90

AREAS REMOVED FROM WITHIN NORTH EXPANSION BLOCK:

Seismic/Experience Related:

Total Enclosed Area	0 - not applicable
Total Enclosed Volume	0
Total Enclosed Tonnage	0

Mineral Rights Issues:

- The equivalent of 10 sections are unsecured.

Location	Area	NW	NE	SW	SE	Tonnes
3-37-8	2,589,988.11	F	F	F	F	17,367,424.26
5-37-8	2,589,988.11	F	F	F	F	17,367,424.26
7-37-8	2,589,988.11	F	F	F	F	17,367,424.26
8-37-8	2,589,988.11	F	F	F	F	17,367,424.26
9-37-8	2,589,988.11	F	F	F	F	17,367,424.26
8-36-8	2,589,988.11	F	F	F	F	17,367,424.26
17-36-8	2,589,988.11	F	F	F	F	17,367,424.26
25-36-8	2,589,988.11	F	F	F	F	17,367,424.26
26-36-8	1,942,491.08	F	C	F	F	13,025,568.20
27-36-8	2,589,988.11	F	F	F	F	17,367,424.26
31-36-8	1,349,707.55	F	F	P	P	9,050,598.97
33-36-8	2,589,988.11	F	F	F	F	17,367,424.26
35-36-8	2,589,988.11	F	F	F	F	17,367,424.26
Total	31,782,067.83					213,117,834.05

** NOTE: Total area listed above differs slightly from Vulcan estimated area due to complexity with the partial rights listed in SW & SE 31-36-8-W3rd. These estimates are taken directly from the government records.

MINING WITHIN NORTH EXPANSION BLOCK:

Total Mined Tonnage	0 - not applicable
---------------------	--------------------

ESTIMATED RESOURCES REMAINING:

Inferred Resources	75,519,868.94	- from total tonnes remaining, including historical extraction rate
Indicated Resources	-	- from total tonnes remaining, including historical extraction rate
Measured Resources	-	- from total tonnes remaining, including historical extraction rate
Proven/Probable Reserves	-	- from total tonnes remaining, including historical extraction rate
Total Tonnage	75,519,868.94	

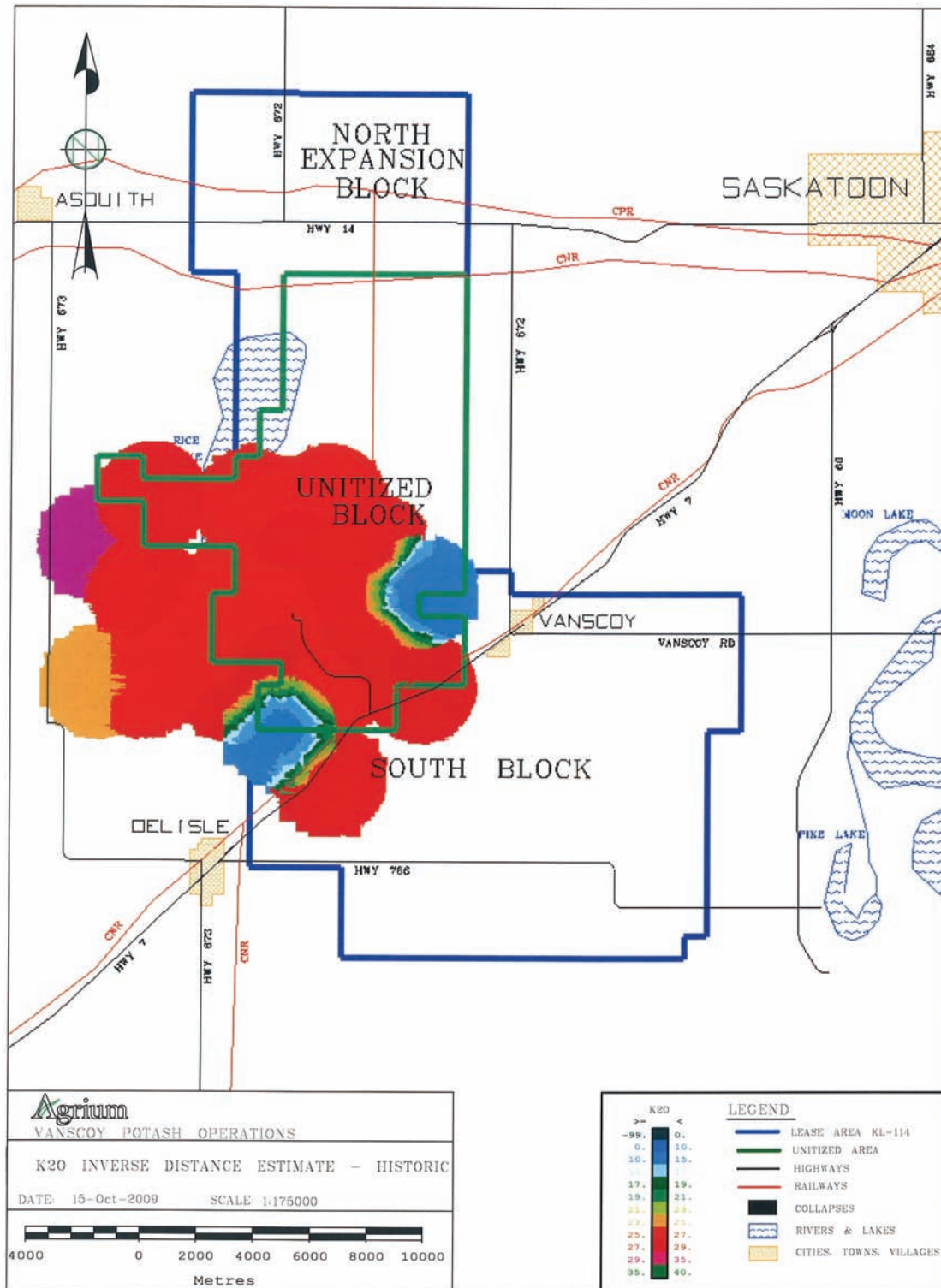
Definitions:

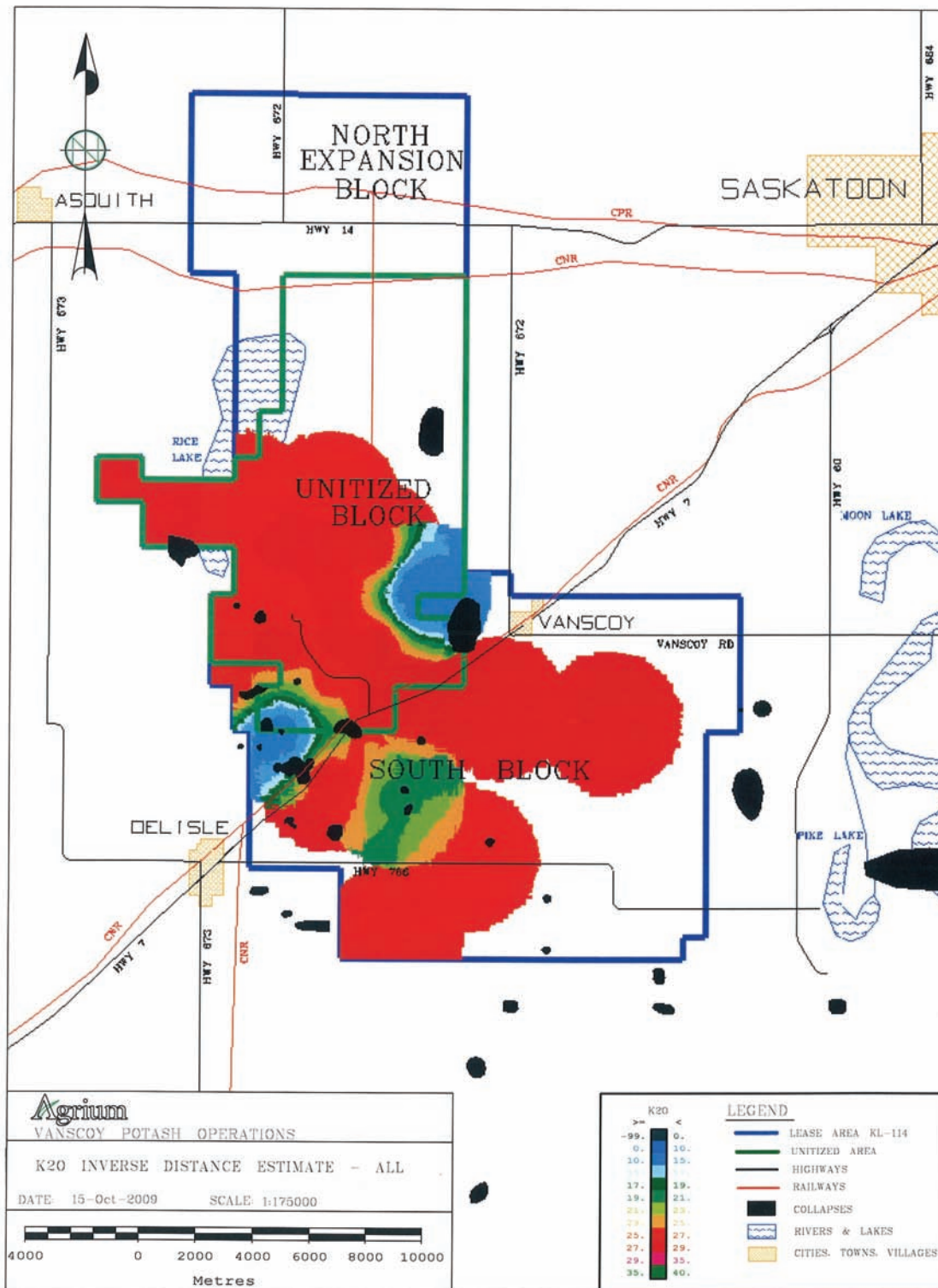
Total Enclosed Area: determined in Vulcan from the "Area" function associated with the polygon of interest

Total Enclosed Volume: calculated using the area resulting from above and the mining height

Total Enclosed Tonnage: calculated using the volume resulting from above and the density

Illustration 26-12: Vulcan Block Models





Agrium - VPO
Vulcan Block Model Resource Estimation

Historical 22 Drillholes Area

	Average K2O	Average Insols	Volume	Tonnes
Nearest Neighbor	24.82	5.39	504,044,276	1,008,088,552
Inverse Distance Squared	24.81	5.39	504,044,277	1,008,088,552

Based on 22 of 23 original exploration holes.
2000 metre search ellipsoid
Based on 6" above B4, down 11' assay composites

South Block Area

	Average K2O	Average Insols	Volume	Tonnes
Entire South Block	24.602	4.829	337,242,285	674,484,570
Collapses Removed	24.897	4.826	326,618,300	653,236,600

Based on 22 of 23 original exploration holes, 3 channel samples, and 2 newer holes in south block.
Inverse Distance Squared Estimation
2500 metre search ellipsoid

Block Model Parameters

Maximum Block Size	500x500x33.5
Minimum Block Size	20x20x0.335
Minimum Number of Samples	1
Maximum Number of Samples (ID2)	50

Reported by Mike Cole, 9 Oct 09