

TECHNICAL REPORT ON
DECEMBER 2009 MINERAL RESOURCE ESTIMATE

GEODEX MINERALS LTD.
SISSON BROOK PROPERTY
TUNGSTEN-MOLYBDENUM DEPOSIT

YORK COUNTY, NEW BRUNSWICK, CANADA

Latitude 46° 22' 05''N
Longitude 67° 02' 38''W

Prepared for
Geodex Minerals Ltd.

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Summary

The Sisson Brook tungsten-molybdenum deposit is located in York County, central New Brunswick, and was initially defined by Kidd Creek Mines Limited drilling carried out in the 1979 to 1982 period. Geodex Minerals Ltd. (Geodex) subsequently completed deposit delineation drilling programs in 2005, 2006, 2007, 2008 and 2009 and these served to define a large deposit of low grade tungsten and molybdenum mineralization. Devonian gabbro and diorite plus deformed Silurian metavolcanic and metasedimentary sequences host the mineralization, which occurs as epigenetic veins, stringers, and disseminations. Two main deposits have been the focus of Geodex's exploration to date, these being Zone III and the Ellipse Zone, and are parts of a single, large mineralized body. As currently defined, the deposit is considered a member of the granite-related porphyry class of tungsten-molybdenum deposits.

Mercator Geological Services Limited (Mercator) prepared mineral resource estimates for the Sisson Brook deposit in 2007, 2008 and 2009 and was retained later in 2009 to update the resource estimate through incorporation of 2009 drilling program results. The 2009 program carried out by Geodex was primarily designed to upgrade existing Inferred mineral resources in Zone III and the Ellipse Zone to Indicated status. This approach was chosen to maximize Indicated and Measured resources available for use in a pre-feasibility study scheduled for completion during 2011.

Tabulated results of the December 2009 resource estimate appear below and are considered compliant with Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves *Definitions and Guidelines* (the CIM Standards) and with disclosure standards of National Instrument 43-101 (NI 43-101). A tabulation of combined resources appears in Appendix 3

Sisson Brook Mineral Resource Estimate – Effective December 17th, 2009

Sisson Brook Mineral Resource Estimate - Zone III				
*WO3 Equivalent % Threshold	Resource Category	Rounded Tonnes	WO3 %	Mo%
0.025	Measured	47,400,000	0.073	0.025
0.075	Measured	34,600,000	0.088	0.031
**0.100	Measured	27,500,000	0.097	0.034
0.125	Measured	20,200,000	0.110	0.038
0.175	Measured	9,500,000	0.133	0.048
0.225	Measured	3,800,000	0.157	0.061
0.025	Indicated	308,500,000	0.061	0.019
0.075	Indicated	179,500,000	0.082	0.026

**0.100	Indicated	125,400,000	0.094	0.030
0.125	Indicated	83,000,000	0.107	0.035
0.175	Indicated	32,700,000	0.133	0.045
0.225	Indicated	11,700,000	0.153	0.060
0.025	Inferred	168,100,000	0.055	0.020
0.075	Inferred	91,300,000	0.075	0.029
**0.100	Inferred	61,300,000	0.086	0.034
0.125	Inferred	39,400,000	0.098	0.040
0.175	Inferred	15,800,000	0.117	0.055
0.225	Inferred	6,100,000	0.133	0.072
Sisson Brook Mineral Resource Estimate - Ellipse Zone				
*WO3 Equivalent % Threshold	Resource Category	Rounded Tonnes	WO3 %	Mo%
0.025	Measured	2,700,000	0.069	0.021
0.075	Measured	1,800,000	0.086	0.027
**0.100	Measured	1,300,000	0.095	0.031
0.125	Measured	900,000	0.104	0.037
0.175	Measured	400,000	0.124	0.048
0.225	Measured	100,000	0.134	0.071
0.025	Indicated	58,900,000	0.062	0.019
0.075	Indicated	34,100,000	0.081	0.026
**0.100	Indicated	23,200,000	0.092	0.032
0.125	Indicated	15,300,000	0.102	0.038
0.175	Indicated	6,200,000	0.117	0.054
0.225	Indicated	2,300,000	0.127	0.076
0.025	Inferred	22,900,000	0.057	0.017
0.075	Inferred	13,000,000	0.073	0.024
**0.100	Inferred	7,700,000	0.085	0.029
0.125	Inferred	4,600,000	0.092	0.036
0.175	Inferred	1,300,000	0.093	0.060
0.225	Inferred	400,000	0.088	0.085

Notes: * WO3% Equiv = WO3% + (Mo%* 2.02) based on \$US 9.00 /lb WO₃ and \$US 15/lb Mo pricing plus 70% WO₃ and 85% Mo recoveries as in previous estimate; ** Marr(2009)Preliminary Economic Assessment base case threshold

Despite the large amount of drilling carried out to date at Sisson Brook, opportunities remain to define extensions to both the Zone III and Ellipse Zone deposits. More specifically, the north and south strike extensions and down dip extension of Zone III remain open, as are the northwest strike extension and down dip extension of the Ellipse Zone. However, at this time it is

recommended that additional deposit extension drilling not be pursued until results of the currently planned pre-feasibility study are available. A small program of grade confirmation in-fill drilling has been recommended for the central area of Zone III, with this to be carried out along with a recommended database review program. A budget of \$Can 180,000 is proposed to cover recommended programs.

1.0 Introduction and Terms of Reference

This report on estimation of mineral resources for the Sisson Brook Zone III and Ellipse Zone deposit was prepared by Mercator Geological Services Limited (Mercator) on behalf of Geodex Minerals Limited (Geodex) to comply with technical reporting and disclosure requirements set out under National Instrument 43-101 and are considered compliant with Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves *Definitions and Guidelines*. Mercator prepared four previous resource estimates for the deposit that reflect increasing amounts of delineation core drilling. Terms of reference for these were presented in earlier technical reports (Cullen et al., 2007; Cullen and Harrington, 2007; Cullen and Harrington, 2008, 2009) and these should be consulted for background. The current Sisson Brook database incorporates results for a total of 40 historic holes and 157 Geodex holes completed to September 1st, 2009, but terms of reference restrict the current mineral estimate to the Sisson Brook Zone III and Ellipse Zone areas. Drilling results for some portions of the adjacent Zone I and Zone II deposits are not included in the estimate.

Hard copies of historic exploration reports and published research papers pertaining to the property were initially assembled by Geodex from public record government archives and delivered to Mercator for report preparation purposes. This included drill logs, drill plans, assay records and laboratory records for drilling completed by Kidd Creek Mines Ltd. during the 1979 to 1982 period and ultimately included all data generated by Geodex during 2005 and 2006 drilling campaigns carried out by the company on Zone III. Mercator also provided technical support with respect to planning and implementation of core logging, sampling, quality control and quality assurance programs for the 2006 drilling project, leading up to the March, 2007 resource estimate. Subsequent project involvement by Mercator includes (1) preparation of an updated mineral resource estimate in October, 2007 (Cullen and Harrington, 2007), (2) provision of the October 2007 block model and technical files for use by Wardrop Engineering Ltd. in the Ozturk et al. (2007) Scoping Study report prepared for Geodex, (3) preparation of additional updated mineral resource estimates presented in the June, 2008 and January, 2009 (Cullen and Harrington, 2008, 2009), and (4) contribution of resource estimation documentation to support the in-house Preliminary Economic Assessment (PEA) study carried out by Geodex in 2009 and reported in Marr (2009).

Both authors of this report have met with Geodex staff and carried out resource-related discussions on numerous occasions, beginning in June 2006 and continuing through the report date. Both authors visited the property on September 15th, 2009 in company with Geodex staff, at which time drilling sites from the 2007, 2008 and 2009 programs by Geodex were inspected and coordination checks completed. The Ellipse and Zone III

trenching sites were visited at that time as well. The Geodex core logging and sampling facility was visited September 15th, 2009 and core handling, logging and sampling protocols were reviewed with Geodex staff at that time. Author Cullen had previously visited the property.

Mercator staff assembled and validated the digital drilling database upon which the current and previous three-dimensional resource estimate block models were subsequently developed using Gemcom Surpac® deposit modeling software.

2.0 Reliance on Other Experts

This report was prepared by Mercator for Geodex and information, conclusions and estimates contained herein are based upon information available to Mercator at the time of report preparation. This includes drilling data made available by Geodex, government and public record information, the Wardrop Engineering Inc. Scoping Study (Ozturk et al., 2007) prepared for Geodex in late 2007, and the Marr (2009) Preliminary Economic Assessment report prepared by Geodex. Information from these sources was referenced and relied upon by Mercator during preparation of the resource estimate and associated reporting.

Information contained in this resource report is believed reliable, but in part the report is based upon information not within Mercator's control. Mercator has no reason, however, to question the quality or validity of data used in this report. Comments and conclusions presented herein reflect Mercator's best judgment at the time of report preparation.

3.0 Property Description and Location

3.1 General

The Sisson Brook deposit is located approximately 100 kilometers northwest of the city of Fredericton NB and occurs within mineral exploration claims registered to Geodex and formerly held by Champlain Resources Ltd. (Champlain). These claims form part of a larger contiguous holding of exploration properties held by the company in this area of central New Brunswick (Figures 1 and 2). The Zone III and Ellipse Zone mineral resource area is fully covered by Claim Group 3270, which reflects amalgamation of pre-existing contiguous Geodex claim groups in this area during 2009. Details pertaining to the Claim Group appear in Table 1 below.



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Figure 1
Property Location Map

MERCATOR GEOLOGICAL
Services Limited

0 25 50 75 100
Kilometres

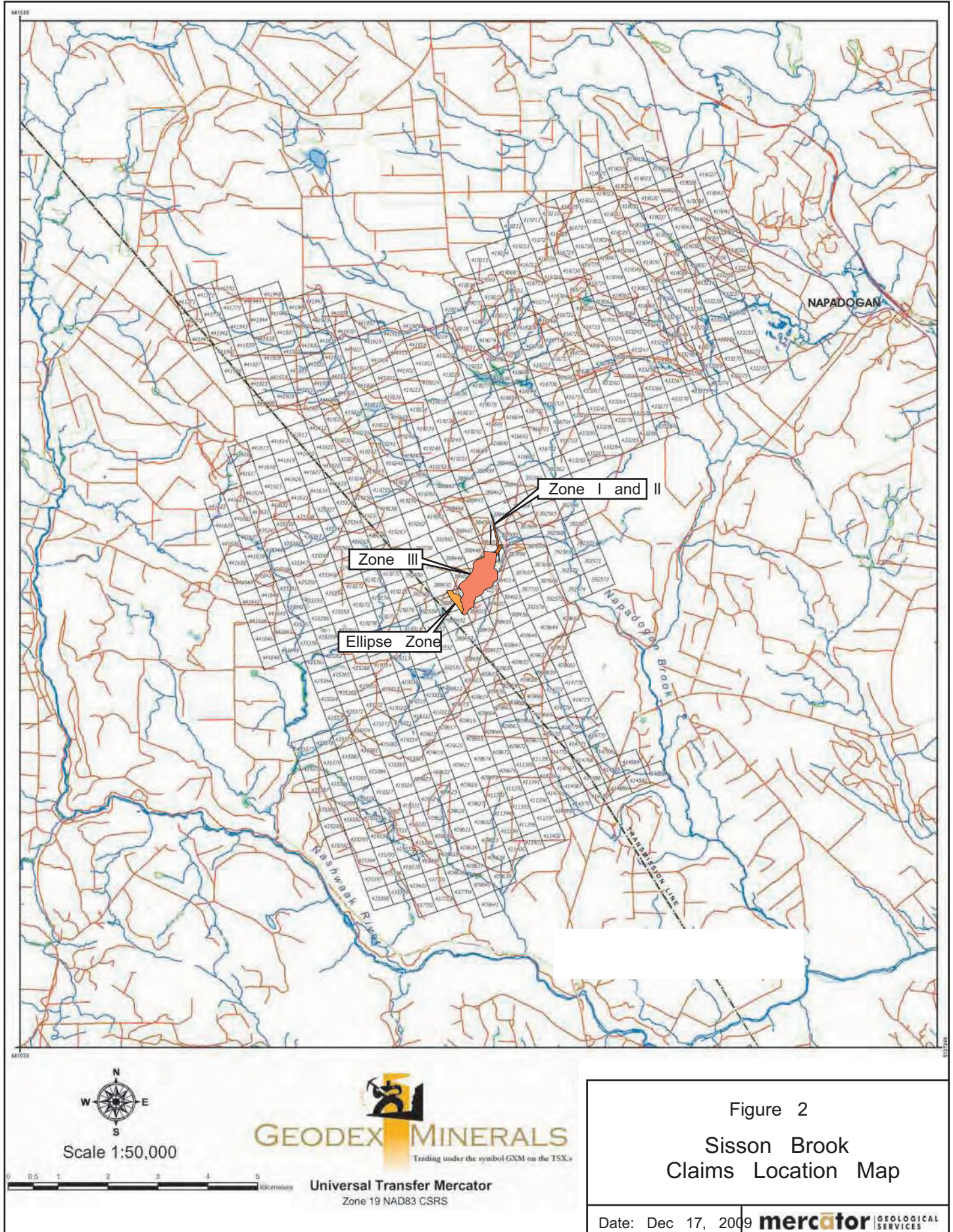


Figure 2
Sisson Brook
Claims Location Map

Table 1: Details of Sisson Brook Claim Group

Claim Group No.	Claim Group Name	No. Of Claims	Licence No.	NTS Map	Anniversary Date
3270	Sisson Brook	536	15088	21J6E	September 4, 2010

The New Brunswick Department of Natural Resources (NBDNR) provided Mercator with a data summary for the claims comprising the group and government records showed it as being held by Geodex at the December 17th, 2009 effective date of this report. Mercator did not otherwise confirm ownership or status of the Sisson Brook claims or any other exploration title held by Geodex. This does not constitute a legal search of title by Mercator with respect to ownership or status of the claim group. However, no reason was known to Mercator at the report date to question status of the claims.

Geodex has advised that surface rights to lands comprising the Zone III and Ellipse Zone area are exclusively held under government ownership and that the company has established access agreements to these lands, as necessary, to allow exploration activities to be carried out. These agreements were not reviewed by Mercator for purposes of this report.

3.2 Agreement with Champlain Resources Ltd.

On the 24th of October, 2005 Geodex and Champlain Resources Ltd. (Champlain) entered into a letter agreement pertaining to certain exploration properties or titles held at that time by Champlain in the Sisson Brook area of central New Brunswick. Lands covering the present Zone III and Ellipse Zone deposits were included under terms of this agreement, which provided Geodex an opportunity to earn a 70% interest in the property by December 31st, 2008. To earn the 70% interest Geodex was required to make cash payments to Champlain totaling \$200,000 (CDN) and complete at least \$2,000,000 (CDN) in exploration expenditures on the property. Geodex subsequently fulfilled these terms during 2007 and acquired the 70% interest held by Champlain. There are no royalties. The agreement allows the Champlain to be carried through to production, its share of pre-production costs to be recovered from the first proceeds of commercial production. In November 2007 Geodex acquired through purchase a 54% controlling interest in Champlain and the company now owns an effective 86% interest in the Sisson Brook deposit.

Mercator did not independently verify terms and conditions of the Champlain agreement for purposes of this report but at the report date had no reason to question the information provided by Geodex.

3.3 Summary of Exploration Title Information

Mineral exploration claims in New Brunswick are issued under the province's Mining Act, c.M14.1 of the Acts of New Brunswick, 1985 ("the Act") and adjudicated under terms of associated Regulations. Any individual or company acquiring claims in the province must hold a valid Prospector's Licence at the time of staking. No specific reference to "patented claim status" is defined under this Act but certain mineral rights in certain areas of the province are vested with the surface title holder and therefore excluded from general staking. These areas generally reflect land grants issued prior to 1810.

All areas of the province were historically subject to ground staking, but map staking was instituted at 9.00 am on November 12th, 2008. The map staking system is based on the New Brunswick Minerals and Petroleum Grid system coordinated to North American Datum 83 (NAD 83). A mineral claim "unit" under this new system measures approximately 500 meters by 500 meters in dimension and conforms to the noted grid coordination and identification system. A schematic of this system is included in Appendix 2. The pre-existing mineral claim system, under which all of the Captain Property claims are defined, was based on ground staking using claim posts in the field, with claim tags affixed, to define individual claims that measured nominally one quarter mile per side. Grid coordination was to magnetic north with orthogonally disposed claim boundaries. Retention of claims in good standing under both systems requires payment of a renewal fee for each claim plus submission of documentation to government describing work programs and associated costs applicable to the property during the course of each reporting year. Table 2 summarizes fees and work commitments that must be met to keep mineral exploration claims in good standing.

Table 2: Claim Renewal Fees and Work Requirements

Year of Issue	Required Work	Period	Renewal Fees
1	\$100 per claim	Anniversaries 1 to 5	\$ 4 per claim
2	\$150 per claim	Anniversaries 6 to 10	\$20 per claim
3	\$200 per claim	Anniversaries 11 to 15	\$25 per claim
4	\$250 per claim	Anniversaries 16 to 5	\$30 per claim
5 through 10	\$300 per claim		
11 through 15	\$400 per claim		
16 through 25	\$500 per claim		
25 plus	\$600 per claim		

There is no requirement in New Brunswick to legally survey all mineral exploration claim boundaries. A requirement to re-establish mineral exploration claim boundaries in the fifth year of claim issue and every five years thereafter was previously applicable to ground-staked claims. Application for a Mining Lease under the Act, which must be obtained to allow commercial production of a mineral to occur, requires completion of a legal boundary survey of the claims under application. None of the Licence 15088 claim boundaries have been surveyed to date.

4.0 Accessibility, Climate, Physiography and Infrastructure

4.1 Preamble

With minor exceptions, report sections 4.2 through 4.4 appear below as previously presented in Cullen and Harrington (2008, 2009).

4.2 Accessibility

The Sisson Brook property is accessible from the nearby city of Fredericton by traveling west approximately 60 kilometers via the Trans Canada Highway to the town of Nackawic and then northerly approximately 45 kilometers on secondary highways and the Valley Forest Products forestry access road to the property center. Numerous secondary forestry access roads cross the property and these have been used by Geodex to provide access for exploration personnel, vehicles and drilling equipment. Four-wheel drive vehicles are required to travel some of the property roads but two-wheel drive access by car or truck is possible over most of the property.

4.3 Physiography and Climate

Central New Brunswick is characterized by northern temperate zone climatic conditions. Winter conditions of freezing temperatures and substantial snowfall can be expected from late November through late March, while spring and fall seasons are cool, with frequent periods of rain. Summer conditions prevail from late June through early September and Environment Canada records for the 1971 to 2000 period for nearby Fredericton show daily mean temperatures in the 16.2 to 19.3 degree Celsius range during the summer months, with an extreme summer daily maximum of 39.2 degrees Celsius. Daily minimum temperatures in January and February average between -14.1 and -15.5 degrees Celsius, with an extreme daily minimum of -37.2 degrees Celsius. Average yearly precipitation for the period totals 1143 millimeters with an average of 276.5 centimeters of snow accumulation and 885 millimeters of rain.

Weather conditions in this part of New Brunswick are conducive to year-round exploration activity, with project planning necessary to deal with relatively deep snow cover in winter and locally impassable forestry road conditions during the spring breakup period. For this reason, scheduling of field activities to avoid the breakup period is advisable.

The property area is characterized as forested upland occurring at an average elevation of 300 meters above sea level. The well-developed main drainage pattern in the area is characterized by the southeast flowing Nashwaak River system which shows well developed subsidiary drainages, frequently trending northwest-southeast or north-south. Geological interpretations indicate that this pattern reflects dominant bedrock structural trends in areas where relatively shallow glacial overburden is present. Mixed deciduous and coniferous cover is typical of the area and was originally present over most of Licence 15088. Clear cut harvesting and subsequent forest regeneration programs have been carried out to substantial degrees in this area over the last 30 years and at present large areas of relatively recent clear cutting exist in the immediate vicinity of Sisson Brook deposit. The Zone III and Ellipse Zone area is totally uninhabited at present with the exception of a few isolated hunting or fishing cabins leased by private interests.

4.4 Local Resources and Infrastructure

The city of Fredericton, located 90 kilometers to the southeast of the Sisson Brook property, is the second largest city in New Brunswick, with a population of approximately 50,000, and is also the provincial capital. The “Greater Fredericton Area”, which includes several surrounding communities, incorporates a larger population of approximately 85,000. This area constitutes a major government, business, service and education center for the province and hosts campuses of both the University of New Brunswick and Saint Thomas University. The city is served by regional and national airlines and good highway infrastructure but lacks direct rail service.

The town of Nackawic is situated adjacent to both the Trans Canada Highway and the St. John River, approximately 60 kilometers west of Fredericton, and is only 35 kilometers from the Sisson Brook property. The town and surrounding areas have a combined population of approximately 7000 and have supported a major pulp mill operation since 1970, although recent market conditions have resulted in sporadic mill closures. Presence of the mill has resulted in local development of forest industry contractors, a local population of skilled tradesmen and availability of basic business services in the area. Presence of such support is advantageous to current mineral exploration activities and would also benefit any future mine development programs in the area.

The provincial electrical grid crosses the Sisson Brook property and access to the CN Rail main line linking Atlantic Canada with Montreal is possible approximately 15 kilometers to the north of the deposit. In the broader context of natural site attributes, surface water resources of significant volume are present in the Sisson Brook area in the form of the Nashwaak River and its subsidiary drainages and topographic relief poses no impediment to site development.

In summary, the Sisson Brook area is considered advantageously situated with respect to potential future mine development due to its current undeveloped state, proximity to good road, rail and electrical grid systems and relative proximity to government, business and work force population centers.

5.0 History

5.1 Preamble

With the exception of updating of the Geodex program summary to the effective date of the current resource estimate, report sections 5.2 and 5.3 appear below as previously presented in Cullen and Harrington (2008, 2009).

5.2 Introduction

The history of modern mineral exploration at the Sisson Brook property spans the time period from the mid 1950's through to the present and Giggie (2006) assembled an excellent detailed review of property exploration history on behalf of Geodex. During the course of the Sisson Brook project Mercator was provided access to this report and subsequently reviewed the major documents referenced therein. This provided independent confirmation of sources and content. Compiled information not originating from Geodex was found to be primarily sourced in (1) underlying archival assessment reports available through the New Brunswick government and (2) independently published research papers or articles. Geodex files pertaining to the company's 2005 exploration campaign rounded out the field of technical information relevant to exploration history of the Sisson Brook area.

5.3 Summary of past exploration

The following itemized summary presents a chronological review of the Sisson Brook property's exploration history and, with only slight modification, reflects the compilation study text provided by Giggie (2006) on behalf of Geodex and is used herein with

permission from Geodex. The area of compilation extends beyond the limits of Claim Group 15088 and therefore references some activities not directly related to the Licence.

1. Nashwaak Pulp and Paper (1955, 1959-1960):

Prior to 1966, Nashwaak Pulp and Paper held exclusive prospecting rights in the area of the present claims. In 1959, in conjunction with York Mining Co., they contracted Canadian Aero to conduct an airborne electromagnetic survey over a large area including the present claim group. Follow-up work included line-cutting and ground geophysics. A number of conductive zones were identified and were investigated with trenching and soil sampling. Twelve holes were drilled to test the most promising targets which led to the discovery of sulphide mineralization (Hole N-7) of the Nashwaak (Zn-Pb-Cu-Ag-Au) occurrence located in the east-central portion of the present group. In 1959-60, the company drilled an additional 43 holes (3957 meters) in the area of the Nashwaak occurrence and intersected a narrow zone of low grade sulphide in Holes E-10 and E-11.

2. Penarroya Canada Ltée. (1969):

In 1967, Penarroya staked the Napadogan “A” claim group which covered most of the present Geodex property and extended to the northeast. Geological mapping resulted in the identification of four distinctive geological zones trending N45-60E with a dip of 90 degrees. After the zone of volcano-sedimentary schists was traced using ground magnetic surveying, the claim block was extended to the north. In June 1968, a 29 mile survey grid was established and soil sampling identified three major areas of Pb-Zn-Cu anomalies. Four drill holes (3,033 feet) were drilled on coincident soil Cu and magnetic anomalies. Drilling intersected low grade disseminated sulphides and also identified low values of Cu, MoS₂ and WO₃ in the area of the present day Sisson Brook deposits. However, due to the lack of significant base metal sulphides, the company conducted no further work on the Napadogan group. IP surveying and general prospecting of “peri-plutonic” zones for possible porphyry copper deposits were recommended.

3. Texasgulf Inc. (Nashwaak area, 1974, 1979):

In 1973, Texasgulf staked 82 claims stretching from Hayden Brook northeast to Napadogan Brook, including the southeast portion of the present Geodex holdings and containing the Nashwaak occurrence discussed above. A large survey grid was cut covering the entire group with a 4-mile baseline oriented at 010 Az, and 1,800 soil samples were collected and analyzed. Horizontal loop electromagnetic and magnetic surveys were carried out on the grid. Three trenches were dug west of the access road in the vicinity of the Nashwaak occurrence on combined geophysical/geochemical targets,

but only one intersected bedrock (black graphitic argillite). The company then drilled five holes (910 m) on targets in the vicinity of the known mineralized sections of the occurrence. Significant mineralization of 7.19% Zn, 3.50%Pb, 1.10%Sb, 3.70 oz/ton Ag, and 0.44% Cu over 16.2 feet was encountered in hole NW-3. In 1979, an additional hole (NW-6) was drilled to test this mineralization at depth, but no significant results were obtained.

4. Texasgulf Sulphur / Kidd Creek Mines Ltd. (Sisson Brook area, 1978-1982):

In April 1978, Texasgulf staked an additional four claims to the west of their Nashwaak group, to investigate ground on which scheelite and chalcopryrite mineralization had been discovered by Penarroya in 1969, and which also contained a significantly high value of Mo reported in a regional stream silt survey published by NBDNR in 1970. Penarroya's old survey grid lines were located and re-cut, followed by prospecting which led to the discovery of tungsten and copper bearing float. Five soil pits were dug and sampled along two of the old lines. Heavy mineral sampling along Sisson, Napadogan and Bird Brooks yielded significantly elevated W values (450 to 700 ppm). Based on the results of this work, additional claims were staked, bringing the Nashwaak/Sisson Brook group to a total of 103 claims and covering most of the present Geodex property.

Concentrating on the Sisson Brook area, the company did further line-cutting, followed by geological mapping, soil sampling (800 samples), magnetic and very low frequency and horizontal loop electromagnetic surveys. Eleven holes were drilled on targets in the area of the present Sisson Brook Zones I and II, resulting in the discovery of significant Cu-Wo mineralization hosted by sheeted quartz vein systems. In the fall of 1979, the grid was extended to the north and south.

Soil sampling, geological mapping, trenching, horizontal loop and very low frequency electromagnetic surveys and a magnetic survey were conducted on the grid extensions in 1980, and twelve additional holes were drilled on the present Zone I. In 1981, nine holes were drilled to the south of Zones I and II, leading to the discovery of an additional concentration of scheelite-molybdenite mineralization which was termed Zone III. In 1982, eight holes were drilled on Zone III and induced polarization surveying and detailed geological mapping was carried out over the area of mineralization. In addition, a compilation of previous soil sampling from 1979 (original grid) and 1980 (expanded grid) revealed that the soil anomaly related to Zones I and II was open to the southeast. A surface geology and overburden geochemistry orientation survey was also completed in 1982. A mineral resource estimate for Zone I at that time (Moore, 1980 in Mann, 1981) and results of this work are presented below in Table 3. The authors caution that this resource was prepared prior to adoption of National

Instrument 43-101 (NI43-101) and the current CIM Standards. As such, it is not compliant with NI 43-101 or the CIM Standards and should not be relied upon. This assessment of tungsten and molybdenum mineralization at Sisson Brook provides valuable insight with respect to lithologies, mineralization and alteration in the three zones considered.

Table 3: *Sisson Brook Resource Estimate - Kidd Creek Mines Ltd.

Area	Category	Tons (Rounded)	MoS%	WO3%	Cu%
Zone 1	“Drill Indicated”	7,500,000	-----	0.21	0.35

**Figures not compliant with NI 43-101 or CIM Standards and should not be relied upon.*

4. Canadian Nickel Co. (1977-1980):

In 1977, Canadian Nickel carried out an airborne geophysical survey followed by ground reconnaissance in 1978. Based on results of this unfiled work, the company staked a 38 claim group in 1979 covering ground from Chainy Lakes in the south to the extreme southwest corner of the present property in the north. A grid located on the southwest corner of the present group was cut in 1979, and the company conducted VLF, soil sampling, and geological mapping. In 1980, three holes (750 feet total) were drilled to test electromagnetics anomalies, one of which appears to have been located on southwest portion of the present group. All three holes intersected felsic meta-volcanics and graphitic meta-sediments but did not return mineralization of substantial interest.

5. Riocanex (1981):

In 1980 Riocanex staked a number of claim groups on map sheets 21J06, 07 and 03 to cover ground conductivity and magnetic anomalies detected by an airborne EM and magnetic survey (not filed). The Millville project included the North Group (39 claims) which extended onto the northeast corner of the present Sisson Brook property, and the Road Group (12 claims) which was staked on the southeast corner of the present group. Line-cutting and geophysical surveys (magnetics, MaxMin II electromagnetics and gravity) were conducted on both claim groups but no magnetic or gravity anomalies were found to significantly correlate with the airborne conductive zones and the property was downgraded. Soil sampling was recommended.

6. Phelps/Dodge- Falconbridge (1993-1994):

In 1992, Phelps Dodge optioned 22 claims from Falconbridge (previously Kidd Creek Mines Ltd./Texasgulf Exploration Canada Ltd.) and conducted work in the vicinity of the Nashwaak occurrence on the present group. Although only the Nashwaak claims (also referred to as the Napodogan group) were covered by the option, the company was also required to apply work to the contiguous claims contained in the Sisson Brook group to the west. A 24 kilometer grid was cut, centered on the Nashwaak occurrence, covering the southeast third of the present group, and tied in with the old Texasgulf grid. Geological mapping, time domain electromagnetics surveying and soil sampling were carried out on the grid.

Two holes were targeted to test geophysical and geochemical targets. One hole was drilled to test a coincident horizontal loop and time domain electromagnetics survey anomalies approximately 2 kilometers northeast of the Nashwaak occurrence, and intersected graphitic and weakly sulphidic black shale. The second hole tested continuity between the Sisson Brook and Nashwaak mineralization, and was drilled approximately 700 meters southwest of the Nashwaak occurrence. This hole intersected black spotted shales that were interpreted as evidence that the Nashwaak deposit, although locally stratiform, is likely genetically related to the intrusion of a granite body to the west. However, as only minor sulphide mineralization was encountered in sulphide-bearing fractures no further work was recommended.

7. Brunswick Mining & Smelting Ltd. (1992-1998):

In 1992, Brunswick Mining and Smelting began work in the Sisson Brook area as part of an assessment of rock units in the area believed to be correlative with those hosting the Brunswick massive sulphide ore bodies. As part of this project, Noranda contracted and filed in 1993 (for information purposes only) the results of a helicopter-borne magnetic and EM survey conducted by Aerodat covering 350 square kilometers of parts of 21J07, 06 and 10 maps, including the present claims.

Compilation of airborne and regional data including unexplained Zn, Pb and Cu anomalies from stream sediments obtained in Hayden Brook (NBDNR 1975/76) resulted in the staking of the Chainy Lake Group in April 1992. The original group comprised 211 claims located south of the present property, extending from an area south of Chainy Lakes and northeast to Trouser Lake. In September 1992, a 46 claim extension was staked to the north, covering parts of the southern and eastern margins of the present group.

Initial work in 1994 consisted of prospecting, line-cutting, soil geochemistry, magnetic, VLF and horizontal loop EM surveys. Soil sampling revealed a strong Pb/Zn anomaly on the east side of the West Branch Napodogan Brook. Three holes (826 meters) were drilled in this area slightly east and north of the present group but no significant mineralization was intersected.

In February 1995, the Sisson Brook claim group (24 claims) was added, covering most of the present group and bringing the Chainy Lakes Group to a total of 281 claims. Work in 1995 consisted of further line-cutting on the Sisson Brook claims, to connect the Brunswick Chainy Lakes grid with the Phelps Dodge/Falconbridge grid. Soil sampling, gravity, magnetic, horizontal loop and UTEM electromagnetics surveys were conducted on the grid.

In 1998, the highest priority geophysical and geochemical targets generated during the 1995 exploration program were tested with two holes (1615 feet) on the Sisson Brook Group and located on the east side of Napodogan Brook in the southeast corner of the present group. Trace vein-type Cu-Pb-Zn mineralization and pyrite and pyrrhotite-rich rocks were considered to explain anomalous geochemical and geophysical responses, and presence of felsic and mafic intrusive rocks explained the areas of low amplitude high gravity results. Although lower priority targets remained untested, no further work was conducted and the group was reduced to 120 claims.

8. *Nicon Holdings Ltd. /Champlain Financial (1997-2001):*

In 1997, Nicon Holdings Ltd. staked 42 claims over the present group covering the Sisson Brook deposit, but excluding the Nashwaak occurrence to the east. Initial work consisted of compilation of previous geochemical and geophysical data. Targets were identified on coincident Cu soil/IP-VLF anomalies and eleven claims, covering the Sisson Brook deposit were retained. Work filed in 2000 consisted of further compilation including a structural study, prospecting, and 12 till samples, which yielded no significant results.

In 2001, additional claims were then acquired by Nicon to include the Nashwaak deposit and covered the entire present group. In the Sisson Brook area, the company assessed the base metal – precious metal potential of the Sisson Brook Zones I, II and III. The Sisson Brook grid (1500 meters) was established over the previously identified northwest-southeast trending VLF and magnetic anomalies identified to target an area south of Zone I and II where compilation showed coincident induced polarization and very low frequency electromagnetics survey anomalies as well as soil anomalies in a known fault zone. Additional electromagnetics and magnetic surveys were carried out on the grid, along with limited trenching. A review and analysis of stored core from previous drilling was carried out.

A second grid (15.5 kilometers) was established to the east over the Nashwaak deposit and was tied into the original Texasgulf grid. Very low frequency electromagnetic and magnetic surveys were carried out on the grid on an area targeted for base and precious metal mineralization believed to be the epithermal manifestation of the Sisson Brook mineralization.

9. *Geodex Minerals Limited (2004-2009):*

In October 2004 Geodex entered into an agreement with Champlain Resources to acquire a 70% interest in the Sisson Brook property. Subsequent to that time the company carried

ground geophysical surveying, mapping, geochemical sampling and diamond core drilling programs on the property. In 2005, 9 drill holes totaling 1219 meters were completed with only two of these in the immediate area of Zone III. In 2006, 29 drill holes were completed on the Sisson property with 28 of these, totaling 7053 meters of drilling, being completed on Zone III. A single hole was completed on Zones I. In 2007 a major resource definition drilling program consisting of 20,039 meters of drilling in 82 holes was carried out, with most of these focused on the Zone III deposit. During 2008 Geodex completed an additional 12,122 meters of drilling in 49 holes focused on Zone III and the new Ellipse deposit area and results of this program are addressed in report section 10.0.

In March, 2005 Geodex disclosed results of an in-house mineral resource estimate completed by D. Martin, P. Geo. (Martin, 2006). Results of this work are presented below in Table 4. The company subsequently disclosed that the estimate should be considered a “potential mineral deposit that is the target of further exploration” and that tonnage and grade should be considered conceptual in nature (Geodex Press release, March 24, 2006). The authors note this qualification and caution that the Martin (2006) estimate is not considered compliant with National Instrument 43-101 (NI43-101) or CIM Standards and therefore should not be relied upon.

Table 4: *Zone III “Potential Mineral Deposit” Estimate (Martin, 2006)

Area	Resource Class	Tonnes	MoS2%	WO3%
Zone III	Inferred	25,950,000	0.05	0.102

**Figures are not compliant with National Instrument 43-101 or CIM Standards and should not be relied upon*

In March, 2007 Geodex disclosed results of a resource estimate for the Zone III deposit prepared by Mercator (Cullen et al., 2007) in compliance with NI43-101 and the CIM Standards. The company completed a large in-fill drilling program on Zone III during 2007 and in October of that year Geodex disclosed an updated resource estimate, also prepared by Mercator (Cullen and Harrington, 2007), that included results for 18 drill holes additional to those used in the March 2007 estimate. Results of the October resource estimate were used in a NI43-101 compliant preliminary economic evaluation or scoping study technical report prepared for the Zone III deposit by Wardrop Engineering Inc. (Ozturk et al., 2007) that was received in November, 2007. Results of the referenced Mercator resource estimates are discussed in section 16.4 of this report and summary comments pertaining to the Scoping Study work appear in section 17.2.

During 2008 and early 2009 Geodex carried out further core drilling, environmental site assessments and engineering studies and also prepared a revised financial assessment of the project (Marr, 2009) in light of deterioration in metal pricing and market conditions

that had occurred since the Wardrop report by Ozturk et al. (2007). Results of this work were initially disclosed by the company in February, 2009 and reported in Marr (2009). These are summarized in report section 17.3. An updated mineral resource estimate was also prepared by Mercator (Cullen and Harrington, 2009) during this period to incorporate results of additional core drilling completed by the company subsequent to the previous estimate.

During the May through July period of 2009 Geodex completed the most recent core drilling program carried out at Sisson Brook and this was primarily designed to upgrade existing Inferred mineral resources to Indicated mineral resource status. The program included 28 holes totaling 4899 meters of drilling, details of which appear in section 10.0

6.0 Geological Setting

6.1 Preamble

The discussion of regional geology that is presented below appears as previously presented in report chapter 6.0 “Geological Setting” by Cullen and Harrington (2009).

6.2 Regional Geology

Cambro-Ordovician volcanic and sedimentary rocks of the Mirimichi tectono-stratigraphic zone extend northeasterly across central New Brunswick from the St. Croix area in the southwest to the Bathurst area in the northeast (Figures 3 and 3a). Both felsic and mafic volcanic assemblages occur in association with continental and marine sedimentary sequences in the Zone, and were intruded by younger mafic and felsic igneous bodies ranging in proportion from thin dikes to plutons and batholiths.

In the immediate area of the Sisson Brook property, two main stratigraphic sequences are present, the oldest of which comprises a mixed succession of siltstone, slate and quartzite that Smith and Fyffe (2006) identify as the Baskahegan Formation of the Cambrian to Early Ordovician Woodstock Group. These strike north-northeast in the Zone III area and are in steeply dipping contact to the west with a sequence of mixed felsic and mafic volcanics plus metasedimentary rocks of the Cambro-Ordovician Meductic Group's Porten Road Formation. The latter sequence hosts much of the Zone III mineralization near its near-vertical contact with a gabbro intrusion that also strikes north-northeast in this area. Both sequences were affected by the Late Ordovician Taconic Orogeny that resulted in development of sub-greenschist facies regional metamorphic assemblages and two regional foliation fabrics that trend north-northeast in the Zone III area and show steep dips.

Foliated stratified sequences were intruded by Early Devonian granodiorite and gabbro of the Howards Peak Granodiorite and also by the related, and significantly larger, Early Devonian Nashwaak Granite, which shows peraluminous geochemical affinity (Smith and Fyffe, 2006; Ruitenberg and MacCutcheon, 1994). These Intrusions were emplaced along the north-northeast regional structural grain in this area and lack penetrative deformation fabrics. However, both are locally affected by spatially discrete shears, faults and zones of foliation development.

Emplacement of gabbro and granite into the steeply dipping and slightly metamorphosed host sequences at Sisson Brook post dated the Mid-Devonian Acadian Orogeny and resulted in overprinting of the earlier regional metamorphic fabrics by contact metamorphic effects of the intrusive bodies. Subsequent emplacement of granitic to granodioritic feldspar-quartz-biotite porphyry dikes post-dated main phases of the Howards Peak Granodiorite and Nashwaak Granite and marked the end of significant igneous activity evidenced in bedrock sequences of the immediate property area (Mann, 1982). As documented by Nast and Williams-Jones (1991) and Mann (1982), contact aureole thermal effects related to the Early Devonian intrusions are represented in metasedimentary rocks at Sisson Brook as porphyroblastic biotite, garnet, cordierite and andalusite. In mafic lithologies, actinolitic hornblende porphyroblasts reflect the contact metamorphic imprint.

The Nashwaak Granite and the later porphyries form part of a regional episode of post-tectonic, Early to Mid Devonian granite emplacement that is metallogenically related to development of polymetallic Sn-W-Mo-Cu-Bi-(Id) mineralization in the Mirimichi Zone and within adjacent litho-tectonic zones to the southwest. Prominent examples of the association include the Burnt Hill W deposit (MacLellan and Taylor, 1989), approximately 30 kilometres northeast of Sisson Brook, the Lake George Sb-W-Mo-Au deposit (Seal et. al., 1988), approximately 50 kilometers to the south near Fredericton, and the Mount Pleasant Sn-W-Mo-Bi-Id deposit (Kooiman et. al, 1986; Ruitenberg and McCutcheon, 1994) located approximately 120 kilometres south of the property

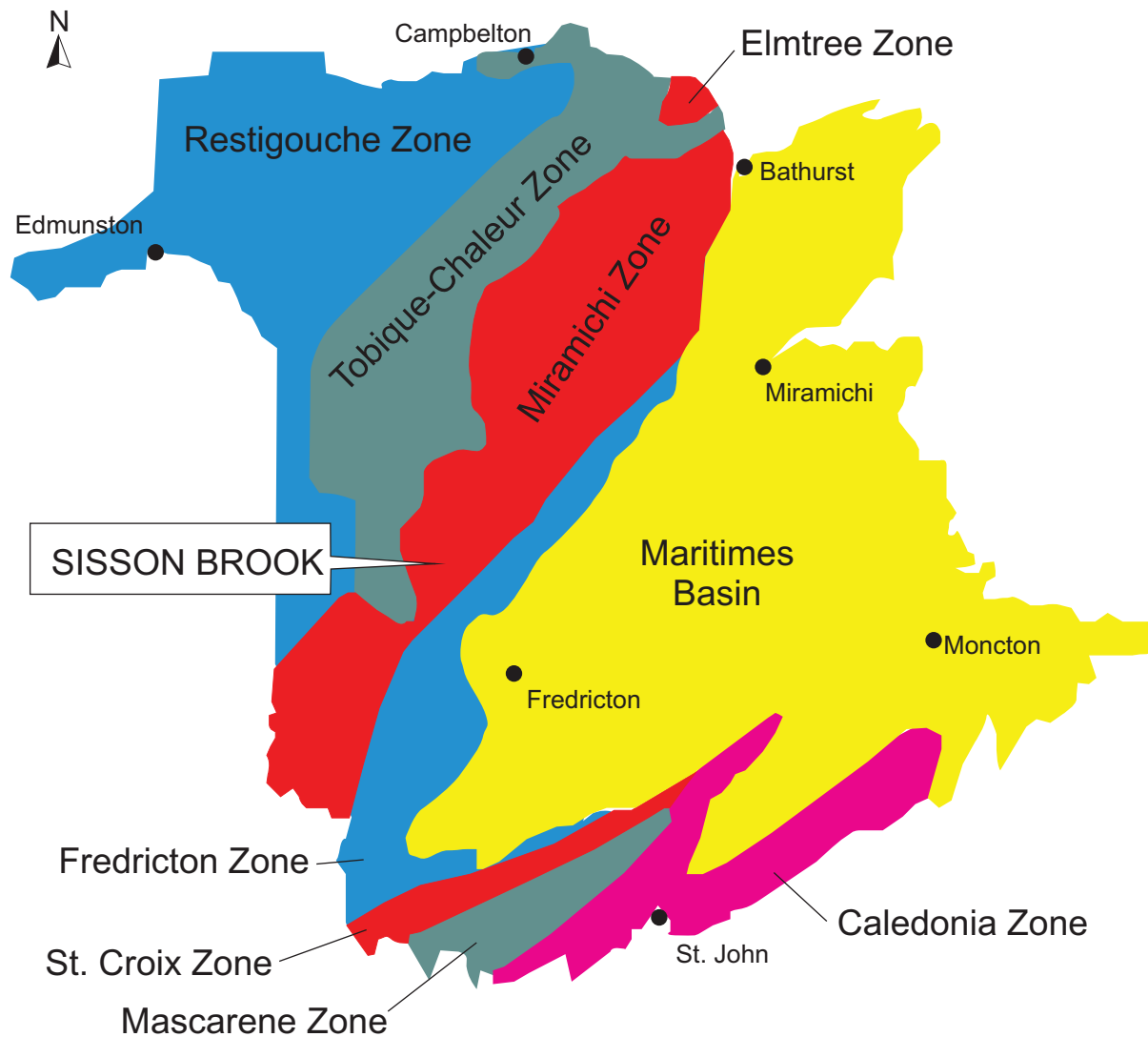
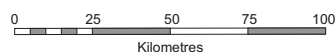
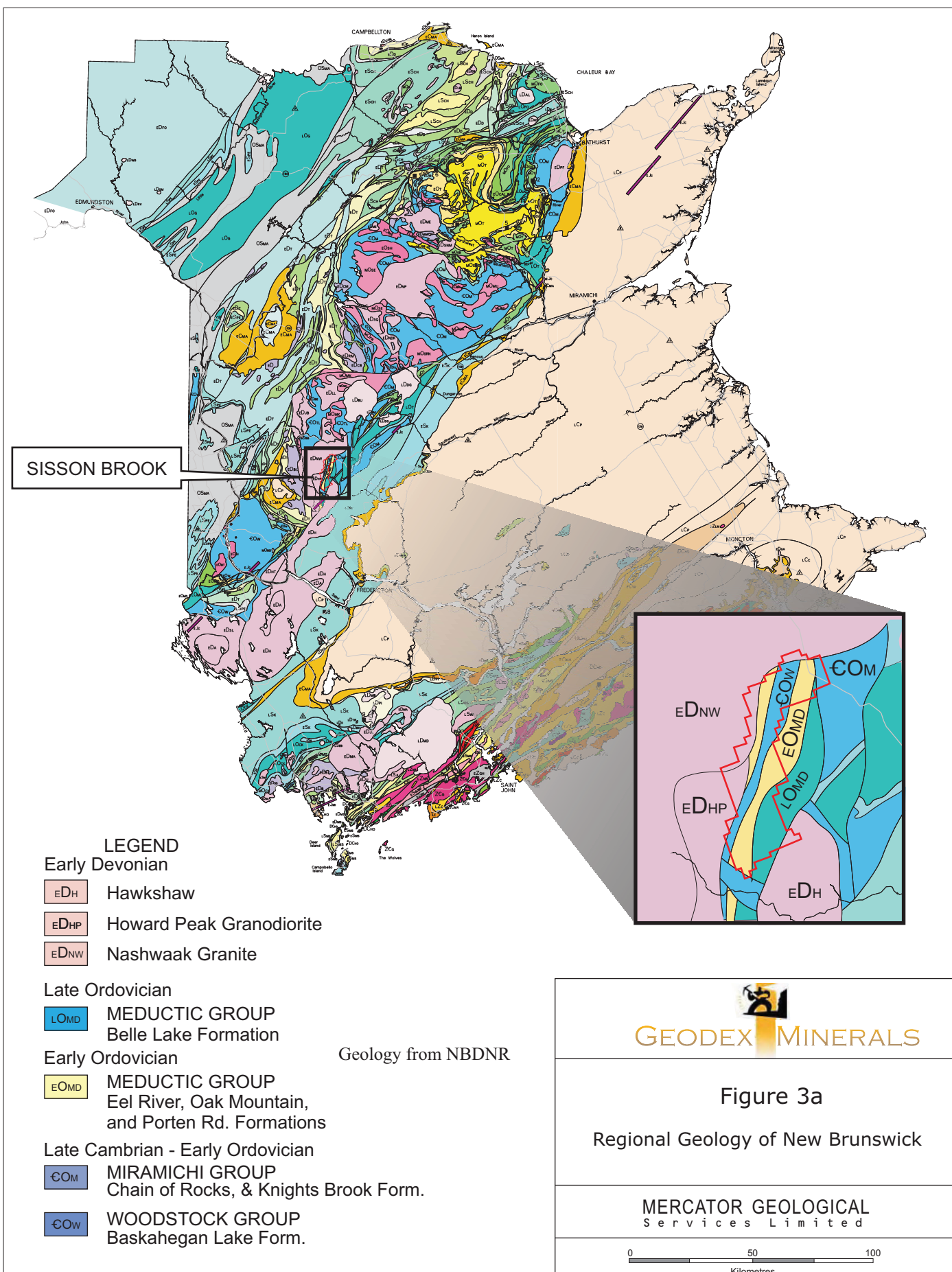


Figure 3
Regional Tectonic Framework
of New Brunswick

MERCATOR GEOLOGICAL
Services Limited



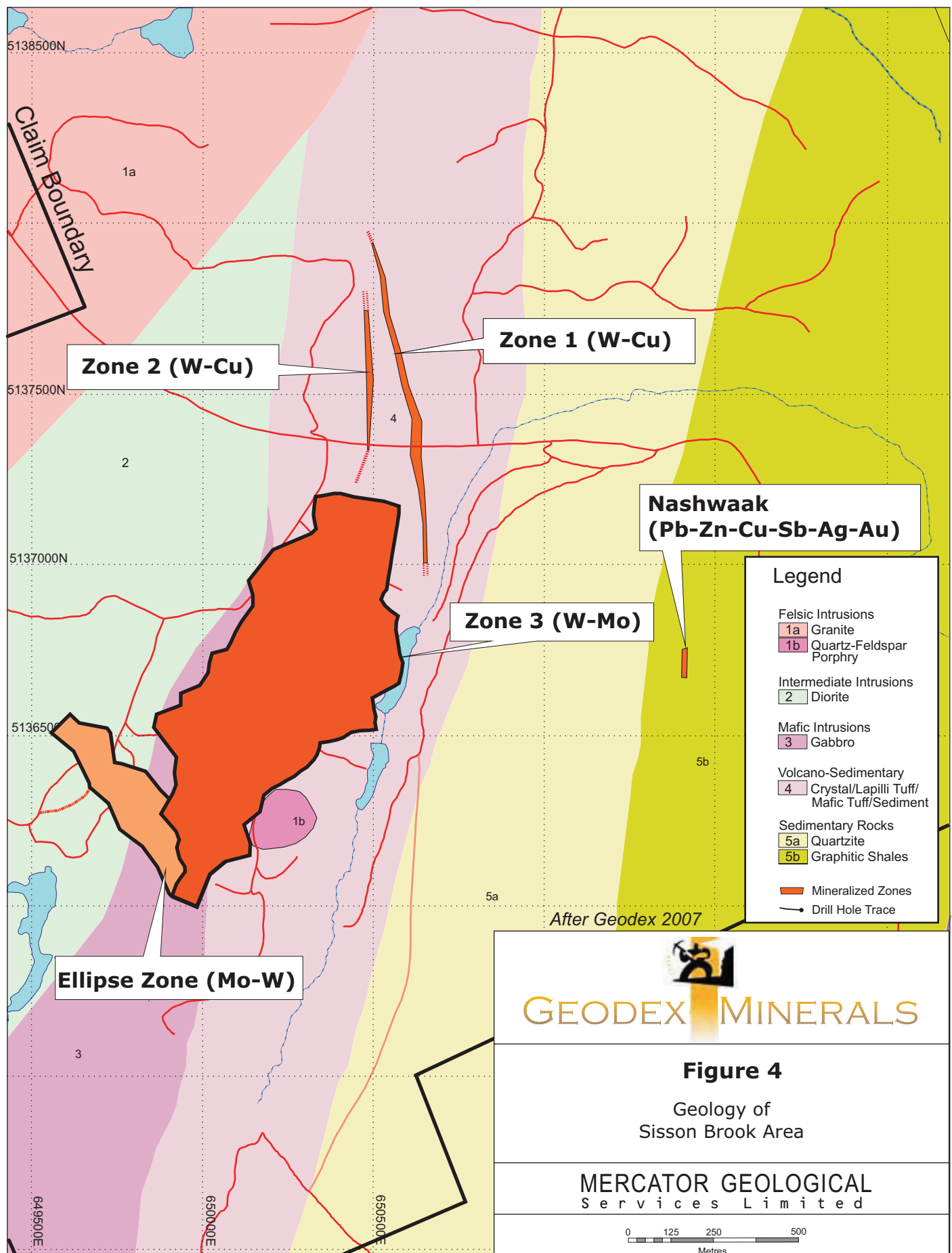
Geology from NBDNR



7.0 Deposit Type

The Sisson Brook Zone III deposit is recognized as part of a larger mineralized area defined by the spatial extent of the combined Zone I, Zone II and Zone III deposits plus the Ellipse Zone (Figure 4). As reviewed earlier in this report, these three zones were originally defined through core drilling carried out by Kidd Creek Mines Ltd. in the 1979 through 1982 period and Zone III has received the greatest amount of drilling investigation by Geodex, followed by the contiguous Ellipse Zone. Geological and geochemical aspects of the three zones were addressed in detail by Nast and Williams-Jones (1991) who also reviewed potential genetic deposit models for the styles of mineralization represent. Several features of W-Mo-Cu mineralization at Sisson Brook bear strongly on assessment of genetic models, prominent among these being that (1) mineralization is multi-stage but predominantly vein and fracture associated and clearly superimposed on host rocks that include gabbro as well as a steeply dipping to vertical sequence of interbedded mafic and felsic volcanics and metasedimentary rocks, (2) mineralization occurs within two distinct, but spatially superimposed, alteration systems, the first being hornblende amphibole-albite-magnetite and the second being potassic and represented by both biotization of amphibole and K feldspar alteration of plagioclase. Nast and Williams-Jones (1991) documented the spatial aspects of these envelopes and showed that intensity of both increases concentrically toward a focal point centered on the area of Zones I, II and III, (3) all mineralized zones occur within the contact metamorphic aureole of the Nashwaak granite and are spatially associated with feldspar-quartz-biotite porphyry dikes that are interpreted to reflect presence of a buried porphyry plug beneath the Sisson Brook area. The vein-associated Nashwaak Pb-Zn-Ag-Cu prospect located southeast of Zone III may be of similar provenance.

In light of the above, and in combination with detailed assessment of geochemistry of both mineralized zones and granitic and granodioritic rocks of the area, Nast and



William-Jones (1991) concluded that W-Mo-Cu mineralization at Sisson Brook was hydrothermally developed in association with emplacement of a granite-related porphyry system beneath the area. Furthermore, the hydrothermal system was considered to be low in fluorine and to have been characterized by relatively low water-rock ratios. The porphyry system assignment is consistent with other views of regional magmatic evolution in central and southwestern New Brunswick and provides a metallogenic link to other granite-related polymetallic deposits such as Mount Pleasant (Sn-W-Mo-Id-Bi) Burnt Hill (W-Sn-Mo), Lake George (Sb-W-Mo-Au) and various lesser prospects and showings (Thorne et. al., 2006).

Marr (2009) reported results of an in-house geological study by Geodex that served to expand on earlier work through incorporation of data and observations from more recent drilling and trenching program carried out by the company. This work highlighted the role of a shear zone marking the contact between gabbroic and metavolcanic/sedimentary rock sequences as a potential conduit for mineralizing fluids that formed the deposits. However, association of the Sisson deposits with emplacement of a buried intrusion is supported by Marr (2009) and considered consistent with earlier observations and conclusions reported above.

Based on characteristics summarized above, the various Sisson Brook W-Mo, W-Cu and W-Mo-Cu deposits defined to date are considered members of the granite-related porphyry W-Mo-Cu class of polymetallic mineral deposits. Their affinity with hydrothermal-magmatic evolution of the regionally extensive granitoid bodies of the Mirimichi Zone is assumed.

8.0 Mineralization

8.1 Preamble

The discussion of Mineralization presented below appears as previously presented in report chapter 8.0 “Mineralization” by Cullen and Harrington (2009), with the exception that additional text addressing Geodex programs reported by Marr (2009) is present.

8.2 Mineralized Zone Descriptions

As currently defined, the Sisson Brook property contains four separate zones of W-Mo $\pm$ Cu mineralization that have been investigated by diamond drilling and a minor amount of trenching. These are believed to be related to the same Devonian granite-related porphyry style mineralizing system, with differences in character of mineralization being attributable to host rock physical and chemical characteristics and both spatial and

temporal positions within the causative hydrothermal system. Two of the four mineralized zones are completely included in the current resource estimate (Zone III and Ellipse Zone) and portions of the remaining two now occur within the Zone III resource solid. Previous Figure 4 illustrates relative locations of the four mineralized zones and summarized characteristics of each are presented below under separate headings.

Zone I

Zone I is the most northerly of the three zones at Sisson Brook and was the first to be discovered and drilled. Mann (1981,1982) described mineralization in Zone 1 as consisting of a mineralized quartz vein system trending 170 azimuth and dipping 80 to 85 degrees to the west. Multiple quartz veins ranging in width from less than a centimetre to a meter characterize the zone within a broader envelope of sericitization and silicification. The zone has been identified along more than 800 meters of strike length, and width is noted as ranging between 2 meters and 36 meters. The main minerals of economic interest in Zone I are wolframite and chalcopyrite and mineralized intercepts for angled drill holes through the thickest sections of the zone returned values such as 0.25% Cu and 0.187% WO₃ over 48 meters (hole SSN-1 between 36m and 48m down hole). Within this broad intercept, discrete zones of higher grade veining are present, such as 3 meters between 45 meters and 48 meters down hole grading 0.55% WO₃ and 0.57% Cu. Host rocks at Zone I consist of altered volcano-sedimentary lithologies of the Porten Road Formation that strike north-northeast and dip steeply east. Nast and Williams-Jones (1991) provided further discussion of Zone I in the context of mineralized vein set paragenesis and noted that two north-northwest trending and steeply dipping fracture systems separated by about 20 degrees in azimuth control mineralization in this area. Veins are oriented obliquely to bedding and were interpreted as a late stockwork system.

Zone II

Zone II is located approximately 100 meters west of Zone I and was originally noted by Mann (1982) as also striking 170 azimuth and dipping steeply to the west. The zone is hosted by silicified volcano-sedimentary rocks of the Porten Road Formation but has not been extensively tested by diamond drill holes to date. Mann (1982) reported occurrence of weak pyrrhotite, wolframite and chalcopyrite mineralization from early drilling. Trenching in an area south of the drilling outlined chalcopyrite scheelite and wolframite mineralization in quartz vein systems similar to those described for Zone I, and it is likely that these two zones are similar in overall style. Economic potential of the zone is demonstrated by a 35.72 meter intercept grading 0.29% Cu and 0.10% WO₃ between 9.28 meters and 45 meters down hole in drill hole SSN-4. Geodex work to date has not

been extensive on this zone but results are consistent with the earlier observations with respect to bedrock mineralization.

Zone III

Zone III is the largest and now best-explored of the three mineralized zones at Sisson Brook. The zone is centered approximately 1 kilometer south of Zone I and occurs as a complex system of vein and fracture associated mineralization, centered along the vertically dipping, north-northeast striking contact between a gabbro phase of the Howards Peak Granodiorite and adjacent stratified volcano-sedimentary sequence rocks of the Porten Road Formation. A strong shearing fabric is commonly present in rocks that occur along this major contact. Mineralization in this area differs from that to the north in that scheelite and molybdenum-bearing scheelite are the predominant tungstate minerals present and molybdenite is the other mineral of primary economic interest. Chalcopyrite is not a pervasively distributed phase but is locally present in infrequent thin quartz veins (<50 centimeters thickness) or stringer sets that show polymetallic sulphide assemblages that may include pyrite and arsenopyrite..

Results of drilling to date by Kidd Creek Mines Ltd. and Geodex show the Zone III deposit to exceed 1.8 kilometers in strike length and to be continuous from surface to a vertical depth exceeding 450 meters. In its widest central area it measures approximately 850 meters in mineralized width. The deposit remains open along strike to both north and south, as well as down dip, and clearly merges with Zones I and II to the north. However, at the current deposit limits to both north and south, substantial thinning and bifurcation of mineralized zone components is present. A new northwest trending mineralized corridor may be present in this area but additional drilling is required to assess such potential.

Nast and Williams-Jones (1991) referred to Zone III as their Zone B and described in detail the distinctions between various stages of mineralization and alteration represented in the zone. Previously, Mann (1982) had reported initial descriptions of mineralization styles and established basic paragenetic relationships between metallic mineral assemblages and associated alteration assemblages. In contrast to the ubiquitous association of metallic minerals of economic interest in association with quartz stringers and veins in Zones I and II to the north, this occurrence style is augmented in Zone III by an earlier, extensive presence of scheelite and molybdenum-bearing scheelite in fracture, stringer and vein associated sites characterised by well developed hornblende $\pm$ albite $\pm$ magnetite alteration and massive aggregations or clots of predominantly chloritized hornblende. They also note that this style of mineralization and associated alteration displays a zoned distribution pattern that intensifies toward a hydrothermal focus broadly

centered on the contact between the gabbro and volcano-sedimentary sequences to the east. These relationships are considered typical of the low fluorine, granite-related porphyry style deposit class to which the Sisson Brook deposits have been assigned (Figures 5, 6, 7 and 8). Marr (2009) reported that Geodex drilling results provide good definition of a central zone of higher grade mineralization that is marked by lessening of grade outward from the core zone.

Mineralization in Zone III is represented over a large area and clearly crosses major lithologic boundaries such as the contact zone between the gabbro complex and the volcano-sedimentary sequence to the east, this being a reflection of its epigenetic nature. Spatial distribution of WO₃ and Mo within the Zone III deposit is not homogenous, and local WO₃/Mo ratios vary depending upon the host rock present and relative percentages of early versus later vein sets. As a general statement, early veining, represented by the



Figure 5: Altered gabbro with chloritized amphibole alteration and quartz veining (Hole SB06-14)



Figure 6: Altered feldspar porphyry and gabbro with disseminated scheelite in gabbro indicated by yellow pencil marks (Hole SB06-14)



Figure 7: Altered mafic tuff with pyrrhotite, chalcopyrite and scheelite (yellow pencil marking) in quartz veining (Drill hole SB06-14)



Figure 8: Altered felsic tuff with molybdenite in quartz vein (Drill hole SB06-14)

VI and early V2 vein sets described by Nast and Williams-Jones (1991) have higher percentages of scheelite and molybdenum-bearing scheelite relative to late V2 and V3 vein sets that have proportionately higher levels of molybdenite (Figure 8). This relationship is manifested at the Zone III deposit scale by local presence east of the gabbro contact of tuff-hosted areas showing molybdenite enrichment relative to presence of scheelite or molybdenum bearing scheelite. This zoning is reflected in the current resource block model and metal grades associated with Zone III are dealt with in detail in section 16.0 of this report,

Ellipse Zone

The Ellipse Zone is the newest mineralized area to be delineated at Sisson Brook and occurs as a northwest striking zone of steep to moderately southwest dipping quartz vein and stringer mineralization that merges with the southwestern quadrant of Zone III. It is now well defined over a strike length of approximately 900 meters, is open to the northwest, and the main mineralized area measures up to 150 meters in width near the surface. Drilling to date has defined the deposit's dip extent to a depth of about 300 meters below surface, where it remains open, as does the northwest strike extension. Ellipse mineralization merges with that of Zone III along strike to the southeast in a complex zone of generally enhanced metal grades.

Ellipse Zone mineralization is developed to large extent in marginal diorite in contrast to the variably foliated volcano-sedimentary sequence and gabbro that host Zone III. Geodex completed a trench in 2008 over the eastern contact area of the Ellipse Zone and mapping results show that well-defined vein sets striking northwest and dipping southwest at 40 degrees to 80 degrees are common in this area. Cross veining and stringer development are also common in this area.

9.0 Exploration

9.1 Preamble

The following discussion of “Exploration” carried out by Geodex appears as previously presented in report chapter 9.0 of Cullen and Harrington (2009), with the exception that updating to include 2009 drilling program information has been completed.

9.2 Review of Deposit Exploration by Geodex

In November 2004 Geodex entered into an agreement with Champlain Resources to acquire a 70% interest in the company’s Sisson Brook property, which contained all three of the then-known main Sisson Brook mineralized zones described earlier in this report. Subsequent to that time the company carried out induced polarization geophysical surveying, mapping, geochemical sampling and diamond core drilling programs on the property. Emphasis in 2005 was placed on both non-Zone III and Zone III areas of the property, with five holes of a 1,219 meter (9 holes) drilling program being completed within the defined Zone III deposit extents. The remaining 2005 holes tested other exploration targets in the area.

Beginning in June, 2006 the company completed an additional 29 drill holes totaling 7,454 meters of coring with all but one of these focused on Zone III. The remaining hole tested Zone I mineralization. In 2007 an additional 19,363 meters of drilling in 78 holes was completed in the Zone I, II, III and Ellipse Zone areas, with 63 holes totaling 16,212 meters of this total being completed in and adjacent to Zone III. Only Zone III and Ellipse Zone drilling is addressed in this report.

In March of 2007 Mercator provided an initial resource estimate for Zone III (Cullen et al., 2007) and updated this in October 2007 (Cullen and Harrington, 2007) after completion of additional drilling. In 2007 Geodex also retained Wardrop Engineering Inc of Vancouver, BC to complete a preliminary economic assessment of the Zone III deposit based on results of the October, 2007 resource estimate by Mercator. Results of the study were reported by Ozturk et al. (2007) and indicate that economic development of the deposit could take place under market and technical conditions assumed in the study. Further comments regarding the scoping study appear in report section 17.3.

In the spring of 2008 Geodex initiated further work on the Sisson Brook property, with this focused on infill drilling on the Zone III deposit and delineation drilling on the Ellipse Zone. This program consisted of 12,122 meters of drilling in 49 holes and was incorporated in the updated project database used in this resource estimate. In 2009 the company carried out a Preliminary Economic Assessment (Marr, 2009) and also followed

up with 4899 additional meters of drilling in 28 holes. Geodex exploration holdings in the Sisson Brook area extend substantially beyond the limits of the deposits that are the focus of this report. Review of results for work programs carried out by the company on surrounding holdings are beyond the terms of reference for the current resource estimate.

10.0 Drilling

10.1 Preamble

The following discussion of “Drilling “ activities carried out by Geodex on the Sisson Brook property appears as previously presented in report chapter 9.0 of Cullen and Harrington (2009), with the exception that additional 2009 drilling program information has been included.

10.2 General

Diamond drilling on the Sisson Brook property that has served to delineate W-Mo± Cu mineralization in Zones I, II and III was completed by two interests, these being Kidd Creek Mines Ltd. (Kidd Creek) during the 1979 to 1982 period and Geodex in the 2005 to 2009 period. In the first case, 40 drill holes were completed on the property in three campaigns and 157 additional holes were completed in five subsequent Geodex campaigns to the end of 2009. Not all of these holes fall within the mineral resource estimate area dealt with in this report.

Company-specific details of all drilling programs are discussed below under separate headings. In each case, associated information such as lithologic and sampling logs, assay results, collar survey data and down hole survey data was assembled from hard copy assessment reports filed with the New Brunswick government or from in-house data sets and reports provided by Geodex. Some digital compilation of historic drilling data was initially carried out by Geodex staff and both hard copy source documents plus the digital files of associated drill hole data were made available to Mercator for validation and resource estimation purposes.

Table 5 below provides a summary of drilling program information pertaining to both Geodex and Kidd Creek programs that was available for use in the December 2009 resource estimate by Mercator. Additional specific information relating to collar coordination and hole orientation for holes used in the Zone III estimate appears in Appendix 2. Collar locations and surface traces for drill holes in the entire Zone III area are presented on the appended hole location plan (Appendix 2) but not all holes in Table 5 fall occur within the resource outline.

Table 5: Company– Specific Listing of Diamond Drill Holes on Zone

Company	Year	Drill Hole Series	No. Of Drill Holes
Kidd Creek Mines Ltd.	1979	SSN-1 to SSN-11	11
Kidd Creek Mines Ltd.	1980	SSN-12 to SSN-23	12
Kidd Creek Mines Ltd.	1981	SSN-24 to SSN-32	9
Kidd Creek Mines Ltd.	1982	SSN-33 to SSN-40	8
Geodex Minerals Ltd.	2005	SB2005-1 to SB2005-9	9
Geodex Minerals Ltd.	2006	SB2006-2 to SB2006-30	29
Geodex Minerals Ltd.	2007	*SB2007-1 to SB2007-81	82
Geodex Minerals Ltd.	2008	*SB2008-1 to SB2008-47	49
Geodex Minerals Ltd.	2009	SB2009-1to SB2009-28	28
Total			197

* Includes hole SB2007-10A ; SB2008-7A, 2008-34A

10.3 Logistics

Ideal Drilling Ltd. provided contract drilling services for the 1979 through 1981 drilling campaigns and Petro Drilling Limited provided services in 1982. In all cases, BQ size drill core measuring approximately 36.5 millimeters in diameter was recovered and Kidd Creek staff supervised on-site geological work and also carried out core logging, sampling, interpretive and reporting functions. The 2005 drilling program by Geodex was contracted to Maritime Diamond Drilling Limited of Hilden, Nova Scotia and recovered NQ size drill core measuring approximately 47.6 millimeters in diameter. In 2006 Maritime Diamond Drilling Limited initiated the Zone III drilling program using two drill rigs, both recovering NQ size core. Slow production attributed to equipment failures prompted Geodex to contract Lantech Drilling Limited of Moncton New Brunswick to assist in completion of the 2006 program. Lantech recovered NQ core and Geodex staff supervised all aspects of the project, including on-site supervision, core logging, sampling, interpretive and reporting functions. Lantech was retained by Geodex to carry out all 2007 and 2008 drilling on the Sisson Brook property and Maritime Diamond Drilling Limited carried out the 2009 program. .

With the exception of one track mounted drill rig operated by Maritime Diamond Drilling Limited in 2006, conventional skid mounted drilling equipment was utilized in all instances. Kidd Creek programs were coordinated from the company's Fredericton exploration office and the later Geodex programs were directed by staff operating out of that company's Fredericton office. Drill core from all programs completed prior to 2006 is stored at the New Brunswick Department of Natural Resources core storage facility near Sussex NB. Core from 2006 through 2009 programs is held under secure storage by Geodex.

Drill hole collar locations for all Kidd Creek holes were originally surveyed and coordinated to Mining Lease survey pins in the area. Most of these in the Zone III area were re-located by Geodex in 2006 and subsequently re-surveyed along with all Geodex holes of the 2006 through 2009 programs. All Geodex surveying was carried out by suitably certified technical staff employed by an independent, third party surveying firm. Universal Transverse Mercator (UTM) Zone 19 grid coordinates based on North American Datum 83 (NAD 83) were generated from this program and are reflected in the project drilling database originally developed by Mercator and sequentially updated for use in all Zone III resource estimates. Holes were typically tested for inclination and azimuthal variation using down hole survey instruments and this data was also incorporated in the project database for use in the deposit model. Early holes were tested using mechanical instrumentation (Tropari) and those subsequent to 2005 used Flex-It (Reflex Instruments) downhole orientation tools. Mercator independently checked collar hole location coordinates for a number of drill holes completed by Geodex through September 2009 and consistently found excellent agreement of results with database values.

11.0 Sampling Method and Approach

11.1 Kidd Creek Mines Ltd. Programs 1979-1982

Government assessment reports provided by Geodex were reviewed to identify core logging and sampling procedures applicable to the Zone III area drilling programs carried out by Kidd Creek Mines Ltd. These showed that drill core was logged by staff geologists who produced hard copy lithologic logs for each drill hole. Detailed information related to lithology, alteration and mineralization was systematically recorded in the logs along with complete records of core sampling and major analytical results. Core sample intervals were laid out by the logging geologist and sample intervals recorded on the drill log. All core was split and half core samples were submitted for analysis to Bondar-Clegg and Co. laboratories in Ottawa, ON. Reports do not specify details of actual sample handling, tagging or shipping protocols, but standard tagging of sample intervals in archived drill holes is apparent. While some core sample intervals were laid out based on visually determined mineralized zone limits or lithologic boundaries, with individual samples ranging from as little as 5 centimeters for well mineralized vein intercepts, most ranged between 2 meters and 4.1 meters in length. Continuous down hole sampling of drill core was not carried out in all holes, possibly due to lack of visible mineralization in certain areas.

11.2 Geodex Minerals Ltd. Programs

2005 Program

Geodex staff was consulted with respect to determination of core logging and sampling procedures used during the company's 2005 drilling program and a review of related core logs and sample records was completed to augment the staff information. Standard Geodex practice was to have a geologist prepare detailed conventional core log descriptions and to mark core sampling intervals based on lithologic units as well as both intensity and style of observed mineralization and alteration. All core was split and half core samples were submitted for analysis to Activation Laboratories. Geologists used standard core sampling and tagging procedures. Sample records and drill logs were subsequently entered into digital spreadsheets to facilitate data handling and development of interpretive sections and plans. As was the case in previous programs, core sample intervals were laid out based on visually determined mineralized zone limits or lithologic boundaries, with individual samples ranging from as little as 12 centimeters for well mineralized vein intercepts, to a maximum length of 2.56 meters. A 1.5 meter standard sample interval was typically applied and the majority of samples reflect this length. In contrast to earlier programs, continuous down hole sampling of core was carried out to provide a more complete analytical record of bedrock metal distribution and grades.

2006 to 2009 Programs

Early in the 2006 drilling campaign Geodex retained Mercator to assist in development of revised core logging, sampling, security and quality assurance and control procedures for the company's Sisson Brook project. After onsite review and discussions with Geodex staff, a series of amendments to existing procedures were recommended by Mercator and ultimately adopted by Geodex. With respect to logging and sampling protocols, use of three tag sample record books was first instituted to provide a more efficient means of tracking and recording samples through the splitting and archiving process. A standardized 1.5 meter core sample length to be used in conjunction with continuous half core sampling from the top of bedrock to hole bottom was also established. Where deemed appropriate by the core logging geologist, smaller sample intervals could be assigned within the continuous sample sequence if presence of a high grade vein or other interval dictated that segregation of analytical values to a specific zone would be appropriate. A minimum sample length of 0.5 meters was implemented for this situation.

Core logging and sampling were carried out at the Geodex logging facility located first in Nackawic (2006 only) and subsequently in the nearby rural community of Tripp Settlement. The first step in this process was receipt of core from the field after which it

was washed and prepared for an initial inspection under ultra-violet (UV) light to define major rock units and associated mineralized intervals. UV-fluorescent qualities of scheelite and molybdenum-bearing scheelite were used in combination with observations of the visually more apparent molybdenite to provide a preliminary assessment of mineralization intensity. Core was then stacked for subsequent detailed logging and sampling.

After logging by a staff geologist, but prior to sampling, all core was photographed using a standardized layout format and digital camera to provide a permanent pre-sampling record of core from each drill hole. At the same time continuous rock quality determinations (RQD) were recorded for all cores and entered into the digital project database. Conventional core logging procedures were standardized through use of a project lithologic legend and lithocode system with log information entered directly into a spreadsheet based template that was then integrated into the digital project database. Copies of the lithologic legend and associated lithocodes appear in Appendix 2.

Core splitting was carried out by Geodex staff using mechanical splitters for general use and a core saw where close inspection of mineralization or other features was required. Split samples were placed in pre-labeled plastic bags along with a corresponding sample book tag and then sealed and laid out for checking prior to insertion of quality control materials into the sample sequence

12.0 Sample Preparation, Analyses and Security

12.1 Kidd Creek Mines Ltd. Programs

Reports documenting the Kidd Creek drilling programs do not provide detailed descriptions of sample preparation methodologies, analytical procedures or security considerations. However, Mann (1982) reported on the first two items and it is assumed that similar procedures were in place for the earlier programs, reporting for which was prepared by the same author.

Bagged samples of half core material were shipped from Kidd Creek's Fredericton office to Bondar-Clegg laboratories in Ottawa ON and upon arrival were subjected to standard rock preparation procedures that would have included jaw crushing and pulverizing. This produced a -200 mesh rock pulp that was used in subsequent analytical procedures. Assay quality analyses for WO₃, Cu, Ag, As and Bi were obtained for 1982 sampling with Cu, WO₃, and Ag assay quality analyses requested for earlier years. In addition to assay procedures, geochemical analyses for Pb, Zn, Ag, Mo, Bi, Au, As, Sb, and Sn were obtained for non-assayed samples in 1979 and 1980 with this suite changing to Cu,Pb,Zn,

Mo, Ni, Ag, Bi, F and As in 1981 and subsequently to Cu, Ag, Bi Sb and Zn in 1982. Analytical and extraction details are only reported for the 1982 program and are summarized in Table 6 below. It is assumed that similar preparation and analytical procedures were used for samples from the drilling programs pre-dating 1982 but this was not confirmed.

Table 6: Analytical Methods Reported in Mann (1982) For Zone III Core Samples

Type	Element	Fraction	Extraction	Method
Assay	WO ₃	-200 Mesh	Thiocyanate	Colorimetric
Assay	Cu	-200 Mesh	HF + HNO ₃	NS
Assay	Ag	-200 Mesh	-----	Fire Assay
Assay	As	-200 Mesh	Na Peroxide Fusion	Idiometric Titration
Assay	Bi	-200 Mesh	HF + HNO ₃	Atomic Absorption
Geochemical	Pb, Zn, Bi	-200 Mesh	HNO ₃	Atomic Absorption
Geochemical	Mo	-200 Mesh	HNO ₃ -HCL	Atomic Absorption
Geochemical	Sb, Sn	-200 Mesh	X-Ray Fluorescence	Atomic Absorption
Geochemical	F	-200 Mesh	Fusion	Specific Ion Electrode
Geochemical	As	-200 Mesh	HNO ₃ -HCLO ₄	Atomic Absorption

* NS =Not Stated

No mention is made of sample or site security measures in Kidd Creek reporting but this is not unusual for the reporting period. For present purposes it is assumed that security measures consistent with industry standards of the day were in place during the 1979 through 1982 drilling programs.

12.2 Geodex Minerals Ltd. Programs

Core samples from Geodex 2005 through 2007 drilling programs were placed in plastic sample bags, checked for sample sequence integrity and then shipped by courier to the selected laboratory. In 2005 and early 2006 Activation Laboratories Ltd. (Actlabs) in Ancaster ON provided analytical services and utilized their IEPI multi-element (Au plus 14) analytical package. Instrumental Neutron Activation Analysis (INAA) methods were used to determine Au, As, Ba, Sb, Hg, and W levels and Inductively Coupled Plasma (ICP) methods were used to determine Ag, Cd, Cu, Mn, Mo, Ni, Pb, Zn and S values after Aqua Regia digestion. Standard rock preparation methods of crushing, pulverizing to 95% minus 150 mesh and splitting prior to analysis were specified. This laboratory and methodology were used for all 2005 core samples as well as for initial samples submitted in 2006

Early in the 2006 sampling program the IEPI protocol was reassessed by Geodex in consultation with Actlabs management to restrict the company's analytical protocol to

Mo and W as the main metals of economic interest and to ensure that assay quality results were being provided at all times. As a result, the company changed its analytical protocol from 1EPI to assay level determinations using INAA methodology. This served to specifically provide assay quality precision and accuracy for the range of W and Mo elemental concentrations of interest at Sisson Brook. Assay quality determinations were also requested to assess the earlier 1EPI results and, based on these results, re-analysis of additional higher grade samples was completed to establish validity of results.

In addition to analysis of core by Actlabs, prepared check sample splits from the 2006 drilling program were analyzed by ALS Chemex in Vancouver, BC using the X-Ray Fluorescence Spectroscopy (XRF) Pressed Pellet method. In 2007, 2008 and 2009 check sample analyses were carried out at Teck-Cominco's Global Discovery Laboratory in Vancouver, BC. This formed part of the Geodex quality control and assurance program, results of which are discussed in section 13 of this report. Table 7 provides a summary of sample preparation and analytical details associated with both the INAA and XRF packages used by Geodex to date.

Table 7: Analytical Methods Used By Geodex for 2005, 2006, 2007, 2008 and 2009 Programs

Method	Laboratory	Fraction	Elements	Category
INAA and ICP	Actlabs	-150 Mesh	**W, Mo,	Near Assay Quality
INAA	Actlabs	-150 Mesh	Mo	Assay Quality
INAA	Actlabs	-150 Mesh	W	Assay Quality
XRF	ALS Chemex	-150 *Mesh	W, Mo	Assay Quality
ME-XRF-05	ALS Chemex	-150 *Mesh	W, Mo	Assay Quality
XRF Fusion\Assay	Teck-Cominco	-150 *Mesh	W, Mo	Assay Quality

**Prepared check sample split from Actlab coarse reject*

*** Plus Au, Ag, Cd, Cu, Mn, Ni, Pb, Zn, S, As, Ba, Hg, Sb,*

A system of responsibility for security of drill core was implemented during the 2006 program that began at the drill site and continued through transportation to the sampling and logging facility and then onward through shipment of samples to the laboratory. At the drill site security of core was the responsibility of the contractor under direction of Geodex. Drill crews were instructed that only they and designated Geodex personnel were to access core at the drill sites and that core boxes should be covered immediately after drilling. Designated field transfer points were established at which responsibility for core security passed from the drilling contractor to Geodex. This was a matter of day to day arrangement between the drilling contractor's crews and Geodex personnel. The focus of site security was to ensure that core was not left in a location where it could be reasonably accessed by non-authorized persons. It was generally assumed that Geodex staff would transport core to the company logging and sampling facility. Core delivered

to the facility was placed in a secure location prior to logging and sampling and Geodex personnel were responsible for security of all core and samples at the logging facility. Only persons authorized by Geodex were allowed to view the core and the sampling facility was locked at all times when Geodex staff were not present. Prior to sampling, a digital picture of each core box was taken and archived for future reference. After core logging and sampling were completed, core boxes containing half-core archives were labelled with weather-proof aluminium tags and stored at the logging facility on pallets confined by steel strapping bands.

All 2006 through 2009 split core samples were recorded on sample shipment forms and, after checking against sample listings, were placed in sealed plastic buckets for shipment to the selected laboratory. Details of the shipment were recorded, including date shipped, sample numbers, client account number, laboratory name and name of the individual responsible for preparation of the documents and security of the sample shipment preparation process. Samples from 2006 were commercially shipped to Activation Laboratories (Act labs) in Ancaster ON and indexed by Geodex. Subsequent to receipt of analytical data, sample pulps were retained at the laboratory for subsequent return to Geodex or other disposition. Sample handling and analysis protocols for 2007, 2008 and 2009 were essentially the same as those used in 2006 with the exception that sample preparation was carried out at a laboratory facility operated by Actlab in Fredericton, New Brunswick and check samples were processed at the Global Discovery Laboratory facility operated by Teck-Cominco Ltd. (now Acme Analytical Laboratories) in Vancouver (see previous Table 7). Accordingly, logistical details of sample delivery to this facility differed from those in the earlier program.

13.0 Data Verification

13.1 Review and Validation of Project Data Sets

Government assessment reports and internal Geodex files consisting of core sample records, lithologic logs, laboratory reports and associated drill hole and survey information for all holes used in the Sisson Brook resource estimates were reviewed by Mercator. Spot checking of digital records of drilling information used to create the resource estimate block model were manually validated against hard copy records. This consisted of back checking individual database lithocode entries against the source hard copy drill logs and assessing whether the lithocoding adequately represented originally logged rock types. Approximately 10% of all 2006 and 2007 lithocoded drill hole intervals were checked in this manner and no substantial inaccuracies were detected. However, in several instances it was apparent that subjective assignments had been made with respect to lithocoding of some rock types. A complete (100%) review of logged

lithologies against corresponding lithocodes was carried out by Geodex for all 2007 drilling in early 2008 and numerous entries were modified to provide better consistency between drilling programs and loggers. These updated logs were made available to Mercator for use in the June 2008 resource estimate and additional logs for the remaining 2008 drill holes were made available during the late Fall of 2008. Systematic checking of these for lithocoding and data entry errors was completed and corrections made as required. Logs were typically found to be in acceptable order, with only minor lithocoding or interval errors present.

After incorporation of all 2008 and 2009 lithocoded logs, all new database drill hole intervals checked by Mercator for lithocode validity were also checked for sample record and assay value validity against available source documents, and database records were found to be in agreement with source records. This result reflects earlier validation of logging and assay results against source documents by Geodex prior to delivery to Mercator as well as use of automated validation routines during assembly of the database by Mercator, which had detected several data entry errors associated with either sample records, drill hole lithocodes intervals, collar or down hole survey tables. All of these issues were sequentially addressed to establish the validated and functional drilling database versions used for the various resource estimates prepared between 2007 and 2009 by Mercator.

To assess correlation potential in sequences lithocoded as being of mixed meta sedimentary and metavolcanic content, a closer inspection of database lithocodes and supporting drill log lithology descriptions was carried out during October, 2009 for certain areas in Zone III showing mixed volcano-sedimentary sequence lithocodes. This program showed that although existing lithocodes were typically acceptable, greater detail could frequently be attained through careful re-assessment of contributing lithology percentages in mixed sections. Based on this result, a focused lithocode review program was carried out to define additional correlatable lithologic unit limits in the volcanic and sedimentary sequence. Resulting new units were subsequently incorporated in the wireframed geological solids model used in the current resource estimate.

13.2 Quality Control and Quality Assurance (QA/QC)

13.2.1 Kidd Creek Mines Ltd. Programs

Assessment reports documenting the Kidd Creek Mines Ltd. drilling programs do not specifically address QA/QC issues. No evidence was noted of independent certified standards being submitted with core samples nor is there any evidence of systematic submission of blank samples or systematic provisions for duplicate sample splits to be

prepared and analysed. Mann (1982) reported on re-assays of WO₃ for a collection of 67 original sample pulp splits from drill hole SSN-33, 9 of which also had new assays reported for pulps generated from second splits of original sample reject materials. Review of the re-assay data set relative to original values showed that reproducibility is moderately good for samples with original WO₃ results above 0.05% but relatively poor for samples with lower original values. Original split values are typically lower than re-assay values but no explanation is offered for this trend. Mann (1982) considered the overall reproducibility of assay values between sample splits to be consistent and acceptable.

While the split discrepancy issue does not appear to have been clearly resolved, reproducibility of values at grade levels of economic interest is more acceptable than at low analytical levels. The entire drilling dataset from Kidd Creek can't be properly assessed on the basis of results from this one drill hole, but better reproducibility for sample pairs in the higher grade ranges suggests that such data is of reasonable precision. Laboratory QA/QC standards appear to have been generally relied upon by Kidd Creek to monitor precision and accuracy of analytical results and it can be assumed that Bondar-Clegg results met internal laboratory QA/QC standards of the day. On this basis, the Kidd Creek drilling results are considered to be of sufficient quality for use in the current resource estimate. However, future re-analysis of additional samples from these drill was recommended by Cullen and Harrington (2007b).

13.2.2 Geodex Minerals Ltd. Programs

Overview

During its 2005 drilling program Geodex completed only 3 drill holes within the Zone III and Ellipse resource areas described in this report. Through discussions with Geodex staff it was determined that analytical standards, blanks and duplicate sample analyses administered by Actlabs in the course of the 1EPI analytical protocol were used to meet QA and QC requirements. Independent insertion of certified standards by the company was not carried out nor were in-house blanks inserted or duplicate analyses requested for sample splits. Comparison with results of Kidd Creek Mines drill core sampling results and subsequent 2006 results by Geodex showed that comparable grade ranges were exhibited for closely spaced drill holes from the three programs. This subjective comparison was assessed for current resource purposes by graphically comparing analytical results for 6 meter composites from the 2005 program with adjacent 6 meter composites from the preceding and subsequent programs across correlatable mineralized zones shown in corresponding grade cross sections. This comparison showed that while variation existed, results from the three data sets showed generally comparable values

that allowed correlation of similar grade trends from hole to hole. On this basis, and in light of the internal laboratory generated and monitored QA and QC procedures, it was determined that results for the 2005 Geodex drill holes were of acceptable quality for use in estimation of mineral resources. Cullen and Harrington (2008) recognized, however, that further confirmation of this assumption through completion of a systematic re-sampling program of available coarse reject or half-core materials from both the 2005 program as well as the previously noted Kidd Creek Mines drill holes would be desirable.

In the main 2006 drilling program Geodex completed 28 holes within Zone III and 1 in Zone I. The company adopted a QA/QC program recommended by Mercator that included systematic insertion of Canmet certified analytical standards and blind blank samples in addition to preparation and analysis of duplicate split samples and submission of additional check sample splits to ALS Chemex, an accredited third party commercial laboratory. More specifically, blind blank samples were inserted into the normal core sample sequence at a frequency of every 25th sample and sample tag books were pre-marked to ensure adherence to this system. Barren greywacke core supplied by Mercator was initially used for sample blanks but was subsequently replaced by barren sandstone sample material collected by Geodex.

Two certified laboratory standards sourced from Natural Resources Canada's Mining and Mineral Sciences Laboratories (Canmet) were used in 2006, these being Canmet MP-2 and Canmet BH-1 and in 2007 and 2008 these were augmented by inclusion of additional third party standards. The 2009 program used only Canmet HV-2, Canmet BH-1 and Canmet TLG-1 standards. Prepared standard samples were inserted into the sample submission sequence by Geodex staff at nominal intervals of approximately 80 core samples in 2006 and 40 samples in 2007, 2008 and 2009. All standards were assigned numbers within the continuous sample record sequence. Since all standards were previously prepared, they were not blind to the receiving laboratory, but no recognition of their status or identity was included in sample support documentation submitted to the laboratory. Preparation and analysis of duplicate sample splits from every 30th core sample was also carried out during the 2006 and subsequent programs, with the duplicate analysis identified as such by the laboratory. A third sample split was also prepared from the same sample for submission to ALS Chemex in 2006 and to Teck-Cominco Limited's Global Discovery Laboratory in subsequent years for purposes of independent check analysis of metal levels. As noted earlier, this facility was acquired by Acme Analytical Laboratories in July, 2009 and check sample results for the 2009 Geodex program were issued as Acme laboratory reports.

Certified Standard Program

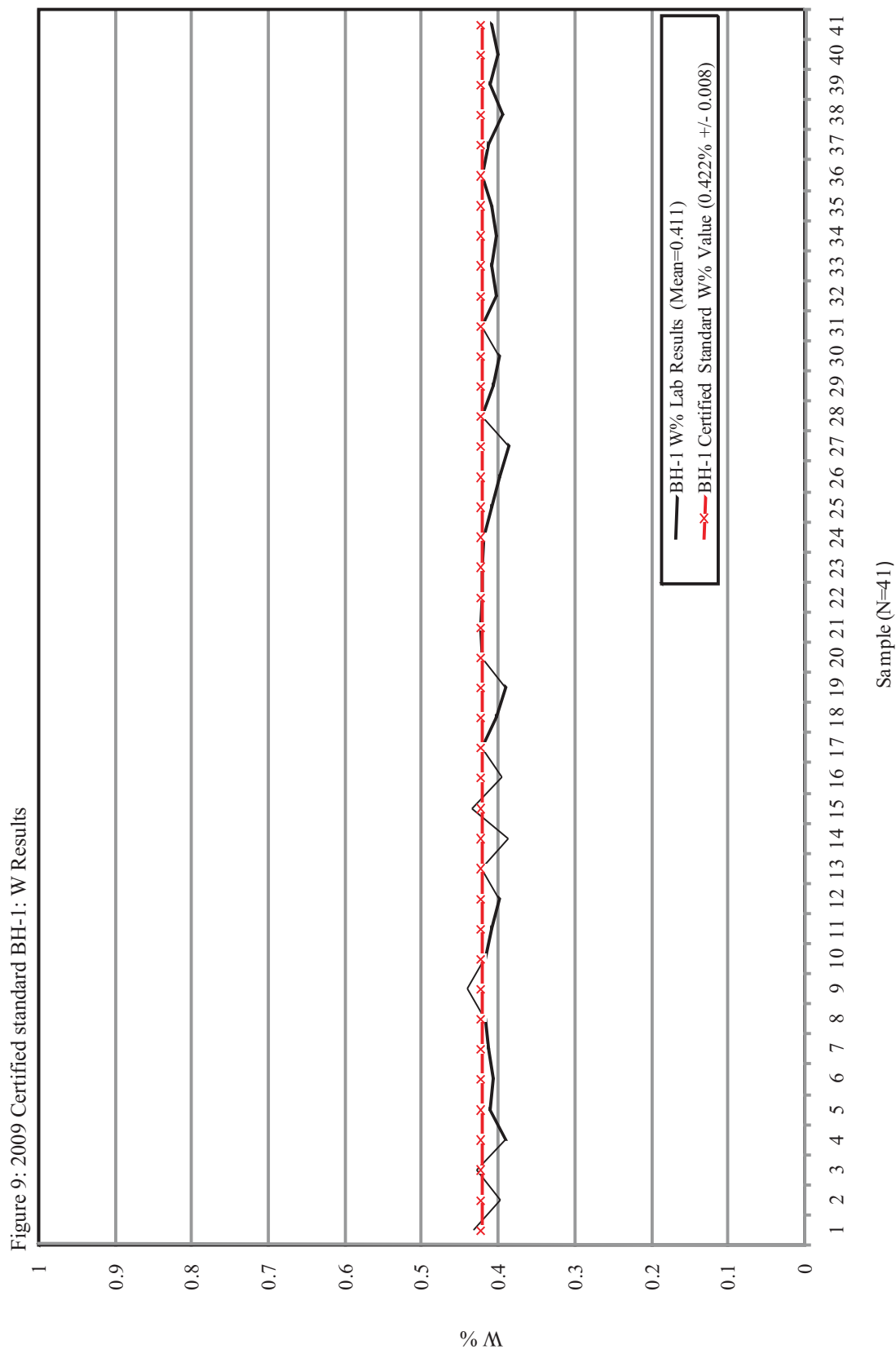
Results of the certified analytical standards program pertaining to the March, 2007 resource estimate by Mercator are discussed in Cullen et. al. (2007a) and those for the three subsequent estimates by Cullen and Harrington (2007b, 2008, 2009) are discussed in the corresponding technical reports filed for disclosure. In all three cases, final analytical results assembled in the project database were considered acceptable for resource estimation purposes.

During 2009 standards MP-2 and HV-1 were not available and the Geodex drilling program therefore only included Canmet standards TLG-1, HV-2 and BH-1. In total, 152 independent certified standard samples were analyzed during the 2009 program and Table 8 presents 2009 program descriptive statistics for each standard population. Figures 9 through 11 present charted results for the various standards, not all of which are certified for both Mo and W. Standards.

Table 8: Certified Standard Descriptive Statistics For 2009

Parameter	TLG-1 (W%)	HV-2 (W%)	BH-1 (W%)
Certified Value	0.083% ±0.004	*NC	0.422 ± 0.008
Mean	0.080	*NC	0.411
Standard Dev.	0.003	*NC	0.013
Range	0.013	*NC	0.052
Minimum	0.076	*NC	0.388
Maximum	0.089	*NC	0.440
Confidence 95%	0.001	*NC	0.004
Number	36	*NC	40
Parameter	TLG-1 (Mo%)	HV2 (Mo%)	BH-1 (Mo%)
Certified Value	*NC	0.048 ± 0.002	*NC
Mean	*NC	0.048	*NC
Standard Dev.	*NC	0.003	*NC
Range	*NC	0.016	*NC
Minimum	*NC	0.041	*NC
Maximum	*NC	0.057	*NC
Confidence 95%	*NC	0.001	*NC
Number	*NC	76	*NC

NC –no certified value for standard



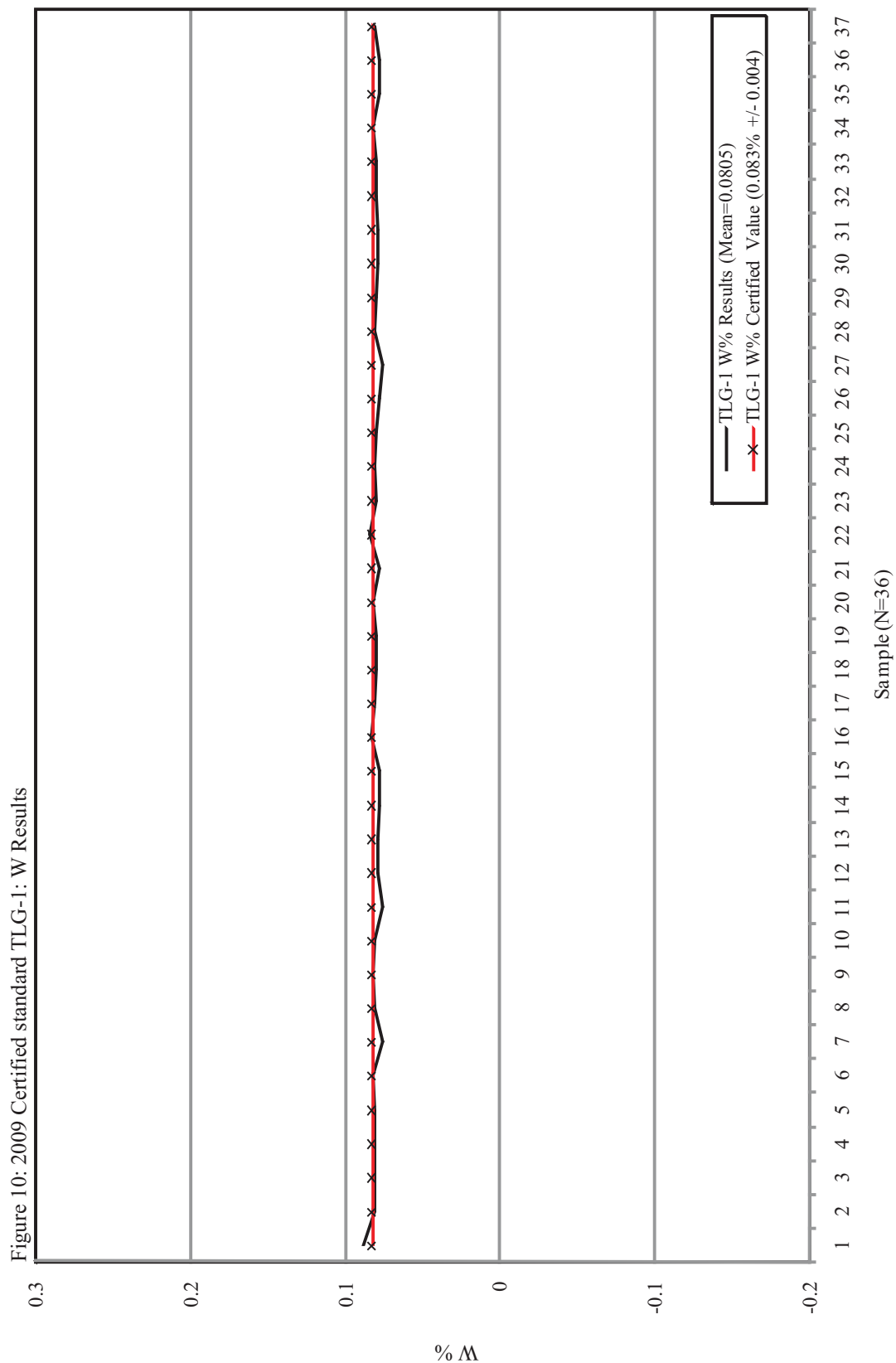
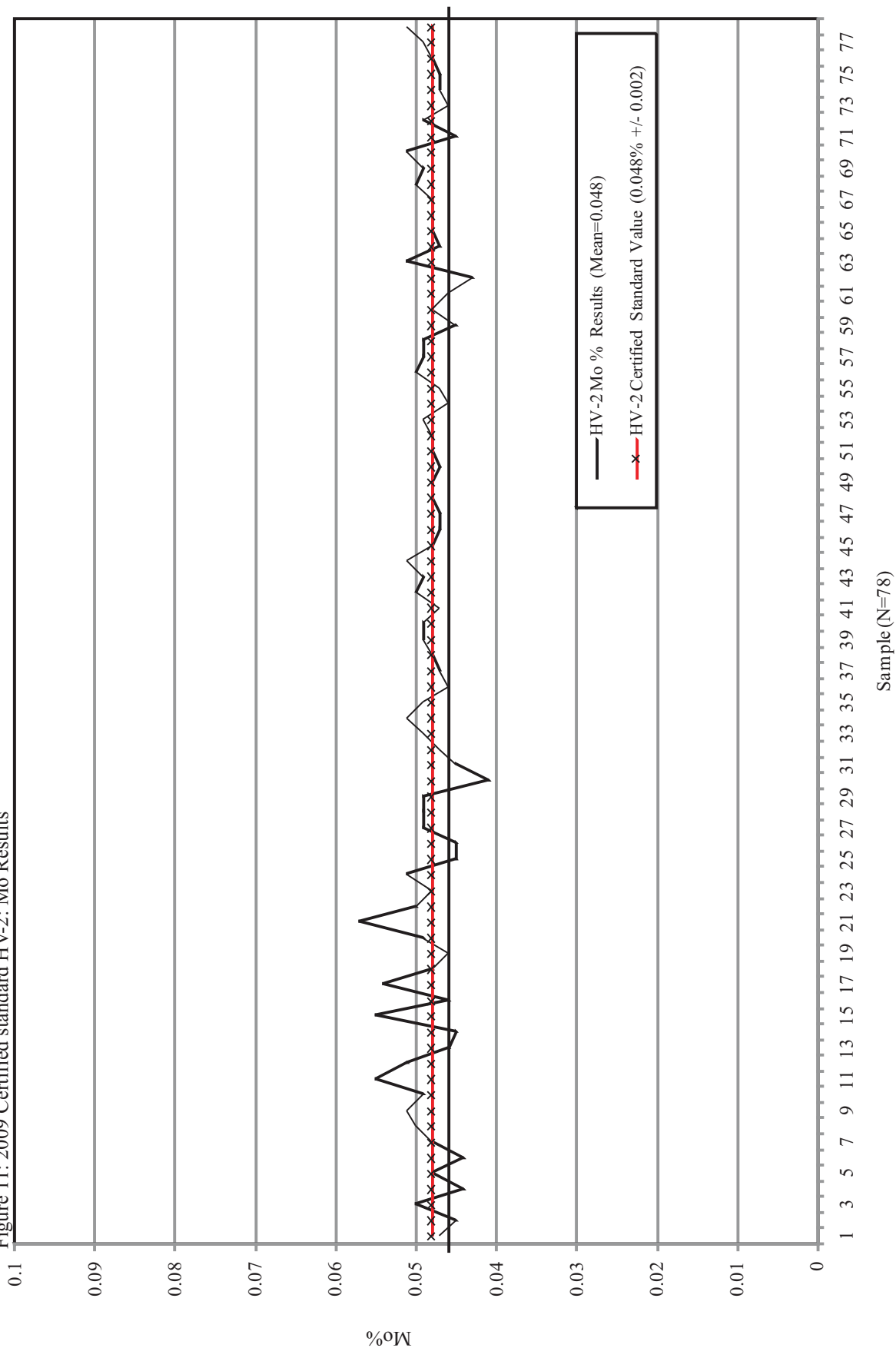


Figure 11: 2009 Certified standard HV-2: Mo Results



The W mean for TLG-1 falls within the certified value range and shows no prominent spiking of data. A slight low bias toward the lower error margin for the sample is present. The BH-1 W mean is 0.011% lower than the certified value mean and 0.003% lower than the lower error margin for the sample. The data set is not characterised by strong spiking but shows a slight, systematic low bias around the lower error margin. The Mo mean for standard HV-2 exactly matches the certified value but inspection of the data set shows that single site spiking to 0.007% above and below the mean is present, with such values falling outside the ± 0.002 error limits for the standard. Spiking to this degree exists for only 2 samples. A few additional samples exceed the error margins by .003% or less and these show a slight positive bias.

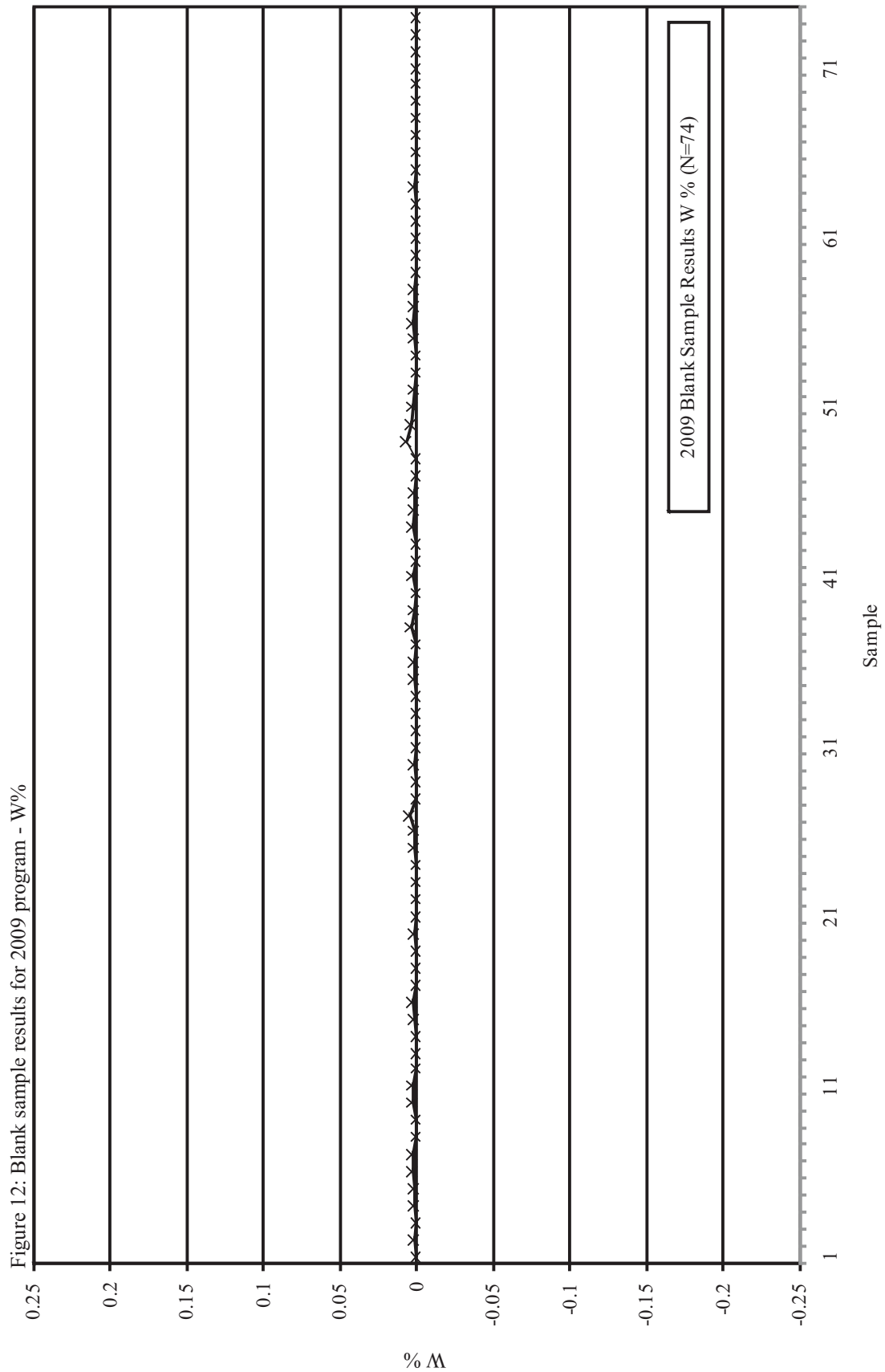
Analytical result means for all three standards used in 2009 compare very well with those from the 2008 drilling program. More specifically, 2008 W means of 0.081% and 0.411% respectively for standards TLG-1 and BH-1 were returned in 2008 and mean values of 0.80% and 0.411% were returned for the 2009 program. The 2008 Mo mean for standard BH-1 was 0.049% and the corresponding mean for 2009 was 0.048%.

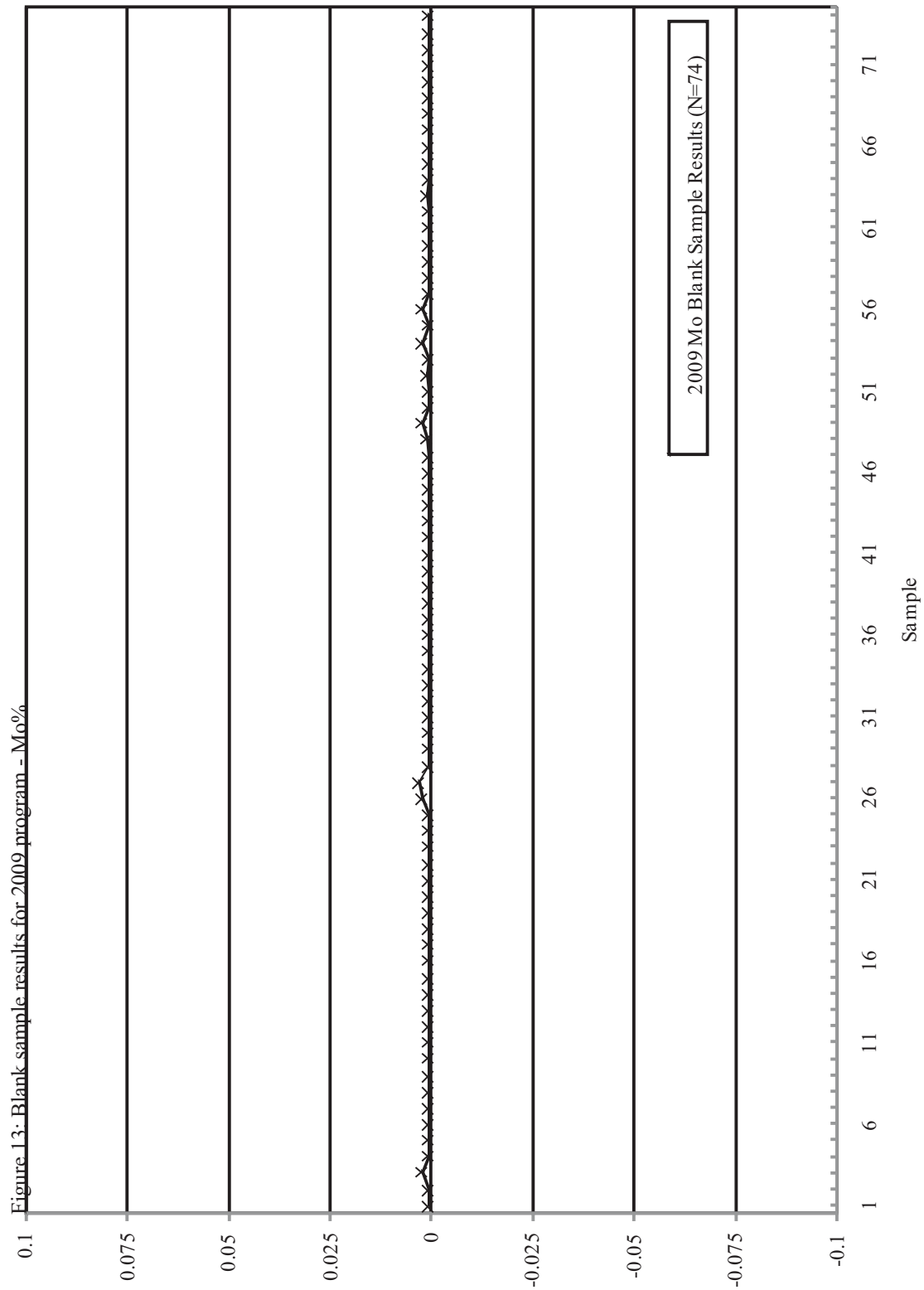
Based on overall results, qualified above with respect to slight low bias tendencies in the TLG-1 and BH-1 results, the certified standards dataset for 2009 drill holes and related core sample data were deemed to reflect acceptable accuracy levels for resource estimation purposes.

Blind Blank Sample Program

As described earlier, blind blank samples were inserted by Geodex into the 2006 sample stream at a frequency of every 25th sample. Barren greywacke supplied by Mercator was used until being replaced by non-metamorphosed sandstone acquired locally by Geodex. This practice was continued in 2007 and 117 blank samples from new drill holes were reported for the first part of the 2007 program, results of which were incorporated in the October, 2007 resource estimate for Zone III by Cullen and Harrington (2007a). Subsequent to that report, 634 additional blank samples from 2007 and 2008 drill holes were submitted for analysis and results were discussed in respective technical reports (Cullen and Harrington, 2007b, 2009). Results were found to be acceptable, with a single highlighted W spike being potentially related to sample preparation procedures and a few very low-level instances of potential cross contamination also cited. No systematic or clearly problematic trends were identified.

The 2009 drilling program incorporated analysis of 74 new blank samples and results for these are presented in Figures 12 and 13. Background values for both the W and Mo data sets are consistently repeated with isolated, non-systematic, single site exceptions present





as very low level spikes, the largest of which are 0.003% and 0.006% respectively for Mo and W. In both data sets the dominant value returned was that marking measurement at less than the respective analytical detection limits. These results are interpreted as indicating that no systematic or substantive problems arising from consecutive sample cross-contamination are present in the 2009 data set. In context of the entire 2009 blind blank data set, results for the 70 blind blank samples are considered consistent with those received in previous Geodex drilling programs and acceptably consistent for resource estimation purposes.

Duplicate Split Sample Program

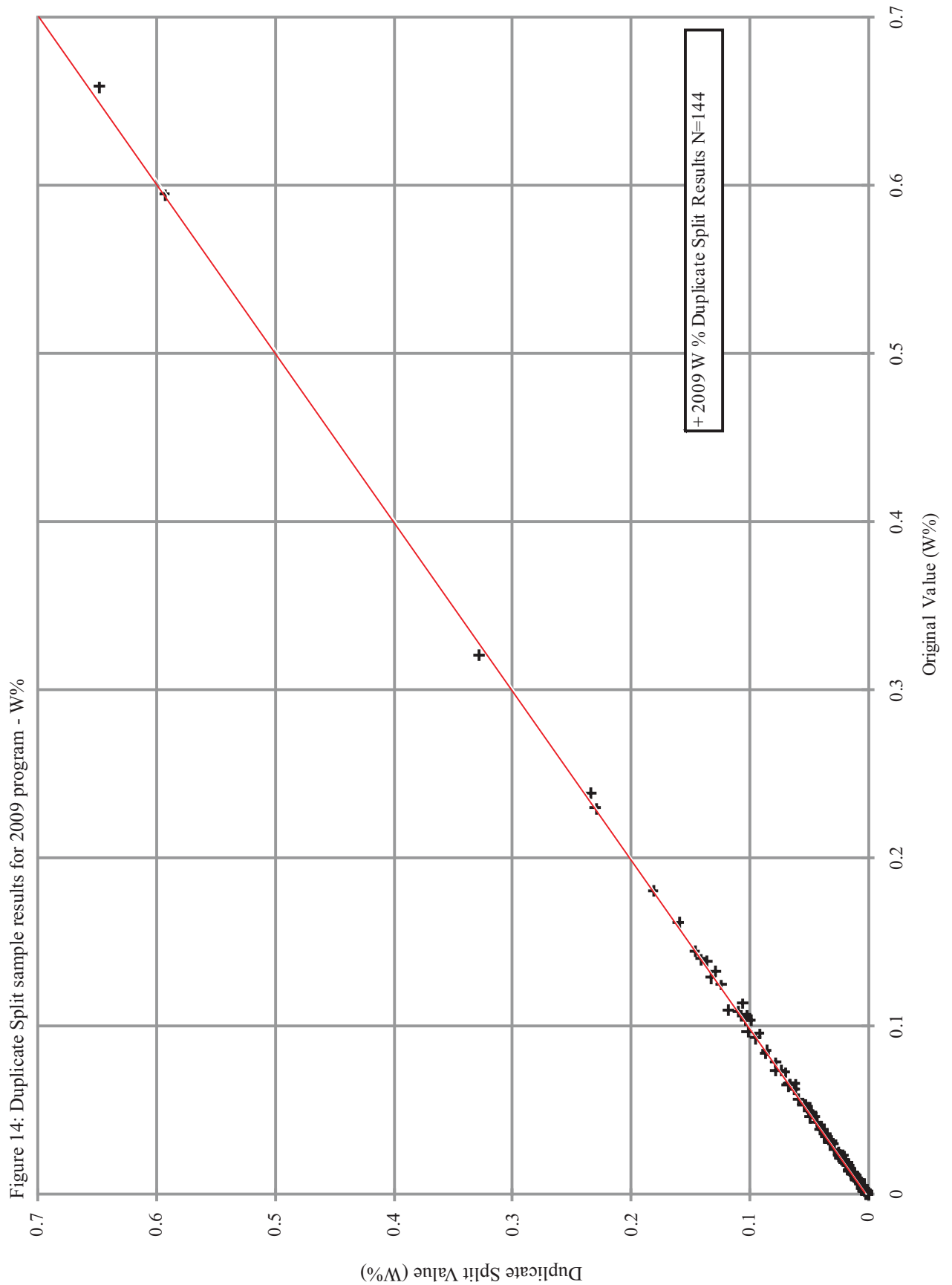
Duplicate sample splits were prepared from coarse reject materials for every 30th sample submitted and these were analysed for W and Mo levels in addition to the original sample split for all new holes included in the current estimate. Values for the earlier 2006, through 2008 programs were reviewed in Cullen and Harrington (2008, 2009) and show acceptable correlation trends. A total of 144 duplicate split pairs were reviewed for the entire 2009 drilling program and Figures 14 and 15 compare associated W and Mo values for this data set. Correlation coefficients of 0.998 and 0.999 apply to results for W and Mo respectively and reflect acceptable precision for resource estimation purposes.

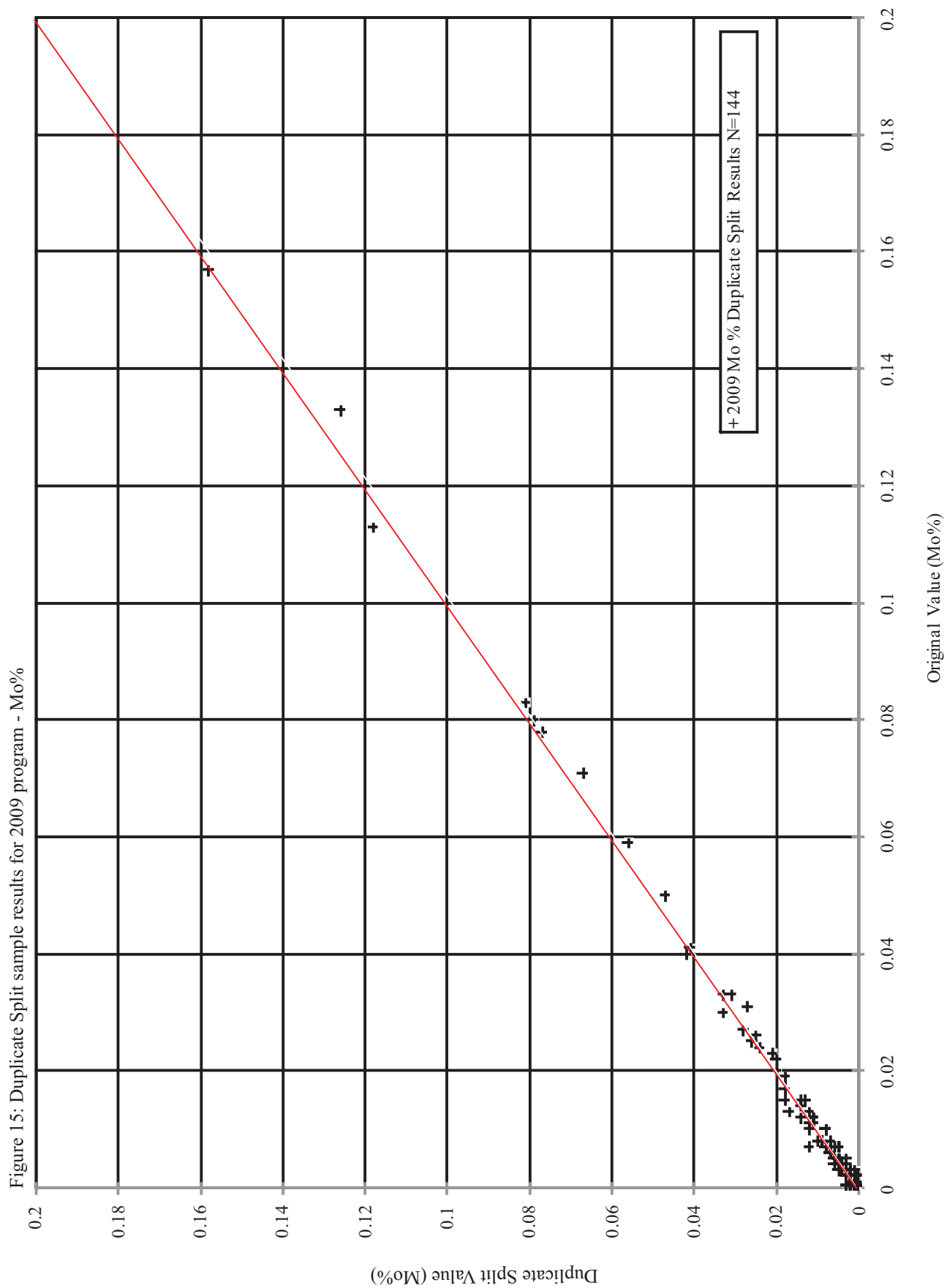
Independent Check Sample Program

Cullen and Harrington (2009) discussed results of the 2006 through 2008 check sampling programs, respectively, carried out by Geodex and specific issues associated with initial 2006 check results were addressed therein. Summarily, in 2006 Geodex had determined that while acceptable results were in many cases returned from ALS Chemex for 2006 check samples, certain samples, including certified standards submitted by Geodex, showed a broader range of correlation to original results than had been expected. After review and discussion of results with laboratory representatives, value of ALS Chemex results as a check sample dataset was down graded and reliance placed on the 2006 certified standard, blank and duplicate split results for the program.

Subsequent to 2006, check samples for Geodex programs were submitted to Teck-Cominco Limited's Global Discovery Laboratory (Global) in Vancouver, B.C for analysis. Cullen and Harrington (2008) reported that 450 check sample pairs associated with the 2007 drilling program support correlation coefficients of 0.997 for W and 0.990 for Mo and 2008 results for 173 additional retained sample pairs support correlation coefficients of 0.997 and 0.986 for Mo and W respectively.

The 2009 drilling program included 120 check sample pairs and results for these are presented in Figures 16 and 17. Correlation coefficients of 0.996 for Mo and 0.994 for W





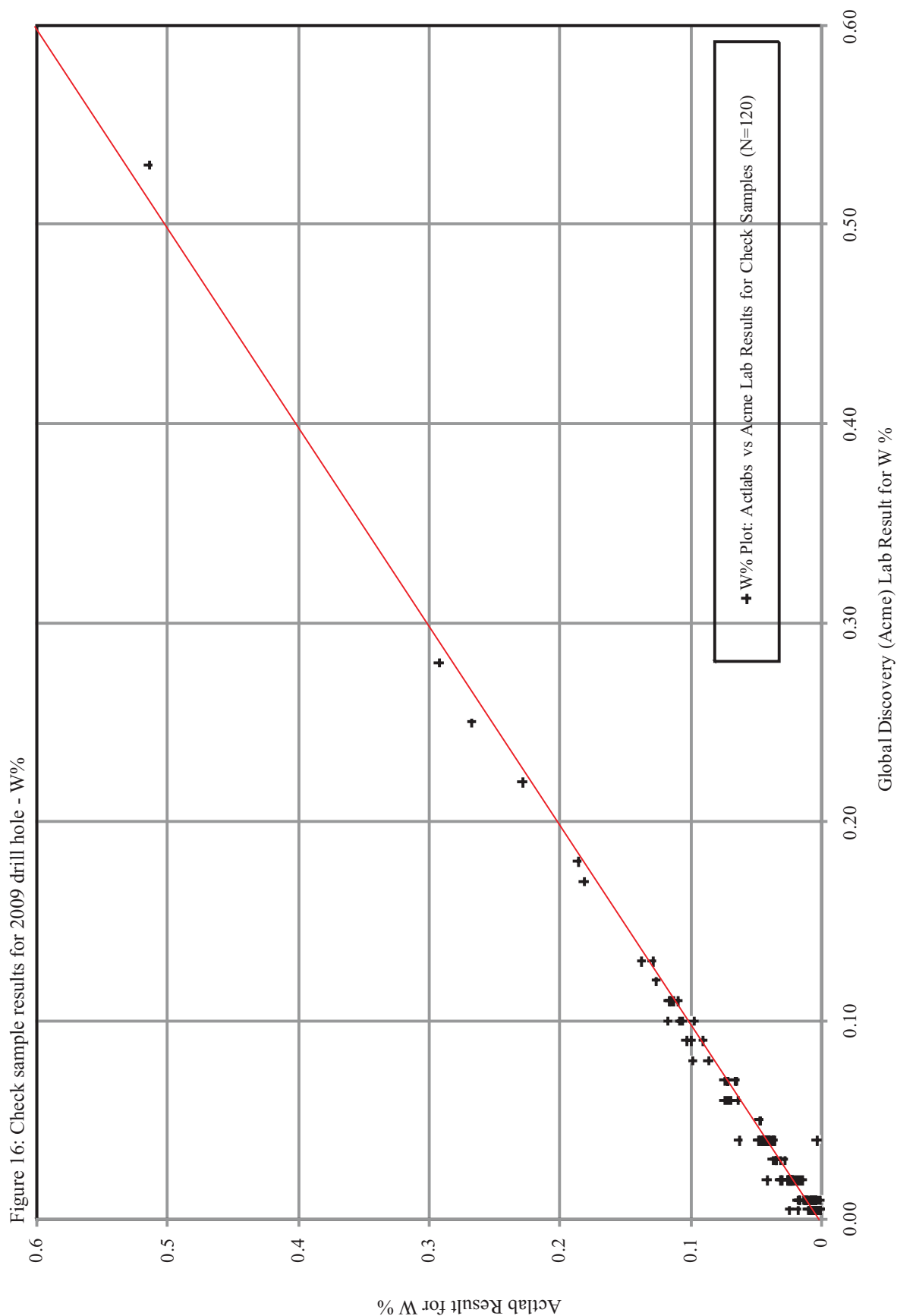
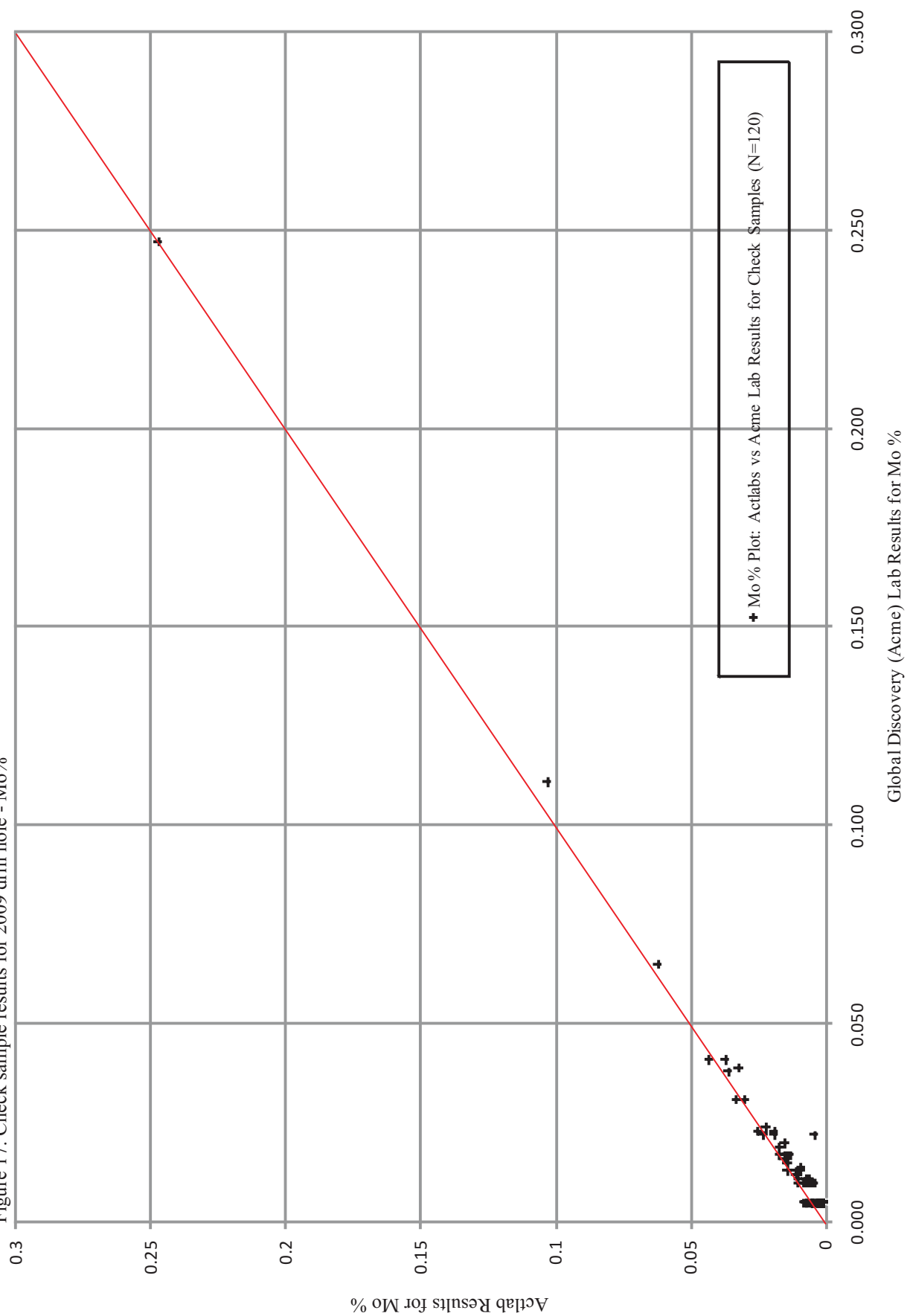


Figure 17: Check sample results for 2009 drill hole - Mo%



apply to these sample pairs. Review of the two data sets showed that Global results reported measurably above those from Actlab for approximately 55% of all pairs, but typically at very low absolute values. This compares to 42% of 2008 check samples showing slightly higher values returned from Global. The 2009 independent check sample program results are interpreted as being consistent and acceptable.

14.0 Adjacent Properties

No adjacent properties as defined under NI 43-101 are pertinent to this report.

15.0 Mineral Processing and Metallurgical Testing

15.1 Micron Geological Limited – 2007

As reported previously in Cullen and Harrington (2007), in mid-2006 Geodex retained the services of Micron Geological Limited (Micron), of Vancouver BC, to carry out an initial petrographic assessment of Sisson Brook Zone III mineralization. This project was designed to support planned metallurgical test work by Process Research Associates, also of Vancouver BC., on the same sample materials. Le Couteur (2006) reported on petrographic study of five sections of drill core reject materials consisting of six contiguous 1.5 m lengths samples selected from Geodex drill hole SB-06-03. Each sample represented a zone of known W-Mo, W or Mo mineralization that had been identified through drill core analysis by Geodex.

Results of the petrographic work confirmed that scheelite and molybdenite are the main minerals of economic interest and that trace element analyses did not reveal substantial levels of any other economically significant elements in the samples. However, small amounts of sphalerite, galena, chalcopyrite and wolframite were observed. Quartz, feldspar, amphibole, biotite-phlogopite and chlorite comprised the major rock forming minerals in the samples and their occurrence was deemed to be consistent between samples. Minor amounts of calcite, ilmenite, pyrite, pyrrhotite and arsenopyrite were also noted.

Study of scheelite grains in the samples showed that size varied substantially, from <0.025mm to 2mm and observations on screened sample fractions showed that 80% to 95% of scheelite grains in the size range -0.86 mm to +0.25mm were fully liberated from gangue or host rock particles. In contrast, less than 5% liberation of scheelite was reported for the +0.86 mm size fraction. Similar results were seen for molybdenite, where observed grain size varied from <0.025 mm to more than 4.0 mm and 80% to 90% liberation of the mineral was noted in the -0.86mm to +0.25 mm sample fraction. This

liberation trend was more strongly represented in heavy mineral concentrates that were also studied by Le Couteur (2006) and geochemical studies on the screened fractions showed that scheelite grain compositions predominated with only minor representation of powellite.

Results of the preliminary metallurgical studies programs outlined above were interpreted to indicate that good liberation of scheelite and molybdenite from Zone III material may be possible after grinding to minus 0.86 mm grain size, but that additional detailed study is required.

15.2 Wardrop Engineering Limited - 2007

Subsequent to the initial Micron metallurgical studies, Geodex completed specific core drilling on Zone III to obtain additional metallurgical test material and work on these samples was carried out to support of the Scoping Study Report prepared by Wardrop Engineering in late 2007 (Ozturk et al., 2007). Results of the work completed for use by Wardrop supported recovery factors of 85% for Mo and 70% for WO₃ for combined gravity and flotation recovery processing. These were subsequently applied in Wardrop's study of economic viability.

15.3 Geodex - 2008-2009

Subsequent to completion of the Wardrop report, Geodex pursued further assessment of metal recovery options, including consideration of automated ore sorting systems to increase milling head grades. Initial results of this work were reported in the Preliminary Economic Assessment prepared by Geodex and presented by Marr (2009). Latest metallurgical testing was carried out by SGS Canada (SGS) at that company's Vancouver, BC facility under direction of Geodex's consultant, A. Bolu Consulting Engineering Inc, also of Vancouver BC. The 2008 metallurgical program was carried out on a 2.8 tonne sample consisting of split core material representative of the central, higher grade area of Zone III. Assays by SGS showed the test sample to contain 0.096% WO₃, 0.038% Mo and 0.45% total sulphur.

Results of preliminary bench-top ore sorting tests showed that potential existed to reject low grade rock from the feed materials (at ~1 inch sizing) using Ultraviolet fluorescence (UV) and dual energy X-Ray tomography (DEXRT) sorting techniques. Application of these techniques produced substantial upgrading of WO₃ and Mo levels in the retained fraction. Bench scale mineral dressing tests on non-sorted samples showed that high grade molybdenum and tungsten concentrates could be produced by conventional

flotation methods and that gravity processing produced a high grade tungsten concentrate.

Based on the above concepts and associated factual results, a processing flowsheet was developed for use in the Preliminary Economic Assessment (PEA). The main processing elements described in Marr (2009) are presented below and Table 9 presents summarized results of the laboratory studies as applied in the PEA. Text in italics reflects verbatim extraction from Marr (2009).

“Crushing and Ore Sorting: ROM feed material will be crushed to nominal 200-mm before screening into three size ranges for ore sorting. The two coarse size ranges will use UV sorting while the finer size range will use the DEXRT sorting technique. Ore sorting utilizing various sort technologies based on attributes such as colour/translucence, x-ray and conductivity, has been used successfully in mineral industries for many years. Their potential use in tungsten processing has recently found renewed interest as several projects world wide are reported to be in the testing and development stage. Using the ore sorting test results as the basis, it is predicted that nearly one-half of the feed material by weight may be separated as a low grade reject stream with reasonably low metal losses. This results in an upgraded feed at nearly half the tonnage for further processing through the grinding and concentration plant. Please see table below for the predicted metallurgical recoveries for ore sorting and the subsequent processing through the concentrator.

Grinding and Classification: The upgraded feed material (with reduced tonnage) will then be ground to the required liberation size of approximately 300 μm through a two-stage rod milling and screening circuit. Rod mills and screens are selected for this duty in order to maximize tungsten recovery (both gravity and flotation) while minimizing the generation of slimes. This approach is commonly used in the industry as the tungsten bearing mineral, particularly scheelite, is considered to be friable and highly prone to sliming in comminution circuits. Ground material will be thickened to a density suitable for the subsequent molybdenum flotation as described below.

Molybdenum and Bulk Sulphide Flotation: Thickened material will be subjected to molybdenum and bulk sulphide flotation using a conventional reagent scheme as widely practised in the industry. Molybdenum rougher concentrate will be reground and upgraded in a ball mill-column cleaner flotation circuit to produce molybdenum concentrates (+53% Mo) which will be dewatered and packaged for shipment to markets. Molybdenum flotation tailings will proceed to bulk sulphide flotation where the rougher concentrate will be cleaned once and the cleaner concentrate will be sent to the tailings pond for disposal while the sulphide tailings will proceed to the gravity circuit for tungsten recovery.

Tungsten Gravity Separation: Tailings from the sulphide flotation circuit will be classified into two size ranges through hydrosizers(s) ahead of gravity separation.

The coarse and (de-slimes) fine products from hydrosizing will be treated through a series of spirals to produce their respective tungsten rougher concentrates which will then be upgraded on shaking tables to produce a final table concentrate. This concentrate will further be upgraded through a sulphide flotation and two magnetic separation circuits to produce high grade (+65% WO₃) tungsten gravity concentrates which will be dried and bagged for shipment to markets. A regrind circuit will provide further liberation and recycling of gravity middlings. Gravity tailings will proceed to tungsten flotation feed thickener.

Tungsten Flotation: *Gravity tailings will be densified and sent to tungsten flotation for the recovery of fine tungsten values not recovered by the preceding gravity circuit. Flotation will take place in a conventional rougher-scavenger-cleaner circuit. Further, it will utilize a conventional reagent scheme and a circuit of mechanical and column cells also as commonly used in the industry. Final cleaner tungsten concentrate (~50% WO₃) will be dewatered, dried and packaged for shipment to markets.” (Marr, 2009)*

Table 9: Metallurgical Study Summary From Geodex PEA (Marr, 2009)

PRELIMINARY OVERALL METALLURGICAL SUMMARY			
	Tungsten	Molybdenum	Tonnage
ROM FEED			
ROM Grades and Tonnes	0.098 %WO ₃	0.031 %Mo	7,000,000 t/a
ROM Contained Metal	WO ₃ : 686,000 *MTU/a	Mo: 4,873,000 **Lb/a	
ORE SORTING			
Recoveries into Sorter Concentrate	96.0 %	83.8 %	50.7%
Sorter Concentrate Grades and Tonnes	0.185% WO ₃	0.052% Mo	3,550,000 t/a
PROCESSING PLANT			
Mill Recoveries	77%	84%	
Overall (Sorter+Mill) Recoveries	74%	70%	
Mill Products - Grades	60% WO ₃	53% Mo	
Mill Products - Contained Metal	507,000 MTU/a	3,397,000 Lb/a	
Mill Products - Tonnage	8,449 ***t/a	2,907 t/a	

*MTU/a = Metric tonne unit per annum

** LB/a = Pounds per annum

***t/a = tonnes per annum

It is important to recognize that the ore sorting stage incorporated in the 2009 PEA produces a substantial decrease in run of mine tonnage that is milled in comparison to figures presented in the 2007 study by Wardrop. Comparatively lower overall metal recoveries are also indicated.

16.0 Mineral Resources and Mineral Reserve Estimates

16.1 General

The definition of mineral resource and associated mineral resource categories used in this report are those recognized under National Instrument 43-101 and set out in the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves *Definitions and Guidelines* (the CIM Standards). Assumptions, metal threshold parameters, capping factors and deposit modeling methodologies associated with this estimate are discussed below in report sub-sections 16.2 through 16.4.

16.2 Geological Interpretation Used In Resource Estimation

As previously described in Cullen and Harrington (2009), Zone III is the largest and best-explored of the four known mineralized zones at Sisson Brook, and occurs as a complex of mineralized quartz stringers, veins and stockworks as well as mineralized amphibole rich stringers, fracture fillings, aggregates and wall rock alteration selvage zones. Zone III is centered along the vertically dipping, eastern contact of a north-northeast striking Devonian gabbro body, with mineralization developed in both the gabbro and its host sequence of steeply dipping, variably sheared volcano-sedimentary rocks. Scheelite and molybdenum-bearing scheelite are the predominant tungstate minerals present in Zone III and molybdenite is the predominant molybdenum-bearing phase. Chalcopyrite, sphalerite, galena and arsenopyrite also occur locally in discrete, thin (<50 centimeters) quartz veins or stringers. Results of the 2008 and 2009 work programs completed by Geodex show that mineralization in the Ellipse Zone has similar characteristics to that seen in Zone III, although host lithologies are not in all cases the same. Diorite predominates in the Ellipse Zone.

Nast and Williams-Jones (1991) referred to Zone III as their Zone B and described in detail the distinctions between various stages of mineralization and alteration represented in the zone. Previously, Mann (1982) had reported initial descriptions of mineralization styles and established basic paragenetic relationships between metallic mineral assemblages and associated alteration assemblages. In contrast to the ubiquitous association of metallic minerals of economic interest in association with quartz stringers and veins in Zones I and II to the north, this occurrence style is augmented in Zone III by an earlier extensive presence of scheelite and molybdenum-bearing scheelite in fracture associated sites characterised by well developed hornblende $\pm$ albite $\pm$ magnetite alteration and massive aggregations or clots of predominantly hornblende alteration. The same workers show that this style of mineralization and associated alteration displays a

zoned distribution pattern that intensifies toward a hydrothermal focus broadly centered on the contact between the gabbro and volcano-sedimentary sequences.

Mineralization in Zone III is represented over a large area and clearly crosses major lithologic boundaries such as the contact zone between the gabbro complex and the volcano-sedimentary sequence. Spatial distribution of WO₃ and Mo within the Zone III deposit is not homogenous and local WO₃/Mo ratios vary depending upon the host rock present and relative areas showing quartz stockwork associated molybdenite enrichment relative to presence of scheelite or molybdenum-bearing scheelite. The northwest striking Ellipse Zone appears to be generally similar to the latter, with the exception that a substantial proportion of the host sequence consists of diorite rather than interbedded tuffs and sediments. The geological update presented in Marr (2009) expands on the spatial association of vein orientation and presents the most up to date summary of this item presented to date by Geodex.

16.3 Methodology of Resource Estimation

16.3.1 Overview of Estimation Procedure

The current Zone III and Ellipse Zone resource estimate is based on a three dimensional block model developed using Gemcom Surpac ® Version 6.1.3 deposit modelling software. The Zone III model was based on composited results of 24,576 drill core samples from a total of 185 drill holes completed by Geodex and Kidd Creek Mines within the assigned resource area limits. The Ellipse Zone model was based on composited results of 4,648 drill core samples from a total of 34 drill holes completed by Geodex within the assigned resource area limits. Grade interpolation within the block models was fully constrained by peripheral solids defining deposit limits, plus grade domain solids that prevent inappropriate smoothing of high grade values into adjacent lower grade areas of the models.

Prior to initial deposit modelling in 2007, a complete set of vertical cross sections through the deposit were produced from the project database. These were used to develop manual geological interpretations through the deposit at the nominal section spacing of 100 meters. The initial 2007 interpretations were updated to include all subsequent 2007, 2008, and 2009 Geodex Zone III and Ellipse Zone drilling results and supplemented by 50 meter spaced sections where necessary. Analytical results for core sampling were represented on the original and updated interpreted geological sections and these were visually compared with grade sections derived from the respective block models to check fit of the models against manually interpreted geological and grade sections. Cullen and Harrington (2009) identified three high grade domains within the Zone III deposit and

created three dimensional solids for these within which grade interpolation was separately carried out. For purposes of the current resource estimate, these grade domain solids were updated to include additional assay data from the 2009 drilling. The solid models were based on wire-framed outlines developed from interpretation of assay composite data presented on deposit cross sections.

As described in Cullen and Harrington (2009), two WO₃ high grade zones are present in Zone III. One high grade WO₃ zone occurs along the gabbro-tuff contact and is modeled with a single solid wireframe. The other high grade WO₃ zone occurs along the zone's eastern flank and is currently modeled with two solid wireframes after incorporating results from the 2009 drill program, whereas previous resource estimates have the zone modeled as a single solid wireframe. The primary high grade Mo solid was updated for the 2009 drill results, having roughly sub-circular outline and apical form defined in the central region of Zone III, with this being characterized by local irregular extensions along the north-south deposit strike. A second high grade Mo solid was added along the eastern flank that extends approximately 450 meters in strike. All Zone III high grade domains occur within a larger Zone III peripheral solid that defines the limit of the deposit within surrounding lower grade material.

The grade domain approach used in Zone III was also applied to the Ellipse Zone for purposes of the current resource estimate. In that case two tabular, high grade WO₃ solids were defined along with two high grade Mo solids showing similar form. All of these strike northwesterly (azimuth 315°- 320°) and dip at approximately 65° to the southwest within the peripheral solid.

Minimum grade parameters of 0.025% Mo over 10 meters or 0.075% WO₃ over 10 meters were used to establish high grade solid limits in both Zone III and Ellipse Zone areas, but some lower grade intervals were locally incorporated to provide geometric continuity. The Zone III and Ellipse Zone peripheral limits that constrain block assignment and grade interpolation were developed from cross sectional wireframes of interpreted assay and geological data and are topped by a bedrock surface digital terrain model based on drill hole data.

Several wireframed outlines of major lithologic units used in the Cullen and Harrington (2009) estimate were updated to include results of the latest 2009 drilling program and revised three dimensional solids were created for (1) the main gabbro unit, (2) the diorite – granodiorite unit that hosts much of the Ellipse Zone and a small portion of Zone III and (3) a granitic dyke that intersects the southern limit of the Ellipse Zone. Based on recommendations from previous resource estimates a re-modeling of the flanking host sequence of mixed felsic and mafic metavolcanic and metasedimentary rocks was

undertaken, resulting in two new lithological wireframed solids of (1) a sequence of predominately felsic metavolcanic rocks with minor interbedded mafic metavolcanic rocks occurring along the eastern gabbro contact and (2) a mixed sequence of primarily mafic metavolcanic rocks and tuffaceous metasedimentary rocks that occur in the eastern portion of Zone III.

Distribution statistics were calculated for Mo and WO₃ assay populations corresponding to the various grade domain solids after compositing original sample results to a standard 3.0 meter down hole sample length. Frequency distribution and probability plots were then prepared for 3.0 meter composites occurring in each grade domain solid. The high grade capping factors of 0.35%/3.00 meters for Mo and 0.60%/3.00 meters for WO₃ that were used by Cullen and Harrington (2009) were retained for the current estimate.

Experimental variograms were assessed at various lags for Mo and WO₃ based on the 3.0 meter composite sample populations for all domains and normal variograms for selected orientations were then developed using spherical models. Search ellipse orientation and range values for inverse distance squared grade interpolation within the block model were based on these results, in combination with results of the geological section interpretations.

A WO₃ Equivalent (WO₃ Eq.) factor of $\text{WO}_3 \text{ Eq.}\% = \text{WO}_3\% + (\text{Mo}\% * 2.02)$ was developed on the basis of client-supplied market pricing information and recovery factors of 70% for WO₃ and 85% for Mo reported in the November 2007 Scoping Study by Wardrop Engineering Inc. (Ozturk et al., 2007). These recovery factors were retained for consistency with the previous resource estimate but will require revision if an ore-sorting stage of processing prior to milling becomes part of the final project flowsheet. Unique density values were assigned to each of the geological model solids based on average corresponding values calculated from a data set of 555 laboratory density determinations.

After assessment of modeled results, Measured, Indicated, and Inferred tonnage and grade resource estimates for Equivalent WO₃, Mo and WO₃ were calculated at 0.025%, 0.075%, 0.100%, 0.125%, 0.175% and 0.225% Equivalent WO₃ threshold values. These results were then assessed on a cross sectional basis against the manually developed geological and grade interpretation sections previously mentioned. Results were also checked by Nearest Neighbour interpolation within the block model. An acceptable degree of correlation was evident and results of the grade-tonnage estimation were established as the final statement of combined Zone III and Ellipse Zone mineral resources.

Report subsections 16.3.2 through 16.3.14 below provide further information regarding specific estimation procedures and parameters noted above.

16.3.2 Data Validation

Results from 233 drill holes drilled by Kidd Creek Mines and Geodex, including a total 27,832 assay core samples, were compiled and imported into Gemcom Surpac ® Version 6.1.3 for resource estimation. Validation checks on overlapping intervals, inconsistent drill hole identifiers, improper lithological assignment, unreasonable assay value assignment, and missing interval data were performed. Checking of database analytical entries was also carried out against laboratory records supplied by Geodex. The expanded and updated 2009 drill hole database contains 24,576 drill core samples from a total of 185 drill holes occur within the resource limits of Zone III and 4,648 drill core samples from a total of 34 drill holes occur within the resource limits of the Ellipse Zone. Zone III and the Ellipse Zone intersect in the southern area of the deposit and several drill holes cut sections of both solids.

16.3.3 Solid Modelling and Grade Domains

Lithologic Solids

Four major lithologic units were defined through sectional wireframing of geological contacts and these were developed into three dimensional solids within the Sisson Brook block model. From west to east these are (1) the diorite – granodiorite intrusion, (2) the gabbro intrusion, and (3) variably foliated felsic tuffs interbedded with minor mafic tuffs, and (4) variably foliated mafic tuffs and flows and related metasedimentary rocks. A fifth lithologic unit of minor extent was created using the same method for a small granitic dyke intruding the southern limit of the Ellipse Zone.

As discussed in Cullen and Harrington (2009), previous resource estimates modeled a single host unit of mixed metavolcanic and metasedimentary rocks, reflecting a lithologic simplification recommended in early 2008 by Geodex. A geological re-modeling of the mixed metavolcanics and metasedimentary rocks for this resource estimate, through review of lithocoding, drill log descriptions, and three dimensional correlation using Surpac ® Version 6.1.3, resulted in sub-dividing the sequence into a predominately felsic metavolcanic unit that shoulders the gabbro contact and a predominately mafic metavolcanic and metasedimentary unit that characterizes the eastern portion of Zone III.

Peripheral Deposit Solids

Peripheral deposit solids were developed for Zone III and the Ellipse Zone. These outline deposit extents and are based on distribution of drill holes and associated assay results. Limiting parameters for the peripheral envelop were defined relative to drill hole intersections and include (1) a 25 meter horizontal across-strike extension from an open mineralized drill hole intersection in plan projection, (2) a 100 meter down dip extension from an open mineralized drill hole intersection in cross section, and (3) a 50 meter horizontal extension along strike from an open drill hole intersection in plan projection.

Grade Domain Solids

Down-hole assay composites at 3.0, 6.0, and 10.0 meter support length were developed from the updated database for those drill holes occurring within the peripheral envelopes. Updated interpretations of the three Zone III high grade domains and the four Ellipse Zone high grade domains, as discussed by Cullen and Harrington (2009), were represented by upgraded solid models. Minimum grade parameters for the higher grade domains were not rigidly fixed and effectively define zones showing acceptable geological continuity that grade above 0.025% Mo or 0.075% WO₃ over a minimum assay composite length of 10 meters.

Level plans show that higher average Mo grades in Zone III are concentrated in the central area of the deposit and define an oval pattern measuring approximately 350-400 meters (North-South) by 250-300 meters (East-West) in extent. In three dimensions this pattern defines a discrete zone of mineralized bedrock similar to what might be expected above a cupola-like igneous intrusion. The updated Mo high grade solid for Zone III has multiple irregular extensions to both the north and south and along the eastern limit that correspond to the primary vertical north-northeast grade trend within Zone III. For report purposes this solid has been identified as the “Main Mo Zone”. Drill results from the 2009 drill program identified a second correlatable higher grade Mo zone that corresponds to a north-south trend along the eastern flank of Zone III, measuring approximately 450 meters (North-South) by 30-50 meters (East-West) in extent. For report purposes this solid has been identified as the “East Flank Mo Zone”

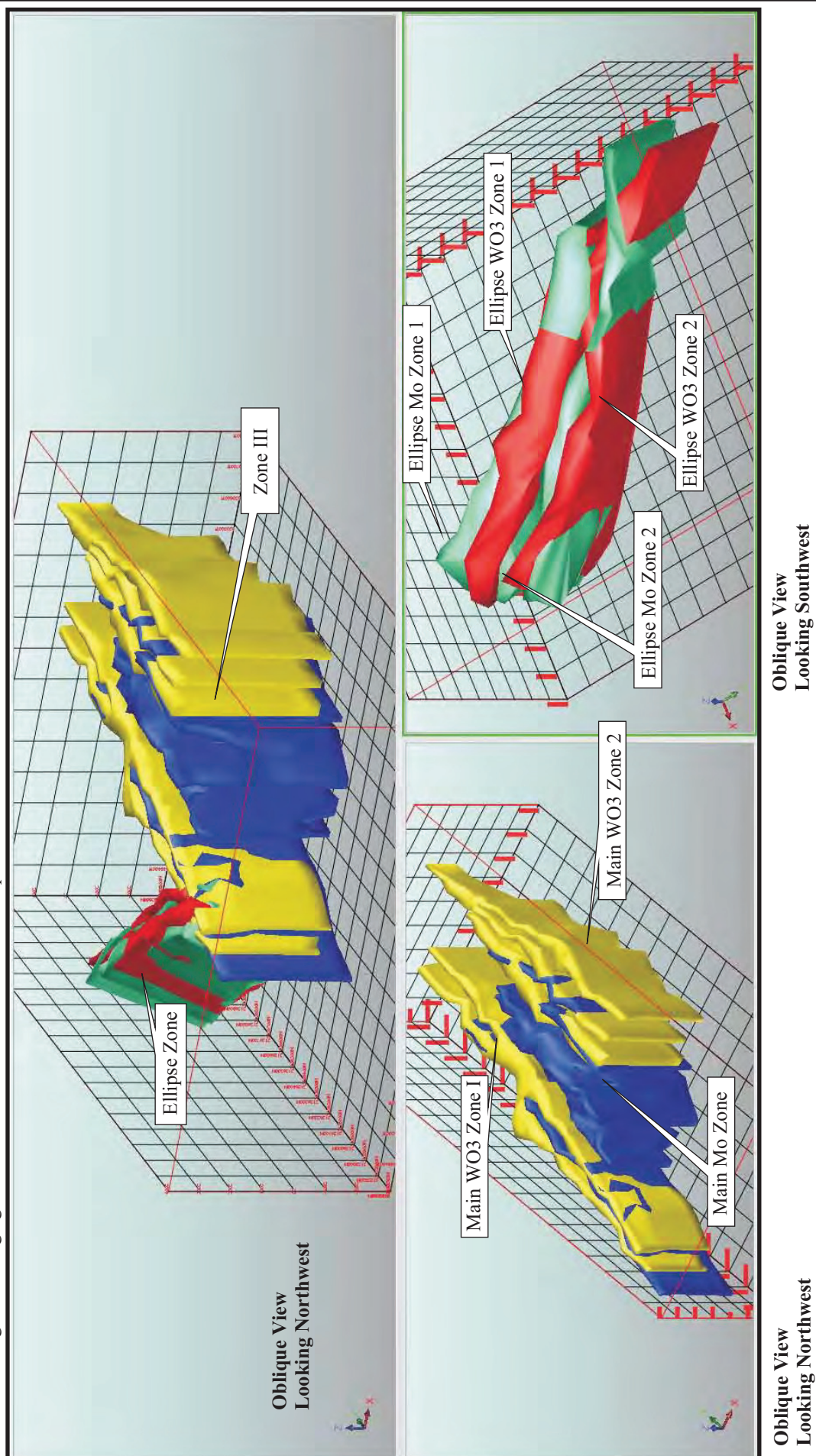
Higher average WO₃ levels are also apparent in the level plans and sections and define two vertical to steeply west-dipping tabular domains that flank the high grade Mo solids to both east and west and extend beyond those solid’s strike limits to the north. For report purposes the western-most WO₃ domain in Zone III that parallels the north-south gabbro-tuff contact and measures about 1500 meters (N-S) in length by 150 meters (E-W) in width, has been identified as Main WO₃ Zone 1. The updated Main WO₃ Zone 1 solid

takes the form of a single unit approximately 250 meters in North-South length in the north central area of the zone and then diverges into two units towards both the northern and southern limits of the deposit. The WO3 zone occurring on the eastern flank of Zone III measures approximately 1000 meters (North-South) by 250 meters (East-West) and is identified as Main WO3 Zone 2 in this report.

The updated Main WO3 Zone 2 is currently modelled as two separate units. The western-most unit takes the form of a single vertical tabular sheet that measures 800 meters (N-S) and 50-90 meters (E-W) in extents. The eastern-most unit takes the form of a single vertical tabular body 450 meters in North-South strike length and 50 meters in East-West extent that diverges into two parallel sub-units towards the south that extend 15-75 meters East-West, terminating at the southern peripheral limit at the Eastern Flank of Zone III. The updated versions of the Main Mo Zone, East Flank Mo Zone, Main WO3 Zone 1 and the Main WO3 Zone 2 solids remove dilution present in the previous models. The Main Mo Zone and East Flank Mo Zone marginally overprint both WO3 domains and all are illustrated in Figure 18.

Level plans and sections for the Ellipse Zone show higher Mo grades concentrated in two tabular stacked zones that in part overlap and are sub-parallel with two tabular stacked zones of higher WO3 grades, all of which strike northwest (315 azimuth to 320 azimuth) and dip to the southwest at 65° or more. The southern Mo domain, identified as Ellipse Mo Zone 1, has a strike length of approximately 650 meters and ranges from 40 meters to 125 meters in width. The northern Mo domain, identified as the Ellipse Mo Zone 2, measures approximately 800 meters in strike length and ranges in width from 10 meters to approximately 100 meters. These zones of higher Mo grades are sub-parallel and in part coincide with two zones of higher WO3 grades identified as Ellipse WO3 Zone 1 and Ellipse WO3 Zone 2. Ellipse WO3 Zone 1 measures approximately 650 meters in strike length and ranges between 10 meters and 75 meters in width, while Ellipse WO3 Zone 2 measures approximately 750 meters in strike length and ranges between 10 meters and 50 meters in width. All Mo and WO3 solids within the Ellipse Zone are also illustrated in Figure 18.

Figure 18: High grade solid domains for Zone III and Ellipse Zone



Dip limits for high grade solids in both Zone III and the Ellipse Zone were extended to the limits of respective peripheral deposit constraints unless grade continuity could not be demonstrated. In the latter case, solid limits were placed at half the distance to the constraining drill hole. Similarly, strike limits for the grade solids were extended to the strike limits of the peripheral constraints or half the distance to the constraining drill hole.

All higher grade metal domains were honoured during grade interpolation runs for the block model to prevent excess grade smoothing between higher grade and lower grade areas. A topographic surface wireframe was generated from surveyed drill collar coordinates and a top of bedrock wireframe was also developed, based on overburden lithocodes in the drill hole database. The block model was constrained by the top of the bedrock wireframe and otherwise by the peripheral deposit.

Contact Plot Assessment of Grade Domain and Lithological Solids

Contact plots discussed in Cullen and Harrington (2009) illustrate the basis for creating higher grade metal domain solids and assessing the effect of lithological contacts on grade distribution. The plots were based on the 3 meter down-hole composites described in the following report section and graphically characterize distance-grade relationships that mark contacts between higher grade model solids and the surrounding lower grade domains and also across contacts between lithological domains. Composites were binned in 3 meter distance increments away from the specified contact, with mean metal grade and composite population size (n) plotted against each other for comparison. The grade domain contact plots show binned composites at increasing distance increments from all areas of the domain and reflect both upper and lower contacts, whereas the geology contact plots show binned composites at increasing distance increments away from the specified contact.

The results from the 2009 drill program do not change the trends and observations identified in the contact plots described in Cullen and Harrington (2009). Substantive metal grade breaks do not mark the major geological boundaries tested by the contact plots and this supports the accepted interpretation that mineralization crosses lithologic contacts at the scale of one or more composite sample lengths. In contrast, sharp breaks in metal grades are apparent across the higher grade solid limits in the contact plots. This is interpreted as indicating that grade restriction should be applied in these areas to reduce inappropriate spatial smoothing of metal values during interpolation. All contact plots reported in Cullen and Harrington (2009) for all domains appear in Appendix 3.

16.3.4 Compositing of Drill Hole Data and Statistics

The drilling sample data set used in the resource estimate contains 25,129 core sample records, inclusive of Geodex quality control and quality assurance samples. Approximately 90% of the all core samples taken during the various Geodex programs were 1.5 meters in length, with 3% of samples occurring at 3.0 meter length and 2% at 2.0 meter length. The remaining samples range from a minimum length of 0.12 meters to a maximum length of 14.1 meters. Of the 2,703 historic core sample records, approximately 44% of the samples taken were 3.0 meters in length, with 36% of the samples taken being 2.0 meters in length and 20% being 1.5 meters in length. The remaining samples range from a minimum length of 0.05 meters to a maximum length of 4.1 meters. Further details of sample length distribution appear in Appendix 2 in the form of a rank and percentile analysis plus a frequency plot of recorded sample lengths.

All core samples used in the resource estimate were composited at 3.0 meter support length to facilitate modeling within the various grade domains defined for the deposit. A single set of 3.0 meter assay composites was created for drill hole intervals intersecting the Zone III and Ellipse Zone peripheral envelopes, with no internal limitations applied based on intersections with the higher grade domain solids or the geological solids. Subsequently, a set of 3.0 meter assay composites was created for drill hole intervals intersecting each high grade domain solid used to restrict the grade interpolation process supported by these samples.

The selected composite length is twice the nominal 1.5 meter sample length for the Geodex drilling data set and provided an acceptable support base with respect to down-hole grade distribution trends. As discussed in Cullen and Harrington (2008), the extensive 2007 fill-in drill program improved drill section spacing over much of the deposit to nominally 50 to 75 meter increments and resulted in a substantial increase in data density, which is now further enhanced with the inclusion of the data from both the 2008 and 2009 drill programs. This was an important factor in better defining higher grade WO₃ and Mo domains within the deposit and was a contributing factor to reduction of the assay composite length to 3.0 meters from the 6.0 meter value used in the 2007 estimates. No lithological constraints were imposed on the down-hole compositing, since mineralization was interpreted as crossing lithologic contacts at the scale of one or more composite sample lengths and to be more accurately defined by the grade based solids discussed above.

Descriptive statistics were calculated for the raw (uncapped) 3.0 meter assay composite data sets occurring within each of the three higher grade domains in Zone III, these being Main Mo Zone, Main WO₃ Zone 1 and Main WO₃ Zone 2, and the lower grade

peripheral domains. These results are presented in Table 10 below. Descriptive statistics were also calculated for equivalent 3.0 meter assay composite datasets occurring within each of the four higher grade domains in the Ellipse Zone; these being Ellipse Mo Zone 1, Ellipse Mo Zone 2, Ellipse WO3 Zone 1 and Ellipse WO3 Zone 2, and the relative lower grade peripheral domains, and these appear in Table 11 below.

Table 10: Zone III Mo and WO3 Statistics for Uncapped 3.0 Meter Composites

Parameter	Main Mo Zone and East Flank Mo Zone (Mo%)	Peripheral Main Mo Zone (Mo%)	Main WO3 Zone 1 (WO3%)	Main WO3 Zone 2 (WO3%)	Peripheral Main WO3 Zone (WO3%)
Minimum	0.0001	0.0000	0.0006	0.0025	0.0000
Maximum	13.35	1.1660	3.2634	1.4633	1.7246
Mean	0.04662	0.0114	0.1163	0.1229	0.0440
Variance	0.5259	0.0010	0.0204	0.01849	0.0053
Standard Deviation	0.2293	0.0314	0.1429	0.1360	0.0726
Coef. of Variation	4.9190	2.7560	1.2280	1.1067	1.6502
Number	3828	9052	2431	1478	9004

Table 11: Ellipse Zone Mo and WO3 Statistics for Uncapped 3.0 Meter Composites

Parameter	Ellipse Mo Zone 1 (Mo%)	Ellipse Mo Zone 2 (Mo%)	Peripheral Ellipse Mo Zone (Mo%)	Ellipse WO3 Zone 1 (WO3%)	Ellipse WO3 Zone 2 (WO3%)	Peripheral Ellipse WO3 Zone (WO3%)
Minimum	0.0003	0.0005	0.0004	0.0014	0.0022	0.0006
Maximum	0.9303	0.461	0.337	2.3814	1.0395	0.3151
Mean	0.0381	0.0300	0.0125	0.0917	0.0856	0.0404
Variance	0.0062	0.0031	0.0008	0.0189	0.0113	0.003
Standard Deviation	0.0787	0.0561	0.0290	0.1375	0.1064	0.0358
Coef. of Variation	2.0518	1.8702	2.3323	1.4996	1.2437	0.8861
Number	513	610	662	454	452	871

As expected, mean grades of uncapped metal values are significantly higher in the high grade domain solids than in the relative peripheral zone solids. The Main WO3 Zone 1 composites show the highest potential for large tonnage higher grade WO3 mineralization, with a mean grade of 0.116% and 953 more composites than the Main WO3 Zone 2, which has a similar mean grade of 0.123%. Ellipse Zone composites show greater potential for higher grade Mo mineralization, with mean grades of 0.038% and

0.030% Mo in the high grade domain solids. In contrast, Ellipse Zone WO₃ high grade domain solids have mean grades of 0.092% and 0.086% WO₃ and fewer composites. Distribution histograms, cumulative frequency plots and probability plots of Mo and WO₃ for 3.0 meter composites were prepared for all grade domains of Zone III and the Ellipse Zone to better represent grade distribution trends and these appear in Appendix 3.

16.3.5 High Grade Capping Of Assay Composite Values

As presented previously in Cullen and Harrington (2009), presence in the drilling data set of a restricted number of samples showing high Mo and/or WO₃ grades was recognized during initial data review and also evident in cumulative frequency curves and grade distribution histograms. Review of cumulative frequency and probability plots for the total assay composite data set resulted in capping values being set at the 99.0th percentile for molybdenum and the 99.5th percentile for tungsten. This corresponds to a 0.60% cap for WO₃ values and a 0.35% cap for Mo values applied to the standard 3.0 meter composites. Capping values of 1.20% WO₃ and 0.70% Mo for assay composites at 1.5 meter support were used in 2007 by Cullen and Harrington (2007) prior to calculation of 6 meter grade composites for block modeling. In contrast, capped 3.0 meter composites were used directly for grade interpolation in the current block model to more clearly define higher grade WO₃ and Mo domains. Capping factors for the two programs reflect constant metal accumulation values of 1.8 for WO₃ and 1.05 for Mo, calculated as metal % x composite length in meters.

A subjective check on applicability of the capping factors was carried out on the basis of logged geology and mineralization styles and it was concluded that presence of 3.0 meter intervals of Mo and WO₃ mineralization at the selected capping grades, and locally above, were geologically reasonable, with potential to show both strike and dip continuity at such levels. Descriptive statistics were calculated for the 3.0 meter capped assay composite datasets occurring for each of the grade domains in Zone III and the four higher grade domains in the Ellipse Zone, results of which appear in Table 12 and Table 13 respectively. As expected, mean composite grades for each domain decreased relative to the mean grades of the raw composite values presented above. Variation coefficients for capped composites are also lower, indicating that associated datasets are more appropriate for resource estimation purposes than the raw composites.

Distribution histograms, cumulative frequency plots and probability plots of Mo and WO₃ for the 3.0 meter capped composites were prepared for each grade domain for the Zone III and Ellipse Zone deposits and these plots appear in Appendix 3..

Table 12: Zone III Mo and WO₃ Statistics for Capped 3.0 Meter Composites

Parameter	Main Mo Zone and East Flank Mo Zone (Mo%)	Peripheral Main Mo Zone (Mo%)	Main WO ₃ Zone 1 (WO ₃ %)	Main WO ₃ Zone 2 (WO ₃ %)	Peripheral Main WO ₃ Zone (WO ₃ %)
Minimum Value	0.0001	0.0000	0.0006	0.0025	0.0000
Maximum Value	0.3500	0.3500	0.6000	0.6000	0.6000
Mean	0.04085	0.0111	0.1121	0.1192	0.0432
Variance	0.0038	0.0006	0.0118	0.0133	0.0039
Standard Deviation	0.0619	0.0254	0.1088	0.1151	0.0628
Coef. of Variation	1.516	2.2839	0.9701	0.9662	1.4540
Number	3828	9052	2431	1478	9004

Table 13: Ellipse Zone Mo and WO₃ Statistics for Capped 3.0 Meter Composites

Parameter	Ellipse Mo Zone 1 (Mo%)	Ellipse Mo Zone 2 (Mo%)	Peripheral Ellipse Mo Zone (Mo%)	Ellipse WO ₃ Zone 1 (WO ₃ %)	Ellipse WO ₃ Zone 2 (WO ₃ %)	Peripheral Ellipse WO ₃ Zone (WO ₃ %)
Minimum Value	0.0003	0.0005	0.0004	0.0014	0.0022	0.0006
Maximum Value	0.3500	0.35	0.337	0.6000	0.6000	0.3151
Mean	0.0359	0.0296	0.01245	0.0870	0.0836	0.0404
Variance	0.0036	0.0029	0.0008	0.0070	0.0548	0.003
Standard Deviation	0.0602	0.0537	0.0290	0.0837	0.0930	0.0358
Coef. of Variation	1.6765	1.8127	2.3323	0.9613	1.1134	0.8861
Number	513	610	662	454	452	871

16.3.6 Calculation of WO % and WO₃% Equivalent

WO₃% was directly calculated from laboratory W% values by multiplying the laboratory value by a factor of 1.26 and WO₃% Equivalent values were then calculated for each of the 3 meter composites used in the block model. The WO₃ Equivalent (WO₃ Eq.) factor of WO₃ Eq.% = WO₃% +(Mo% * 2.02) used in the current estimate is the same as that used in Cullen and Harrington (2009) and reflects (1) client-supplied long term metal pricing figures of 15\$US/lb for Mo and 9.0 \$US /lb for WO₃ and (2) assumed total metal recovery rates of 85% for Mo and 70% for WO₃ as presented in the Wardrop Engineering Ltd. Scoping Study (Ozturk et al., 2007). The recovery factors used in Cullen and Harrington (2009) were retained for consistency, but Geodex has revised these since that study through incorporation of ore sorting processes prior to milling.

Three year trailing average metal pricing figures were used in previous resource estimates but continued use of this approach would have resulted in greater relative value being assigned to Mo than was considered appropriate in light of both the client-supplied pricing data and market conditions at the effective date of reporting.

16.3.7 Variography

Methodology and Results

Review of updated experimental variograms and variogram models for the 2009 drill program results compared favorably with the geostastical analyses from the previous resource by Cullen and Harrington (2009). It was therefore determined that variography from Cullen and Harrington (2009) is still applicable and relevant for the updated data set. Methodology and results from Cullen and Harrington (2009) are presented below.

The manually derived models of geology and grade trends provided definition of a north to north-northeast (or south-southwest) strike, near vertical primary orientation to metal distribution within Zone III and definition of a northwest (or southeast) striking, 65 degree southwesterly dipping primary orientation to metal distribution within the Ellipse Zone. Notably, elements of the northwest trend of mineralization defined in the Ellipse Zone are also present in areas of Zone III, particularly in the cupola-like higher grade Main Mo Zone, but these are clearly subordinate to the primary north-northeast, steeply dipping mineralization trend. In both cases, mineralized fracture and vein sets are considered to be the underlying orientation controls for these trends.

To assess spatial aspects of grade distribution and continuity, experimental variograms were calculated at various lags for WO₃% and Mo% for each grade domain in Zone III and the Ellipse Zone. All experimental variograms were assessed at 10 and 15 degree increments within a range of orientations corresponding to the main mineralization trends. Capped 3.00 meter composite data sets were used in all instances and variograms were assessed against a spherical model curve.

Model results for WO₃ in Zone III returned a primary (major) axis with a range of 175 meters defined along the north-northeast trend for both the Main WO₃ Zone 1 and the Main WO₃ Zone 2 domains. In the Main WO₃ Zone 1 domain, spherical model curves were developed for the primary axis along an azimuth of 015° with an 80° northerly plunge at a lag of 40 meters (Figure 19). In the Main WO₃ Zone 2 domain, spherical model curves were developed for the primary axis along an azimuth of 005° with a 10° southerly plunge at a lag of 40 meters (Figure 20). Secondary axes of continuity (semi-major) were returned for both domains, with a range of 175 meters defined along an

azimuth of 015° and a 10° plunge to the south for the Main WO3 Zone 1 and a range of 140 meters defined along an azimuth of 005° and a 80° plunge to the north for the Main WO3 Zone 2. Spherical model curves were created for the secondary axes at a lag of 40 meters for the Main WO3 Zone 1 domain (Figure 21) and at a lag of 30 meters for the Main WO3 Zone 2 (Figure 22). Well defined third (minor) axes of continuity were not resolved for individual domains but a down hole experimental variogram for WO3% for the total deposit data set presented in Figure 23 shows continuity to a range of 35 meters.

Model results for the Main Mo Zone in Zone III returned a primary axis with a range of 160 meters defined along an azimuth of 015° and a 79° plunge to the south (Figure 24).

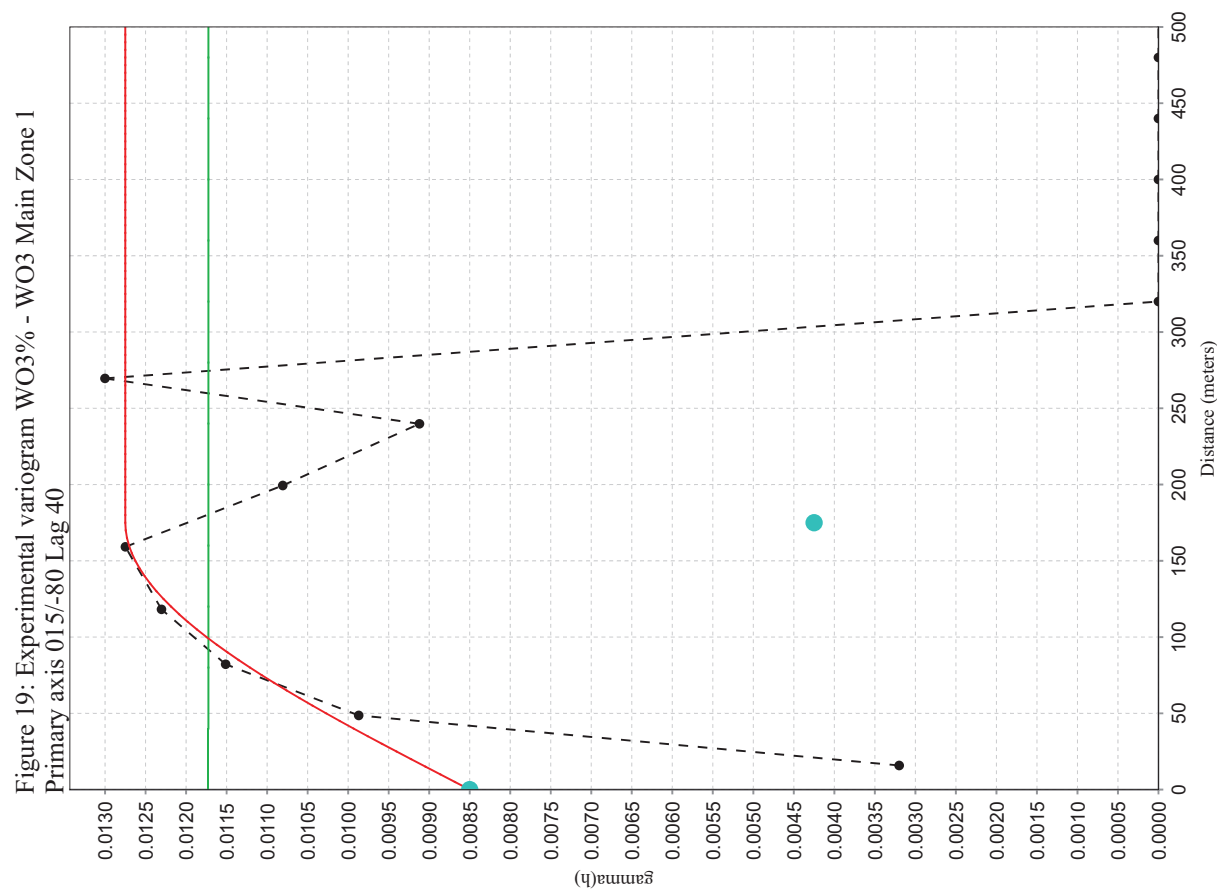
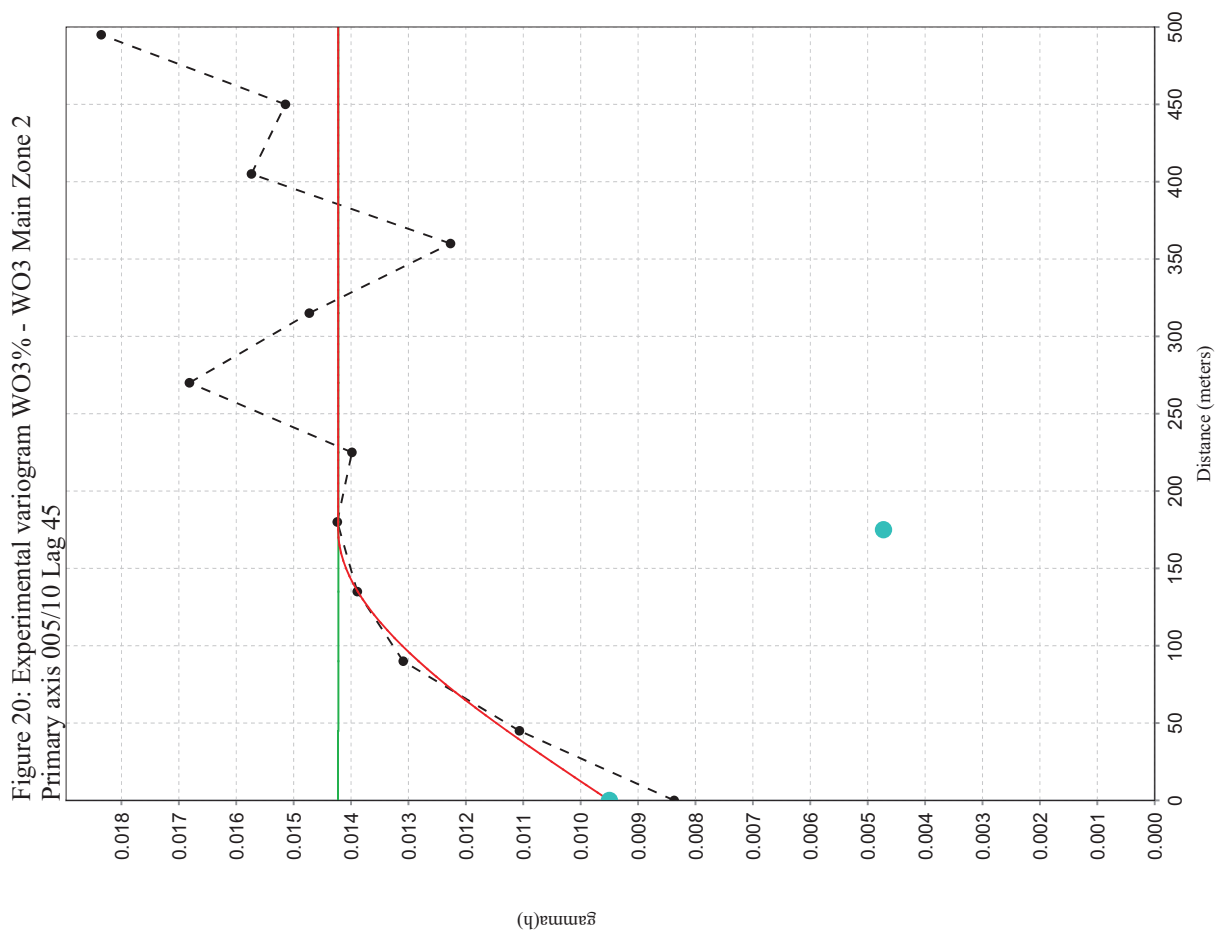


Figure 21: Experimental variogram WO3% - WO3 Main Zone 1

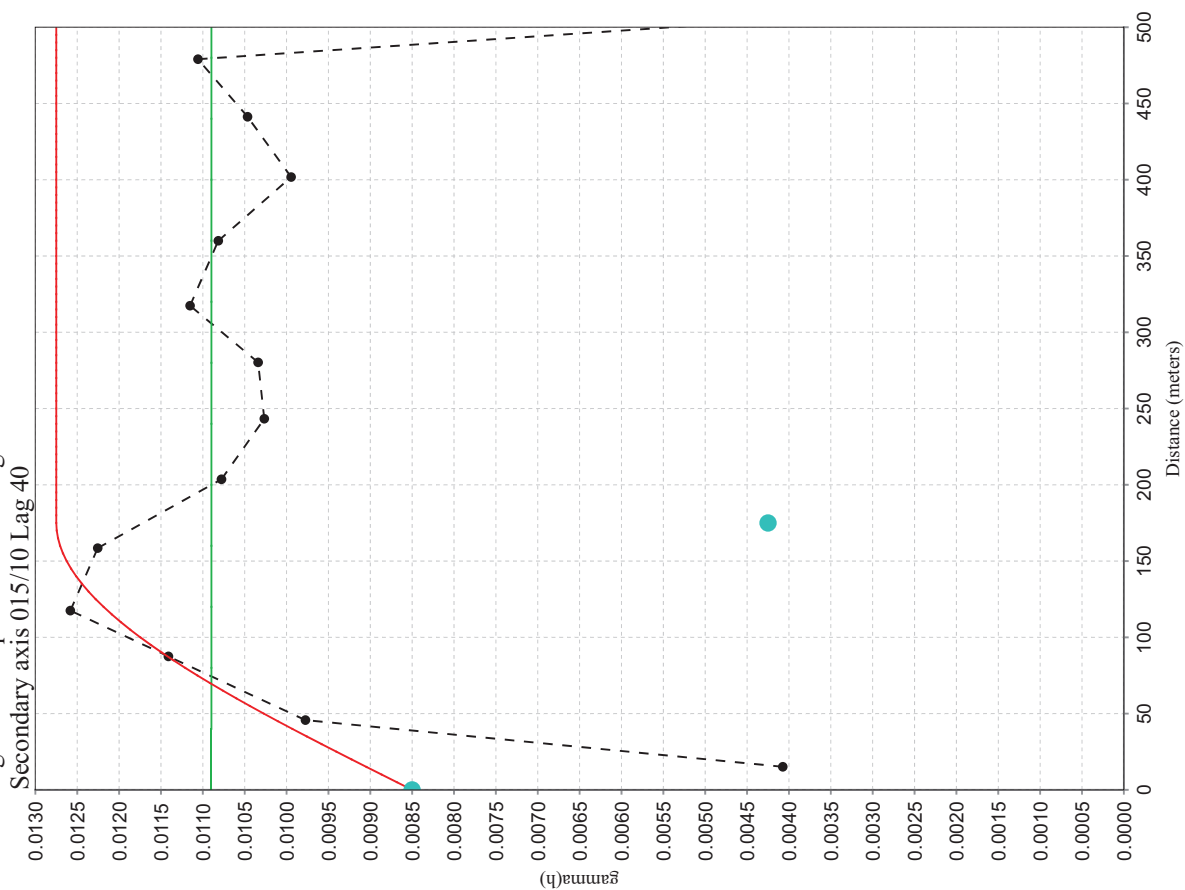


Figure 22: Experimental variogram WO3% - WO3 Main Zone 2

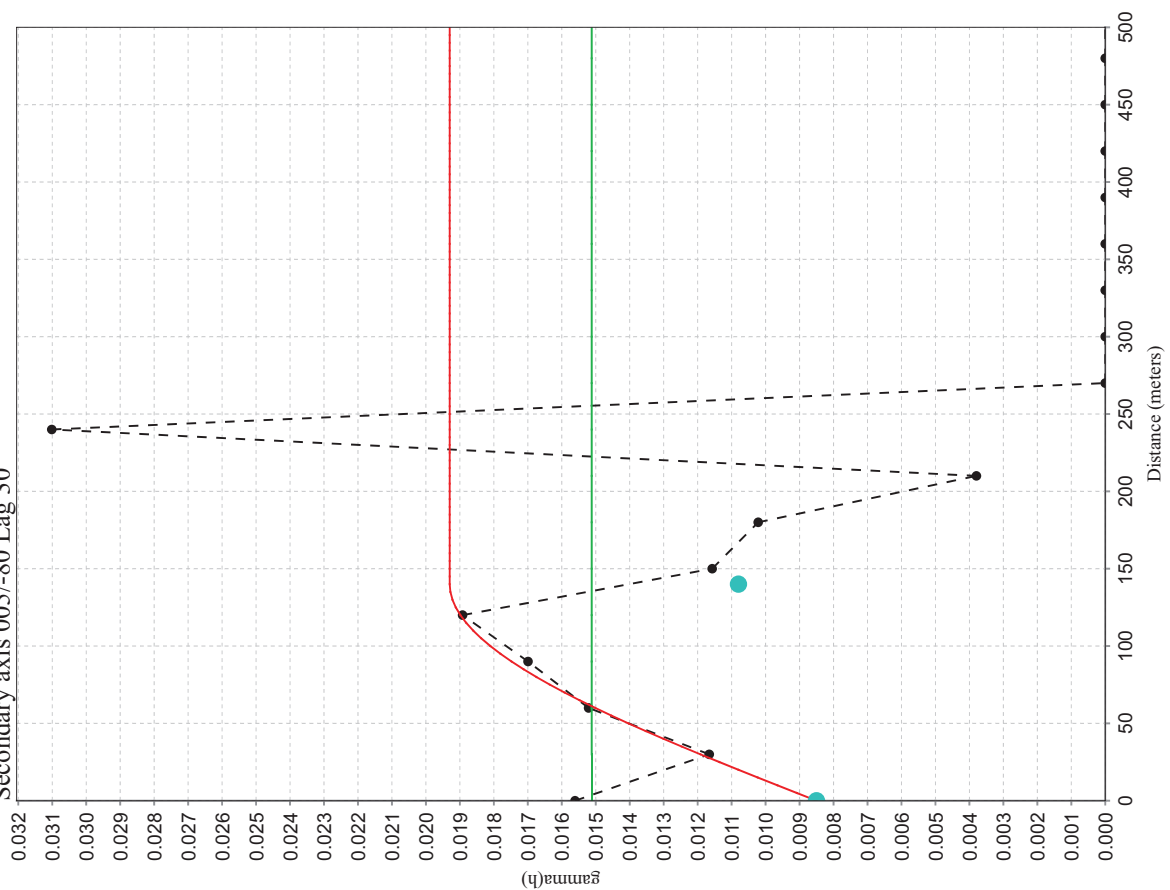


Figure 23: Down hole experimental variogram Wo3% - Lag 12

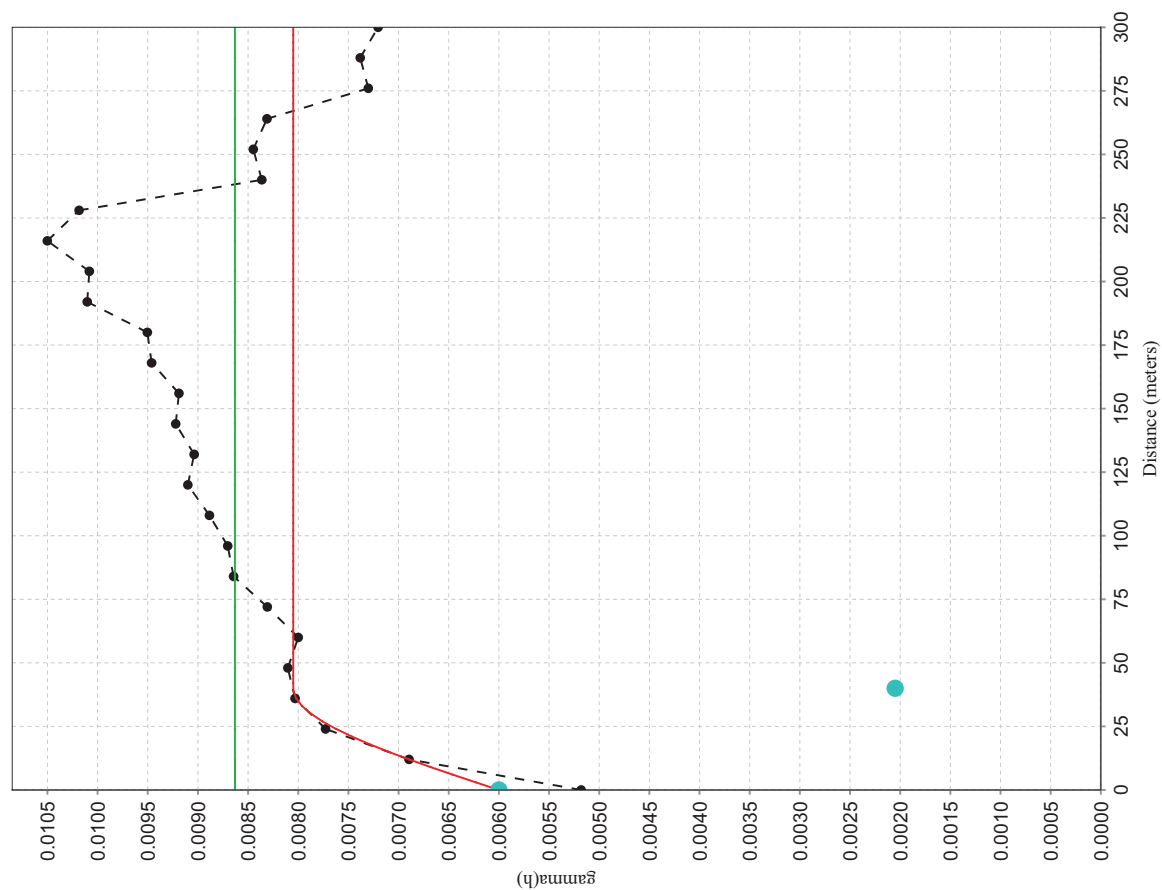
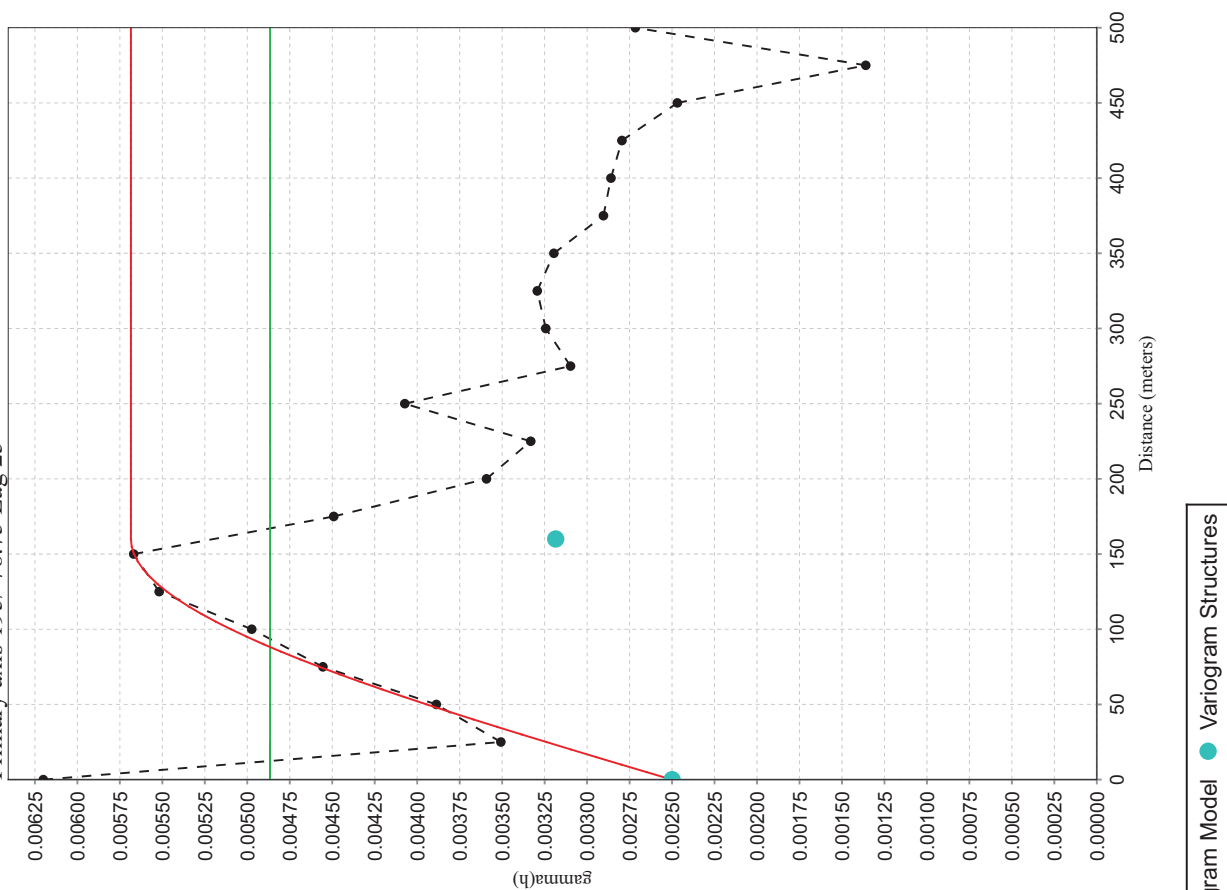


Figure 24: Experimental variogram Mo% - Mo Main Zone Primary axis 195/-78.75 Lag 25



A spherical model was developed for the Mo % primary axis at a lag of 25 meters. A secondary axis of continuity for this domain with a range of 125 meters along an azimuth of 015° with an 11° plunge to the north was also defined. A spherical model was developed for the secondary axis at a lag of 25 meters (Figure 25). A well defined third axis of continuity could not be resolved but a down hole experimental variogram for Mo% based on the total deposit dataset shows continuity to a range of 50 meters (Figure 33).

Model results for WO3 in the Ellipse Zone returned a primary axis range of close to 175 meters defined along an azimuth of 245° with a 60° southwesterly plunge. A spherical model was developed for the primary axis at a lag of 25 meters (Figure 26). A secondary axis of continuity was returned with a range of 150 meters along an azimuth of 139° with a 09° plunge to the southeast. A spherical model was developed for the secondary axis at a lag of 30 meters (Figure 27). The previously mentioned down hole experimental variogram for WO3% having a range of 35 meters was used to assign the minor axis range.

Model results for Mo in the Ellipse Zone returned a primary axis with a range of 175 meters defined along an azimuth of 315° (135 °) and a 00°. A spherical model curve was developed for the primary axis at a lag of 35 meters (Figure 28). Definition of a secondary axis of continuity was returned with a range of 175 meters defined along an azimuth of 225° with a 60° plunge to the southwest. Spherical model curves were developed for the secondary axis at a lag of 45 meters (Figure 29). The previously mentioned total deposit down hole experimental variogram for Mo% having a range of 50 meters was used to assign the minor axis range.

Additional supporting Zone III and Ellipse Zone variogram models for Mo and WO3 at various lags for the primary, secondary, and down hole directions are present in Appendix 3.

Figure 25: Experimental variogram Mo% - Mo Main Zone
Secondary Axis 195/-11.25 - Lag 25

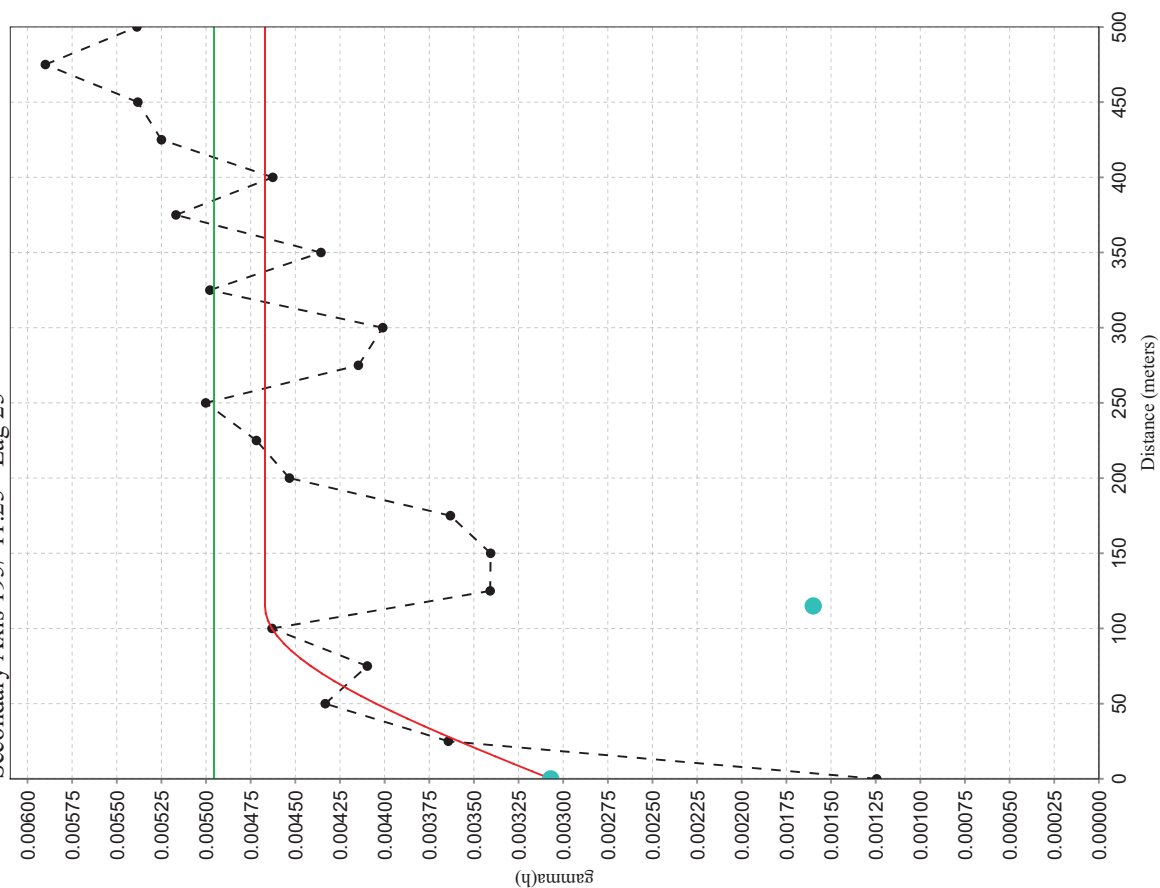


Figure 26: Down hole experimental variogram Mo% - Lag 9

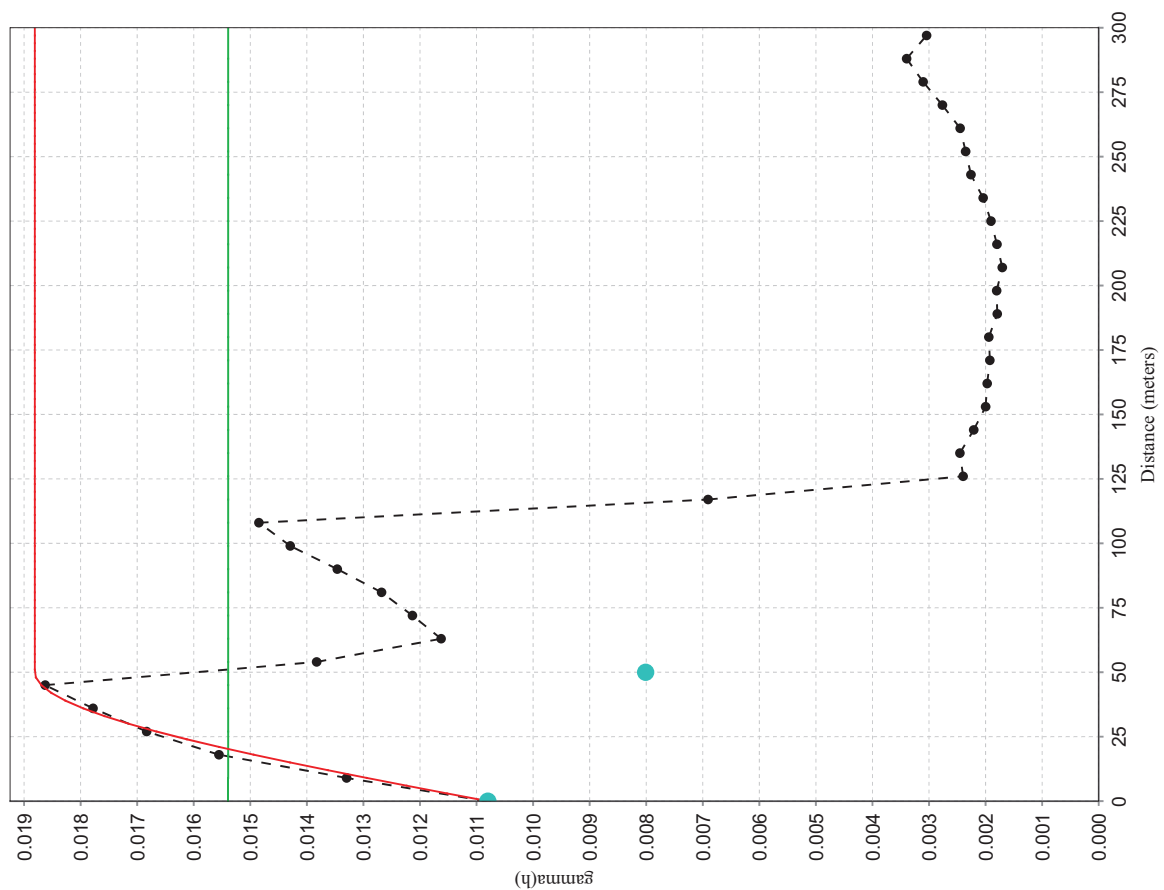


Figure 27: Experimental variogram WO3% - Ellipse Zone
Primary Axis 245/-60 - Lag 25

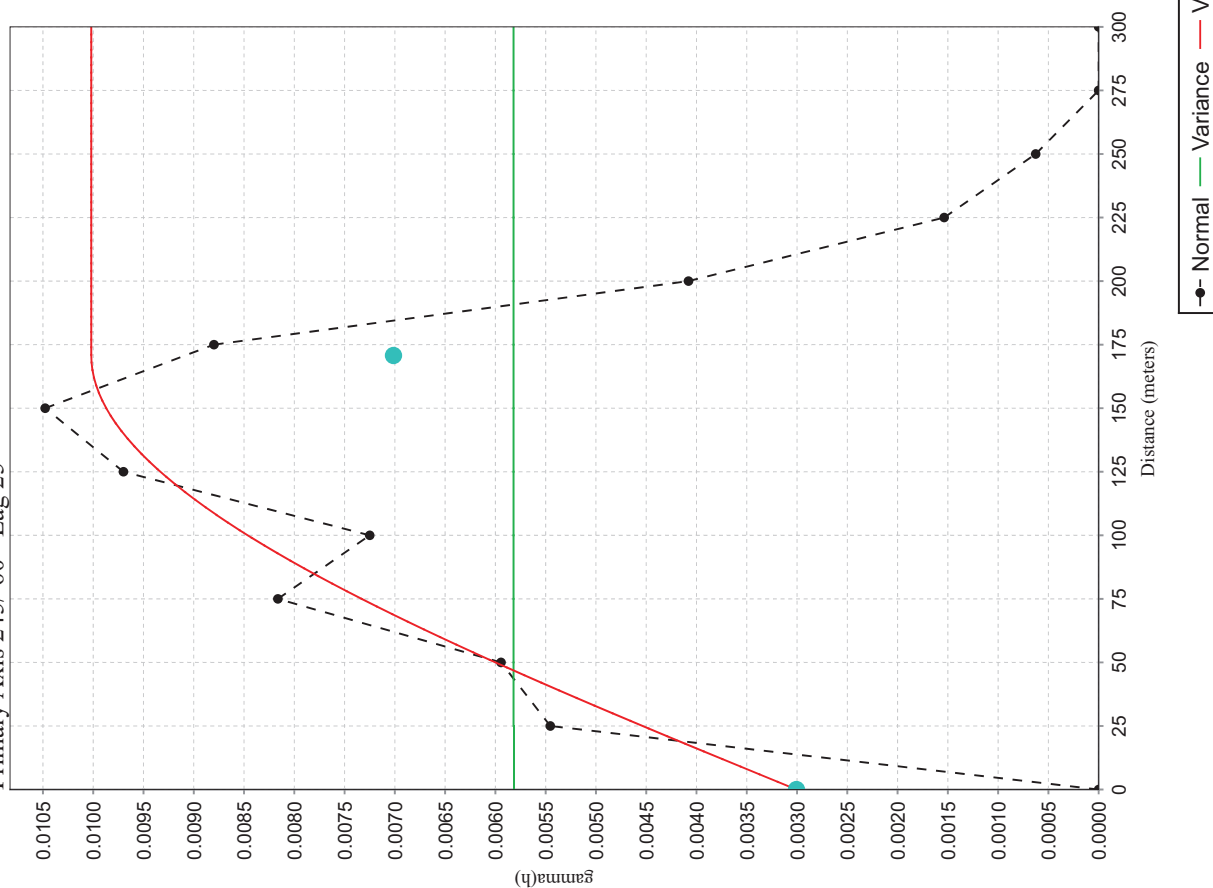


Figure 28: Experimental variogram WO3% - Ellipse Zone
Secondary Axis 138/09 - Lag 30

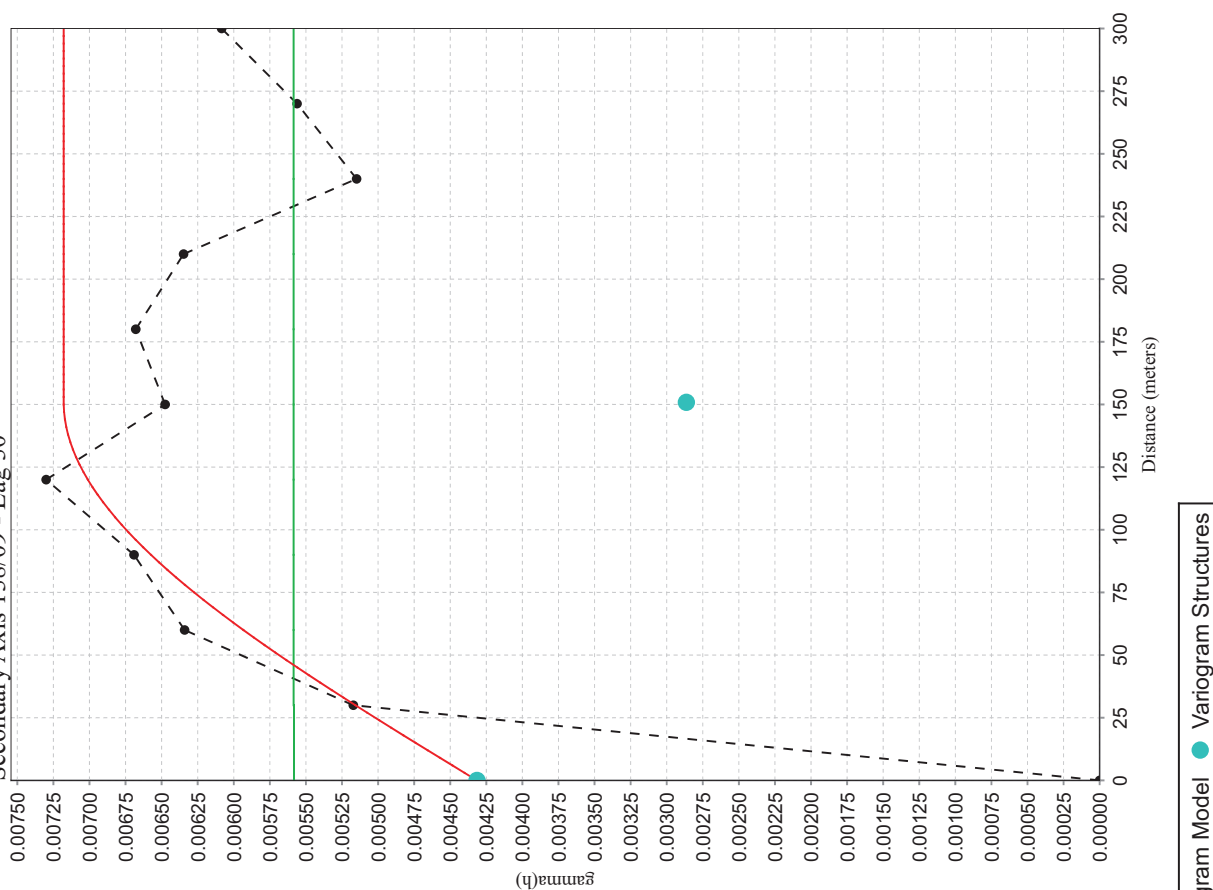


Figure 29: Experimental variogram Mo% - Ellipse Zone
Primary Axis 315/00 - Lag 25

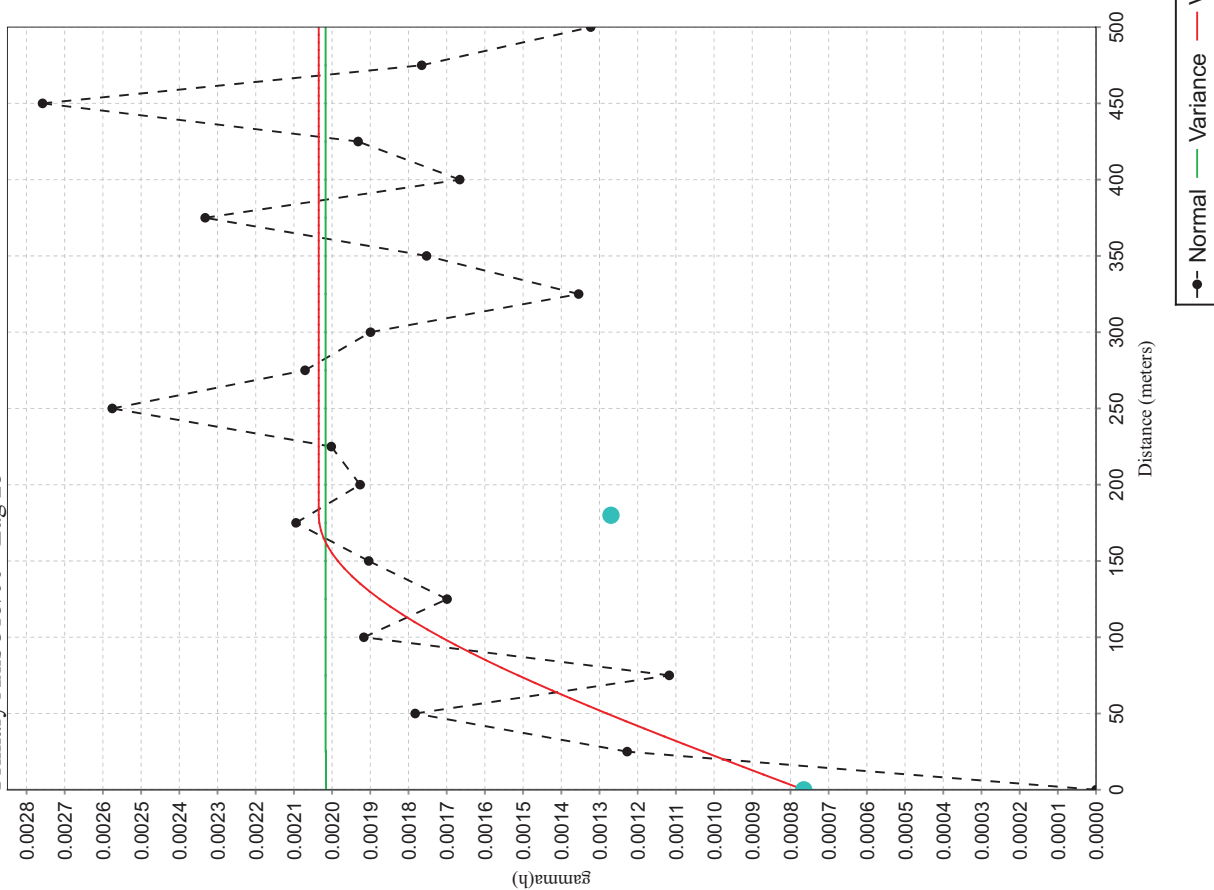
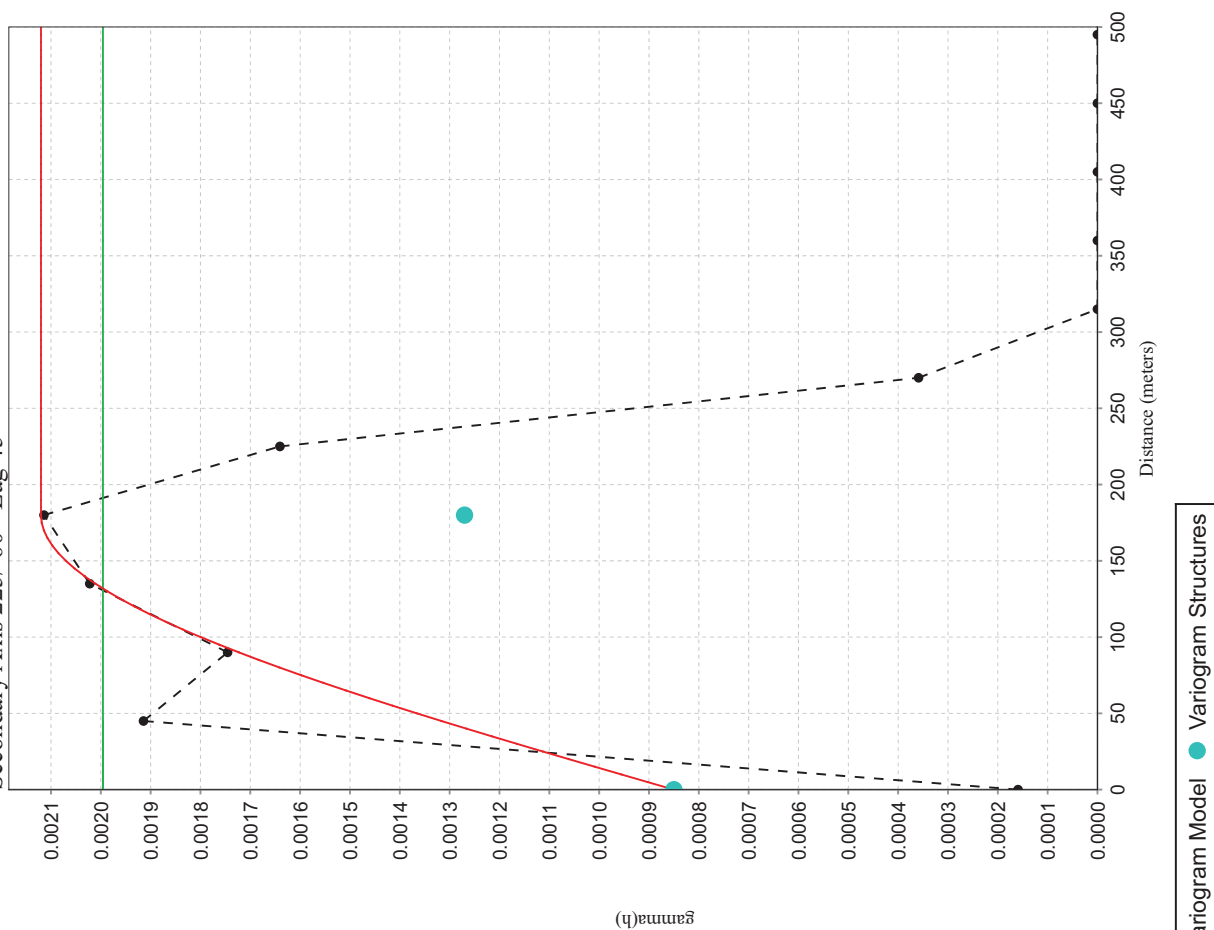


Figure 30: Experimental variogram Mo% - Ellipse Zone
Secondary Axis 225/-60 - Lag 45



Discussion of Results

Experimental variograms for both WO₃% and Mo% assay composites in the total deposit, as defined by the higher grade domain solids for Zone III and the peripheral domain solid for the Ellipse Zone, show that primary and secondary continuity axes conform to orientation corridors defined by dip and strike directions of the major mineralized zones, with ranges of up to 175 meters defined for both axes. These results were reviewed in light of the manually interpreted grade and lithology cross sections prepared earlier and were determined to be geologically reasonable. On this basis, major and secondary ellipsoid axes for grade interpolation were oriented along the dip and strike directions of respective grade interpolation domains, with ranges of 175 meters applied for both axes. Minor axis ranges for interpolation ellipsoids were set at 17.5 meters and their relative orientations with respect to mineralized zone true thicknesses. Interpolation ellipsoid orientations and ranges for all domains in Zone III and the Ellipse Zone are summarized in Table 14.

Table 14: Ellipsoid orientations for interpolation domains

Interpolation Sub-Domain	Azimuth (axis 1)	Plunge (axis 2)	Dip (axis 3)
Zone III Main WO3 Zone 1			
ZONE3_WO3_WEST_BOTTOMLEFT	10	0	-90
ZONE3_WO3_WEST_BOTTOMRIGHT	15	0	-90
ZONE3_WO3_WEST_TOPLEFT_A	5	0	-90
ZONE3_WO3_WEST_TOPLEFT_B	55	0	-90
ZONE3_WO3_WEST_TOPLEFT_C	335	0	-90
ZONE3_WO3_WEST_TOPRIGHT_A	15	0	-90
ZONE3_WO3_WEST_TOPRIGHT_B	335	0	-90
ZONE3_WO3_WEST_TOPRIGHT_C	44	0	-90
ZONE3_WO3_WEST_CENTRAL_A	50	0	-90
ZONE3_WO3_WEST_CENTRAL_C	5	0	-90
Zone III Main WO3 Zone 2			
ZONE3_WO3_EASTFLANK_WEST_A	15	0	-90
ZONE3_WO3_EASTFLANK_WEST_B	335	0	-90
ZONE3_WO3_EASTFLANK_EAST_LEFT_A	0	0	-90
ZONE3_WO3_EASTFLANK_EAST_LEFT_B	25	0	-90
ZONE3_WO3_EASTFLANK_EAST_LEFT_C	0	0	-90
ZONE3_WO3_EASTFLANK_EAST_RIGHT_A	0	0	-90
ZONE3_WO3_EASTFLANK_EAST_RIGHT_B	15	0	-90
ZONE3_WO3_EASTFLANK_EAST_RIGHT_C	350	0	-90
ZONE3_WO3_EASTFLANK_EAST_CENTRAL	0	0	-90
Zone III Main WO3 Peripheral			
ZONE3_WO3_PERIPHERAL	15	0	-90

Zone III Main Mo Zone and East Flank Mo Zone			
ZONE3 MO MAIN BOTTOMLEFT A	10	0	-90
ZONE3 MO MAIN BOTTOMLEFT B	30	0	-90
ZONE3 MO MAIN BOTTOMLEFT C	340	0	-90
ZONE3 MO MAIN BOTTOMMIDDLE	5	0	-90
ZONE3 MO MAIN BOTTOMRIGHT	5	0	-90
ZONE3 MO MAIN TOPLEFT	5	0	-90
ZONE3 MO MAIN TOPMIDDLELEFT	0	0	-90
ZONE3 MO MAIN TOPMIDDLERIGHT	5	0	-90
ZONE3 MO MAIN TOPRIGHT	0	0	-90
ZONE3 MO MAIN CENTRAL A	10	0	-90
ZONE3 MO MAIN CENTRAL B	0	0	-90
ZONE3 MO EASTFLANK A	355	0	-90
ZONE3 MO EASTFLANK B	30	0	-90
Zone III Main Mo Peripheral			
ZONE3 MO PERIPHERAL	15	0	-90
Ellipse Zone WO3 Zone 1			
ELLIPSE WO3 ZONE 1 NORTHWEST	155	0	-65
ELLIPSE WO3 ZONE 1 SOUTHEAST	136	0	-64
Ellipse Zone WO3 Zone 2			
ELLIPSE WO3 ZONE 2 NORTHWEST	145	0	-68
ELLIPSE WO3 ZONE 2 MIDDLE	125	0	-65
ELLIPSE WO3 ZONE 2 SOUTHEAST	152	0	-70
Ellipse Zone WO3 Peripheral			
ELLIPSE WO3 PERIPHERAL	135	0	-65
Ellipse Zone Mo Zone 1			
ELLIPSE MO ZONE 1	140	0	-62.5
Ellipse Zone Mo Zone 2			
ELLIPSE MO ZONE 2 NORTHWEST	125	0	-68
ELLIPSE MO ZONE 2 MIDDLE	140	0	-68
ELLIPSE MO ZONE 2 SOUTHEAST	133	0	-68
Ellipse Zone Mo Peripheral			
ELLIPSE MO PERIPHERAL	140	0	-63.5

Variogram ranges returned for spherical models were in some cases less than the selected interpolation ellipsoid range of the 175 meters for the major and semi-major axes and this result is thought to be primarily attributable to clustering or contrasting spatial distribution of data within some domains. For example, dip extension drilling at the eastern flank of Zone III is not as extensive as in the gabbro-tuff contact area and this resulted in the lesser modeled down-dip range of 140 meters for the secondary axis of the Main WO3 Zone 2 as opposed to the 175 meter down dip range returned for the Main WO3 Zone 1 where deeper drilling results are present. The returned range of 160 meters

for the major axis and 125 meters for the semi-major axis of Mo% are also less than the 175 meter range selected for interpolation and are believed to reflect the same spatial influence.

16.3.8 Setup of October 2008 Three Dimensional Block Model

The Sisson Brook Zone III and Ellipse Zone block model was developed using Universal Transverse Mercator (NAD 83-Zone 19) coordination and a sea level elevation datum, this being consistent with the earlier resource models by Mercator. Block model extents were defined as being from 649300 meters East to 650900 meters East and from 5135700 meters North to 5137550 meters North. The model extends in elevation from minus -230 meters to plus 340 meters relative to sea level datum, with the nominal topographic surface defined by drill collar elevations being at approximately 300 meters above sea level. Standard block size for the model was 10 meters x 10 meters x 5 meters (X,Y,Z) and a minimum sub-block size of 5 meters x 5 meters x 5 meters was permitted to better fit the model at grade domain, overburden surface and peripheral solid limits. No block rotation was applied.

16.3.9 Resource Estimation

As in the previous estimates by Mercator, Inverse Distance Squared (ID^2) grade interpolation was used to assign block grades within the Sisson Brook Zone III and Ellipse Zone model, recognizing that discrete domains of higher metal grade were present within the deposit and that over-smoothing of values associated with these should be minimized. Interpolation ellipsoid orientation and range values used in the estimation reflect trends supported by variography that were checked against sectional geology and manual grade distribution interpretations. The trends of the major, semi-major and minor axes of the search ellipse for each interpolation domain were described previously in report Section 16.3.7 and Table 13. Ranges of 175 meters, 175 meters and 17.5 meters apply to the three axes respectively. The maximum number of contributing composites used to estimate a block grade was set at 9 and the minimum number of contributing composites was set at 3. A maximum of 3 composites per drill hole was allowed for block grade estimation and block discretization was set at 2Y x 2X x 1Z.

Multiple interpolation domains were used with a combination of composite and block constraints and domain-specific interpolation ellipsoids. Block grades in the higher grade WO₃ domains (Main WO₃ Zone 1, Main WO₃ Zone 2, Ellipse WO₃ Zone 1 and Ellipse WO₃ Zone 2), were first interpolated using the respective down hole assay composite file constrained within the boundaries of the appropriate solid model. The grade domains were divided into interpolation sub-domains (ten for Main WO₃ Zone 1, nine for Main

WO3 Zone 2, two for Ellipse WO3 Zone 1, and three for Ellipse WO3 Zone 2) to accommodate local geometric irregularities of the solids, with grade interpolation in each carried out using slightly differing ellipsoid orientations. The contributing assay composite population for each grade domain was constrained for sub-domain grade interpolation. After completion of the above grade interpolations, WO3% grades were interpolated for all remaining blocks occurring within the Zone III peripheral domain, but outside the higher grade WO3 domains, and for all block occurring in the Ellipse Zone peripheral domain that occur outside both the higher grade WO3 domains and the Zone III peripheral envelop solid. The latter condition prevented spatial overlap of Zone III and Ellipse Zone grade interpolations.

Finally, Mo grades were interpolated for all blocks occurring in the higher grade Mo solids (Main Mo Zone, East Flank Mo Zone, Ellipse Mo Zone 1, and Ellipse Mo Zone 2), followed by interpolation of all remaining blocks in the Zone III peripheral domain and subsequently all remaining blocks in the Ellipse Zone peripheral domain occurring outside the Zone III peripheral constraint. The same composite file constraints and domain specific interpolation ellipsoids used in WO3 grade interpolation were applied (eleven for Main Mo Zone, two for East Flank Mo Zone, one for Ellipse Mo Zone 1, and three for Ellipse Mo Zone 2). After completion of all grade interpolation runs, WO3 Equivalent values for all blocks were calculated from WO3 and Mo block grades using the previously discussed equation $WO3\text{ Eq.} = WO3\% + (Mo\% * 2.02)$.

A representative set of block model cross sections and level plans appear in Appendix 4. Perspective views of the block model showing WO3% Equivalent, WO3% and Mo% parameters are presented in Figures 31, 32, and 33. Spatial aspects of the Zone III higher grade Mo core (Main Mo Zone) and the flanking zones of higher WO3 grades (Main WO3 Zone 1 and 2) are also apparent in these figures, along with the two tabular zones of higher Mo grades (Ellipse Mo Zone 1 and 2) and sub-parallel zones of higher WO3 grades (Ellipse WO3 Zone 1 and 2) that occur in the Ellipse Zone.

16.3.10 Material Densities

Average density factors for major rock units encountered in the Zone III and Ellipse Zone drilling were calculated from 415 separate density determinations as discussed in previous resource estimates (Cullen and Harrington 2007, 2008, 2009). These were supplemented with an additional 140 separate density determinations from the 2009 drill program, for a total 555 determinations. Geodex values were calculated by company technical staff using water emersion methodology and data were compiled and averaged by Mercator on the basis of sampled lithology.

Figure 31: Perspective view of the Zone III and Ellipse Zone block model for WO3 Eq.

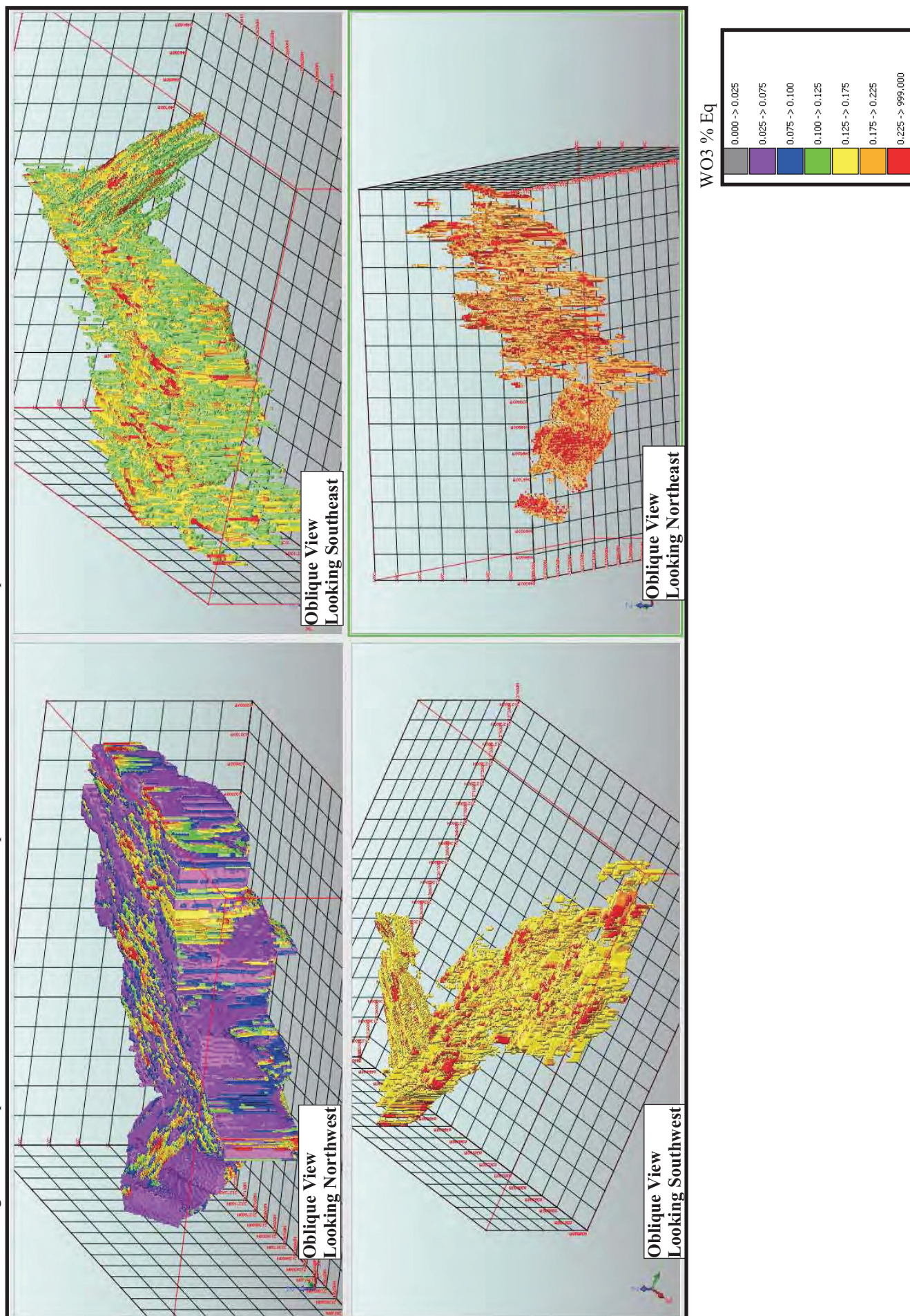


Figure 32: Perspective view of the Zone III and Ellipse Zone block model for WO3

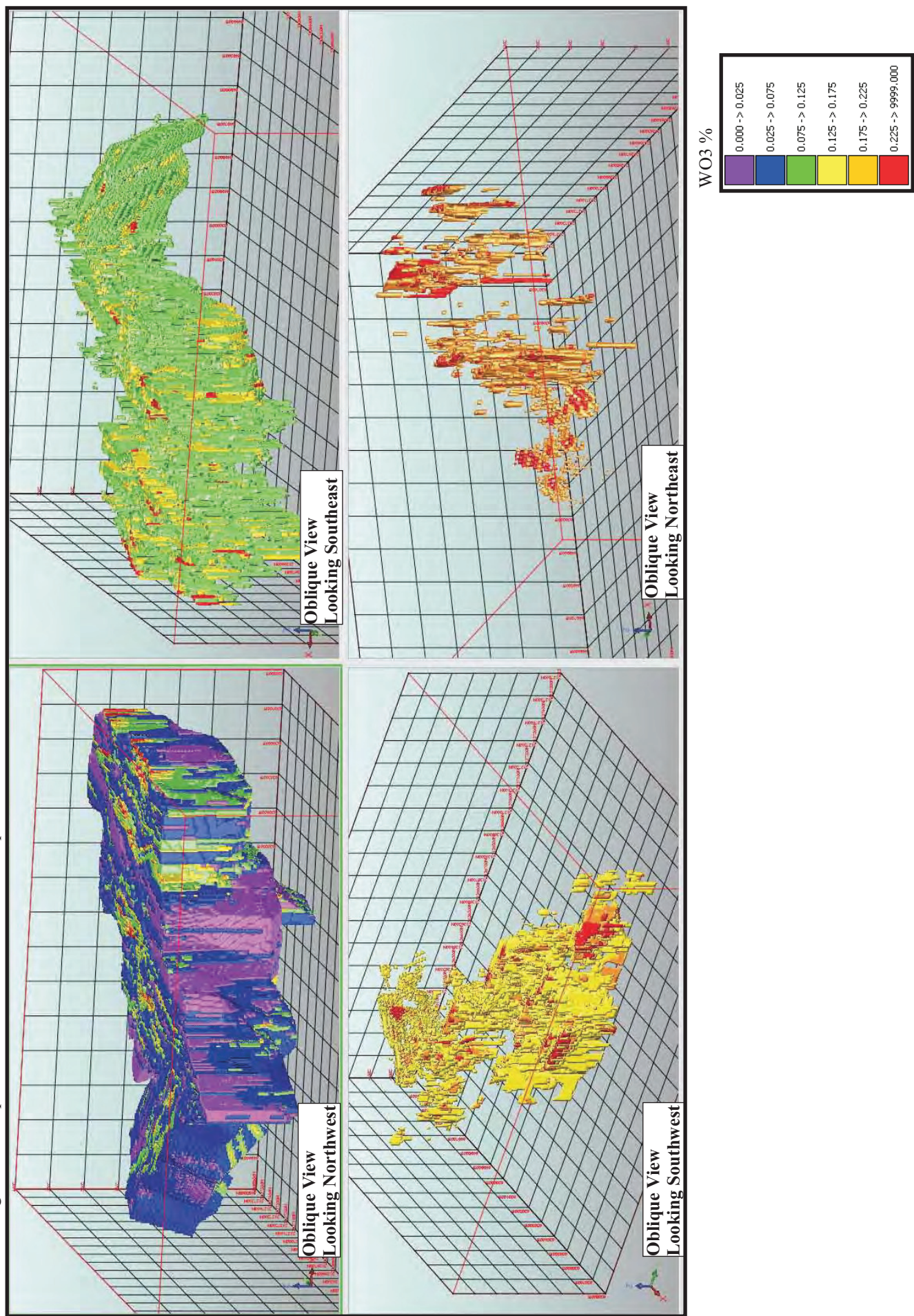
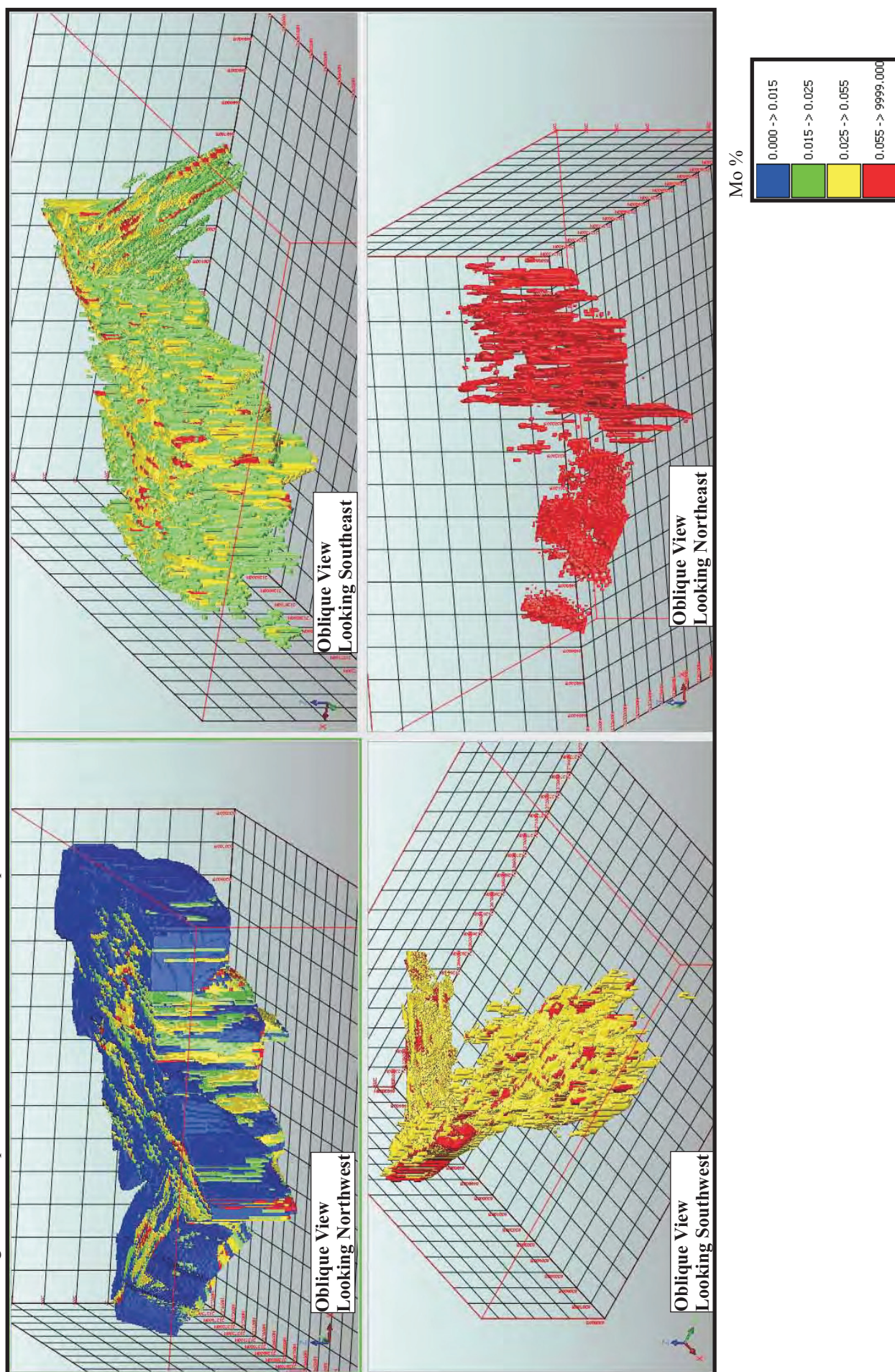


Figure 33: Perspective view of the Zone III and Ellipse Zone block model for Mo



Resource blocks in the model were grouped into four major lithologic categories for the purpose of density assignment, these being (1) gabbro intrusion and (2) interbedded felsic tuff, (3) mafic volcanics and related metasedimentary rocks, and (4) diorite and granodiorite.

Three dimensional solids for the major rock units were developed from wireframes of lithologic units interpreted on cross sections, and average density factors calculated from the Geodex sample data set were assigned to each lithologic solid. This allowed subsequent assignment of density values to individual model blocks based on the lithology attribute assigned to each block from its associated geological solid. Results of the Geodex density determinations were assigned as follows to the wire-framed major rock unit solids: 2.86g/cm³ for gabbro (n=58), 2.83g/cm³ (n=60) for the diorite, 2.66g/cm³ (n=65) for the sequence of felsic metavolcanics, and 2.80g/cm³ (315) for the sequence of mafic metavolcanics and metasedimentary. The 57 remaining specific gravity samples pertain to other minor lithologies (i.e. quartz and quartz flooded zones) that are present in Zone III deposit and average 2.72g/cm³. Descriptive statistics for the contributing Geodex density determinations are presented in Table 15

Table 15: Geodex Density Value Descriptive Statistics (Grams/Cubic Centimeter)

Parameter	Gabbro	Mafic Volcanics	Mixed Metasedimentary	Felsic Volcanics	Diorite
Mean	2.86	2.81	2.79	2.66	2.82
Standard Dev.	0.067	0.113	0.113	0.077	0.057
Range	0.323	1.001	0.906	0.46	0.251
Minimum	2.72	2.63	2.65	2.59	2.69
Maximum	3.04	3.64	3.56	3.05	2.94
Confidence 95%	0.018	0.014	0.027	0.024	0.015
Number	58	243	128	65	60

16.3.11 Resource Category Definitions

Definitions of mineral resource and associated mineral resource categories used in this report are those recognized under National Instrument 43-101 and set out in the Canadian Institute of Mining, Metallurgy and Petroleum Standards On Mineral Resources and Reserves *Definitions and Guidelines* (the CIM Standards).

16.3.12 Resource Category Parameters Used In Current Estimate

Mineral resources in the Inferred, Indicated and Measured categories are included in the current resource estimate, with the largest percentage reported in the Indicated category. This reflects up-grading and expansion of geological and assay databases through

completion of the 2007, 2008 and 2009 in-fill drilling programs carried out by Geodex. The following resource category definitions apply to the current Zone III and Ellipse Zone estimates and reflect a progressively decreasing scale of certainty based on proximity of sample composites included in block grade assignments. In contrast with previous models, three dimensional grade category solids were created from wireframed sectional interpretations of category blocks. This allowed local smoothing of category boundaries and subjective elimination of isolated classification artifacts.

Measured Resource Category: Blocks having 9 included assay composites showing averaged distance from the block of 25% of the major axis range (43.75 meters), with the block being 37.5 meters or less from at least one included composite and no more than 3 included composites allowed from a single hole. Measured blocks were wireframed on cross sections to create corresponding solids for reporting.

Indicated Resource Category: Blocks having 9 included assay composites showing averaged distance from the block of 50% of the major axis range (87.5 meters), with the block being 75 meters or less from at least one included composite and no more than 3 composites allowed from a single hole. Indicated blocks were wireframed on cross sections to create corresponding solids for reporting.

Inferred Resource Category: All remaining blocks within the deposit solid that show interpolated grades and are not included in the Indicated or Measured categories.

16.3.13 Statement of Resource Estimate

Block grade, block density and block volume parameters for the Sisson Brook Zone III and Ellipse Zone deposit were estimated through the methods described in preceding sections of this report. Subsequent application of the resource category parameters set out above resulted in the final tonnage and grade estimates presented below in Table 16. A tabulation of combined resources appears in Appendix 3. Results are in accordance with Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: *Definitions and Guidelines* (the CIM Standards) as well as disclosure requirements of National Instrument 43-101. The 0.100% WO₃ Equivalent grade threshold is highlighted as the base case threshold presented in the Marr (2009) PEA prepared by Geodex.

Table 16: Sisson Brook Mineral Resource Estimate – Effective December 17th, 2009

Sisson Brook Mineral Resource Estimate - Zone III				
*WO3 Equivalent % Threshold	Resource Category	Rounded Tonnes	WO3 %	Mo%
0.025	Measured	47,400,000	0.073	0.025
0.075	Measured	34,600,000	0.088	0.031
**0.100	Measured	27,500,000	0.097	0.034
0.125	Measured	20,200,000	0.110	0.038
0.175	Measured	9,500,000	0.133	0.048
0.225	Measured	3,800,000	0.157	0.061
0.025	Indicated	308,500,000	0.061	0.019
0.075	Indicated	179,500,000	0.082	0.026
**0.100	Indicated	125,400,000	0.094	0.030
0.125	Indicated	83,000,000	0.107	0.035
0.175	Indicated	32,700,000	0.133	0.045
0.225	Indicated	11,700,000	0.153	0.060
0.025	Inferred	168,100,000	0.055	0.020
0.075	Inferred	91,300,000	0.075	0.029
**0.100	Inferred	61,300,000	0.086	0.034
0.125	Inferred	39,400,000	0.098	0.040
0.175	Inferred	15,800,000	0.117	0.055
0.225	Inferred	6,100,000	0.133	0.072
Sisson Brook Mineral Resource Estimate - Ellipse Zone				
*WO3 Equivalent % Threshold	Resource Category	Rounded Tonnes	WO3 %	Mo%
0.025	Measured	2,700,000	0.069	0.021
0.075	Measured	1,800,000	0.086	0.027
**0.100	Measured	1,300,000	0.095	0.031
0.125	Measured	900,000	0.104	0.037
0.175	Measured	400,000	0.124	0.048
0.225	Measured	100,000	0.134	0.071
0.025	Indicated	58,900,000	0.062	0.019
0.075	Indicated	34,100,000	0.081	0.026
**0.100	Indicated	23,200,000	0.092	0.032
0.125	Indicated	15,300,000	0.102	0.038
0.175	Indicated	6,200,000	0.117	0.054
0.225	Indicated	2,300,000	0.127	0.076
0.025	Inferred	22,900,000	0.057	0.017
0.075	Inferred	13,000,000	0.073	0.024

**0.100	Inferred	7,700,000	0.085	0.029
0.125	Inferred	4,600,000	0.092	0.036
0.175	Inferred	1,300,000	0.093	0.060
0.225	Inferred	400,000	0.088	0.085

Notes: * $WO_3\% \text{ Equiv} = WO_3\% + (Mo\% \times 2.02)$ based on \$US 9.00 /lb WO_3 and \$US 15/lb Mo pricing plus 70% WO_3 and 85% Mo recoveries as in previous estimate; ** Marr(2009)Preliminary Economic Assessment base case threshold

16.3.14 Validation

Visual Comparison to Geological Sections

Results of block modeling were compared on a section by section basis with corresponding manually interpreted geological and grade distribution sections prepared prior to model development. As in the past, this showed block model grade patterns to generally conform with the trend of steeply dipping to vertical major lithologic units of Zone III and to locally transgress such unit boundaries. This is consistent with the recognized epigenetic character of WO_3 and Mo mineralization in Zone III. Isolation of higher grade Mo and WO_3 values within corresponding solids is apparent and excessive smoothing of grade to surrounding lower grade areas does not appear to have occurred.

The Ellipse Zone block model was assessed in a manner similar to Zone III but predominance of the diorite host unit and the zone's northwest strike and southwest dip distinguish this area. Logged presence of mineralized vein and stringer arrays within the Zone III drilling data set veining provided the best indication of model validity since correlatable zones of higher mineralized vein frequency were found to correspond with block model zones having similar orientation. However, near the zone's southeast intersection with Zone III, greater complexity of mineralized trends is apparent due to intersecting north (Zone III) and northwest (Ellipse Zone) mineralized corridors.

Overall, visual comparisons of Zone III and Ellipse Zone block models to corresponding geological models showed acceptable degree of consistency between the block model and the independently derived sectional interpretations of deposit geology and grade distribution.

Comparison of Composite Database and Block Model Grades

Descriptive statistics were calculated for the drill hole composite values used in the block model grade interpolations and these were compared to values calculated for the individual blocks in the block model for each grade domain (Table 17 and Table 18). The mean drill hole composite grades for the various domains were found to compare

favorably with corresponding grades of the block model, thereby providing a general check on the model with respect to the underlying assay composite population. The peripheral domain illustrates the percentage of lower grade WO₃ and Mo material present within the block model. Results of the composite and block grade comparison are interpreted as showing acceptable agreement between the data sets.

Table 17: Zone III Comparison of 3m Composite and Block Model Grades

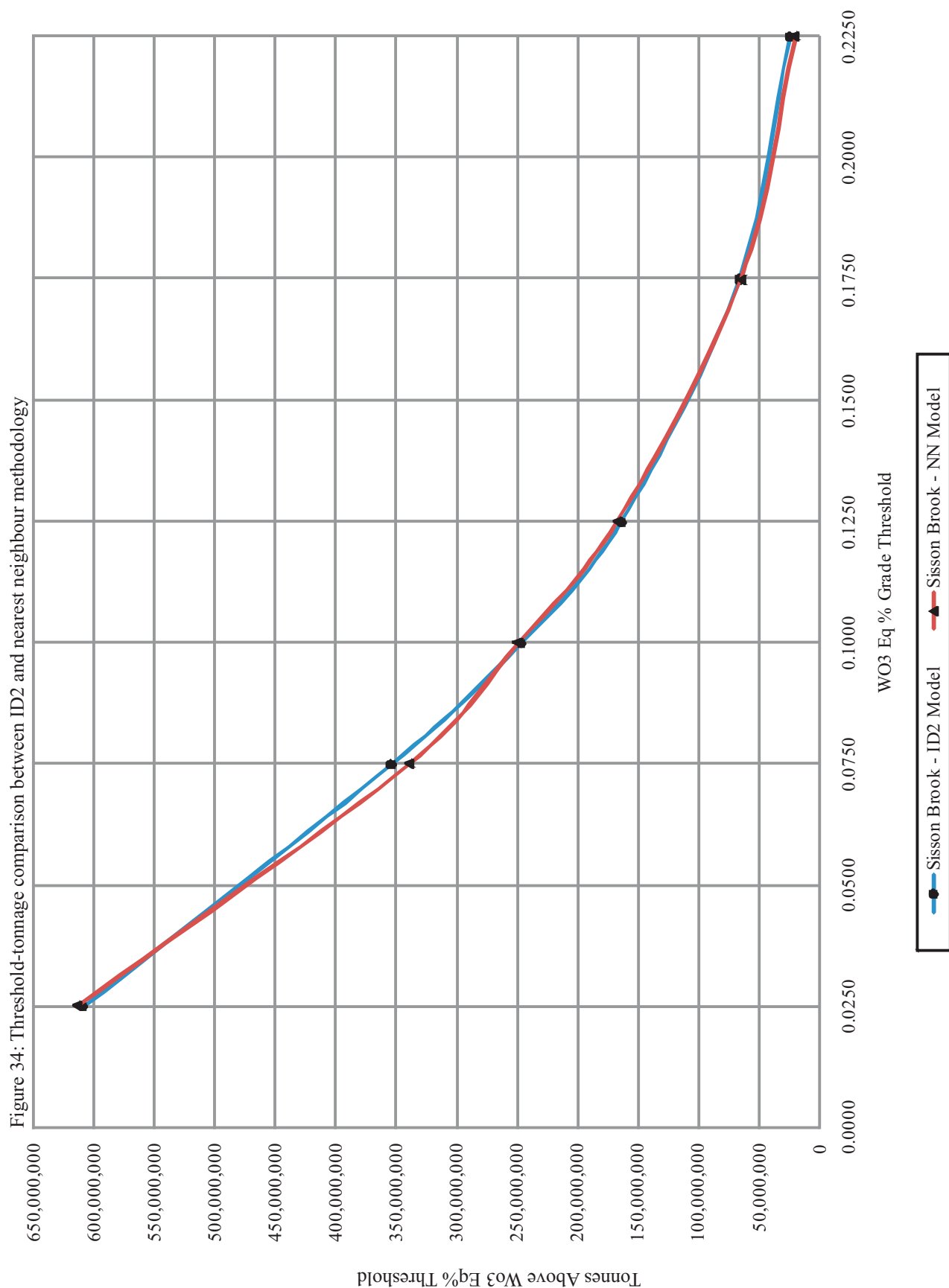
Parameter	Blocks	3m Capped Composites
Comparison of WO₃% in the Zone III Main WO₃ Zone 1		
Mean Grade	0.1001	0.1192
Variance	0.0021	0.0118
Standard Deviation	0.0457	0.1088
Coefficient of Var.	0.4572	0.9701
Number of Samples	106350	2431
Comparison of WO₃% in the Zone III Main WO₃ Zone 2		
Mean Grade	0.1112	0.1192
Variance	0.0021	0.0133
Standard Deviation	0.0455	0.1151
Coefficient of Var.	0.4095	0.9662
Number of Samples	70754	1478
Comparison of WO₃% in the Zone III Peripheral WO₃ Domain		
Mean Grade	0.0410	0.0432
Variance	0.0007	0.0039
Standard Deviation	0.0272	0.0628
Coefficient of Var.	0.6632	1.4540
Number of Samples	419315	9004
Comparison of Mo% in the Zone III Main Mo Zone and East Flank Mo Zone		
Mean Grade	0.0408	0.04085
Variance	0.0006	0.0038
Standard Deviation	0.0233	0.0619
Coefficient of Var.	0.5723	1.516
Number of Samples	159244	3828
Comparison of Mo% in the Zone III Peripheral Mo Domain		
Mean Grade	0.0114	0.0111
Variance	0.0001	0.0006
Standard Deviation	0.0103	0.0254
Coefficient of Var.	0.9072	2.2839
Number of Samples	437175	9052

Table 18: Ellipse Zone Comparison of 3m Composite and Block Model Grades

Parameter	Blocks	3m Capped Composites
Comparison of WO3% in the Ellipse Zone WO3 Zone 1		
Mean Grade	0.0858	0.0870
Variance	0.0016	0.0070
Standard Deviation	0.0403	0.0837
Coefficient of Var.	0.4700	0.9613
Number of Samples	28632	454
Comparison of WO3% in the Ellipse Zone WO3 Zone 2		
Mean Grade	0.0847	0.0836
Variance	0.0776	0.0548
Standard Deviation	0.0356	0.0930
Coefficient of Var.	0.4193	1.1134
Number of Samples	34874	452
Comparison of WO3% in the Ellipse Zone Peripheral WO3 Domain		
Mean Grade	0.04378	0.0404
Variance	0.0004	0.003
Standard Deviation	0.0192	0.0358
Coefficient of Var.	0.4375	0.8861
Number of Samples	77379	871
Comparison of Mo% in the Ellipse Zone Mo Zone 1		
Mean Grade	0.0352	0.0359
Variance	0.0006	0.0036
Standard Deviation	0.0254	0.0602
Coefficient of Var.	0.7199	1.6765
Number of Samples	34581	513
Comparison of Mo% in the Ellipse Zone Mo Zone 2		
Mean Grade	0.0272	0.0296
Variance	0.0004	0.0029
Standard Deviation	0.0194	0.0537
Coefficient of Var.	0.7108	1.8127
Number of Samples	35440	610
Comparison of Mo% in the Ellipse Zone Peripheral Mo Domain		
Mean Grade	0.0140	0.01245
Variance	0.0002	0.0008
Standard Deviation	0.0146	0.0290
Coefficient of Var.	1.0432	2.3323
Number of Samples	70792	662

Comparison of ID² Resource Model with Nearest Neighbour Model

The ID² resource model for the Sisson Brook Zone III deposit was validated using the Nearest Neighbor (NN) interpolation method. Single composites for drill hole intersections with respective interpolation domains were created and assigned to intersection mid-points for use in the NN model. Search ellipse parameters and other applicable parameters were the same as those used in the ID² model. For Zone III the two methods have combined correlation coefficients for tonnage and WO₃ Equivalent of 0.999 and 0.998 respectively. Figure 34 presents a graphic comparison of Zone III results and the Ellipse Zone also produced similar tonnage and grade values for the two methods. The NN model provides a de-clustered view relative to the ID² method and results of the two methods are considered to be sufficiently consistent to provide an acceptable check on the preferred ID² methodology.



16.4 Previous Resource or Reserve Estimates

In March, 2007 Mercator prepared a mineral resource estimate for the Zone III deposit based on 45 historic and Geodex drill holes available at that time (Cullen et. al., 2007). All resources were assigned to the Inferred category and considered compliant with the CIM Standards and National Instrument 43-101. Results appear in Table 19 below.

Table 19: Mineral Resource Estimate for Sisson Brook Zone III - March 28, 2007

Resource Category	Equivalent WO3% Threshold	Tonnes (Rounded)	WO3%	Mo%	*Equivalent WO3%
Inferred	0.025	167,400,000	0.059	0.021	0.122
Inferred	0.075	126,300,000	0.069	0.025	0.143
Inferred	0.125	64,400,000	0.084	0.034	0.186
Inferred	0.175	28,900,000	0.098	0.045	0.233
Inferred	0.225	12,300,000	0.110	0.057	0.281

* Notes: Mo and WO3 values capped at 0.7% and 1.2% respectively; WO3 Equivalent = (WO3% + 2.97*Mo %)

In October 2007, Mercator completed a second resource estimate for the deposit that included 18 additional drill holes completed as part of the initial 2007 drilling program. This program was designed to extend deposit limits and provide in-fill to the earlier 100 meter spaced drilling sections. This resulted in a second Inferred resource estimate (Cullen and Harrington, 2007) that was used in the Zone III Scoping Study completed for Geodex by Wardrop (Ozturk et al., 2007) in late 2007. Results of the October 2007 resource estimate are presented in Table 20 below.

Table 20: Mineral Resource Estimate for Sisson Brook Zone III – October 17, 2007

Resource Category	*Equivalent WO3% Threshold	Tonnes (Rounded)	WO3 %	Mo %	*Equivalent WO3 %
Inferred	0.025	290,800,000	0.059	0.020	0.118
Inferred	0.075	215,000,000	0.069	0.024	0.140
Inferred	0.125	109,000,000	0.084	0.032	0.179
Inferred	0.175	43,400,000	0.100	0.043	0.227
Inferred	0.225	15,800,000	0.121	0.054	0.281

*Notes: Mo and WO3 values capped at 0.7% and 1.2% respectively; WO3 Equivalent = (WO3% + 2.97*Mo %)

The second Mercator estimate in 2007 provided definition of comparable deposit grades to the first but significantly higher tonnage. Tonnage increase is attributable to substantial increase in recognized deposit width and depth extent in the north half of the block model due to new drilling results and also to use of a peripheral deposit solid to constrain block grade interpolation. The earlier 2007 estimate was constrained peripherally by a block assignment maximum distance parameter of 100 meters from an included composite.

In June 2008, Mercator updated the 2007 resource estimates with the complete set of results from the 2007 drill program, which resulted in a substantial increase in drill hole data (Cullen and Harrington (2008)). This expanded database provided sufficient information to better assess grade distribution and control in the Zone III deposit, resulting in definition of higher grade domains of WO₃% and Mo% mineralization. Improved confidence in the model resulting from the infill drilling allowed definition of Measured, Indicated and Inferred resources. Results of the June 2008 resource estimate are presented in Table 21 below.

Table 21: Mineral Resource Estimate for Sisson Brook Zone III – June 5, 2008

*WO ₃ Equivalent % Threshold	Resource Category	Rounded Tonnes (Millions)	WO ₃ %	Mo%
0.025	Measured	18.6	0.067	0.03
0.075	Measured	15.2	0.075	0.03
0.125	Measured	10.3	0.086	0.04
0.175	Measured	5.6	0.099	0.05
0.225	Measured	3	0.109	0.06
0.025	Indicated	225.3	0.061	0.02
0.075	Indicated	160	0.073	0.03
0.125	Indicated	92.5	0.088	0.03
0.175	Indicated	47.4	0.1	0.04
0.225	Indicated	22.6	0.111	0.06
0.025	Inferred	154.4	0.049	0.02
0.075	Inferred	103.4	0.059	0.03
0.125	Inferred	55.4	0.072	0.04
0.175	Inferred	25.7	0.085	0.05
0.225	Inferred	11.4	0.094	0.06

Notes: (1) * WO₃% Equiv. = WO₃% + (Mo %* 3.35) (2) Wardrop Engineering scoping study base case grade = 0.063% WO₃ and 0.024% Mo; 70% recovery for WO₃ and 85% recovery for Mo assumed based on Wardrop Engineering Scoping Study

The 2008 resource estimate provides a significant increase in tonnage and grade and an improved confidence of resources over the previous 2007 resource estimates. As previously discussed this resulted from a substantial increase of drill hole information from the 2007 in-fill drill program. Calculation of the WO₃% Equivalent factor changed from WO₃ Eq = WO₃% + (2.97*Mo%) to WO₃ Eq. = WO₃% + (3.35*Mo%) due to the change in long term metal prices at the time of resource estimation and inclusion of a 70% recovery factor for WO₃ and 85% recovery factor for Mo based on results of the Wardrop Engineering Scoping Study (Ozturk et al., 2007). Tonnage and grade estimates for the Ellipse Zone were not prepared at the time of this estimate.

In January, 2009 Mercator provided another update to the Zone III and Ellipse Zone resource estimate through incorporation of 2008 drilling program results and this was reported by Cullen and Harrington (2009). The estimate reflected an increase in deposit

size as well as increased Indicated and Measured category resources. Table 22 presents the resource estimate, which included a revised WO3% Equivalent factor of WO3 Equivalent = WO3% + (2.02*Mo%). This factor was based on client-supplied long-term pricing figures of \$US 9.00/lb WO3 and \$US 15.00/lb Mo and metal recovery factors retained from the earlier Wardrop study.

Table 22: Sisson Brook Property Mineral Resource Estimate – January 27th, 2009

Zone III Mineral Resource Estimate				
*WO3 Equivalent % Cutoff	Resource Category	Rounded Tonnes	WO3 %	Mo %
0.025	Measured	26,600,000	0.072	0.025
0.075	Measured	19,400,000	0.086	0.030
0.125	Measured	11,000,000	0.109	0.037
0.175	Measured	5,100,000	0.135	0.044
0.225	Measured	1,800,000	0.168	0.053
0.025	Indicated	257,300,000	0.062	0.019
0.075	Indicated	151,100,000	0.082	0.026
0.125	Indicated	69,100,000	0.107	0.034
0.175	Indicated	26,700,000	0.131	0.045
0.225	Indicated	9,300,000	0.152	0.058
0.025	Inferred	223,600,000	0.055	0.018
0.075	Inferred	118,700,000	0.073	0.027
0.125	Inferred	47,800,000	0.097	0.036
0.175	Inferred	15,900,000	0.120	0.049
0.225	Inferred	5,400,000	0.138	0.064
Ellipse Zone Mineral Resource Estimate				
*WO3 Equivalent % Cutoff	Resource Category	Rounded Tonnes	WO3%	Mo %
0.025	Measured	1,100,000	0.082	0.023
0.075	Measured	900,000	0.092	0.027
0.125	Measured	500,000	0.112	0.034
0.175	Measured	200,000	0.135	0.044
0.225	Measured	100,000	0.146	0.068
0.025	Indicated	28,300,000	0.072	0.024
0.075	Indicated	22,500,000	0.081	0.027
0.125	Indicated	10,400,000	0.105	0.038
0.175	Indicated	4,600,000	0.121	0.050
0.225	Indicated	1,500,000	0.139	0.067
0.025	Inferred	36,500,000	0.061	0.019

0.075	Inferred	23,400,000	0.073	0.026
0.125	Inferred	8,600,000	0.091	0.041
0.175	Inferred	3,400,000	0.102	0.057
0.225	Inferred	900,000	0.094	0.094

Notes: (1) $WO_3\% \text{ Equiv} = WO_3\% + (Mo\% * 2.02)$ based on \$US 9.00 /lb WO_3 and \$US 15/lb Mo from Geodex study plus 70% WO_3 and 85% Mo recoveries from 2007 Wardrop Scoping Study (Osturk et. al, 2007), (2) 0.125% WO_3 resource cutoff reflects Geodex base case economic model at effective date

Prior to the resource estimates completed by Mercator, in March of 2006 Geodex disclosed results of an in-house Zone III estimate (Martin, 2006) for a “potential mineral deposit that is the target of further exploration” rather than a formal mineral resource estimate (Geodex Press Release March 24, 2006) and results of this work are presented below in Table 23. The authors note the deposit definition qualification and caution that the estimate should not be considered a mineral resource or considered compliant with National Instrument 43-101 or the CIM Standards. Geodex had previously prepared an in-house estimate for Zone II based on Kidd Creek Mines data and reported 1,600,000 tons grading 0.215 WO_3 and 0.41% Cu. This estimate is also not compliant with the CIM Standards or National Instrument 43-101 and should not be relied upon.

Table 23: *Summary of Geodex Zone III “Potential Mineral Deposit” Estimate

Area	Resource Class	Tonnes (Rounded)	MoS2%	WO3%	Cu%
Zone III	Inferred	25,950,000	0.05	0.102	-----

*Figures are not compliant with National Instrument 43-101 or CIM Standards

While recognizing that the 2006 estimate by Geodex did not meet reporting standards for mineral resources, consideration of these figures in combination with their unpublished support documentation provided a useful introduction to grade distribution trends that are reflected in subsequent block models. Since the work was completed prior to initiation of the major drilling program by Geodex in 2006, substantially fewer drill holes and a smaller assay database were available for consideration at that time, resulting in lower tonnage being defined.

As reported earlier, Kidd Creek Mines (Moore, 1980 in Mann, 1981) reported a mineral resource estimate for Zone I at Sisson Brook based on drilling results available to that date. Results of this work are presented below in Table 24. The authors caution that this resource does not cover the current Zone III and was prepared prior to adoption of National Instrument 43-101 and current CIM Standards. As such, it is not compliant with National Instrument 43-101 or the CIM Standards and should not be relied upon.

Table 24: *Summary of Resource Estimate by Kidd Creek Mines Ltd.

Area	Resource Class	Tons (Rounded)	MoS%	WO3%	Cu%
Zone 1	“Drill Indicated”	7,500,000	-----	0.21	0.35

**Figures are historic in nature and not compliant with National Instrument 43-101 or CIM Standards*

17.0 Other Relevant Data and Information

17.1 Scoping Study by Wardrop Engineering Inc.

In November, 2007 Geodex received results of a preliminary economic analysis, or scoping study, for the Zone III deposit completed by Wardrop Engineering Inc. (Ozturk et al., 2007). This study was based on the October, 2007 resource estimate for Zone III (Cullen and Harrington, 2007b) and involved development of a conceptual design for all aspects of the project, including mine design, mineral processing, tailings disposal and economic evaluation. The study was completed to a $\pm 35\%$ level of accuracy, which was considered appropriate for this level of investigation. Authors Cullen and Harrington of the present resource report contributed to the Wardrop study, with author Cullen contributing as a Qualified Person for certain sections of the report.

Wardrop’s preliminary economic assessment of the Zone III project indicated that, based on the parameters assumed (see the Appendix 3 summary for details), an open pit mine operating for 31 years at 20,000 tonnes per day, with mine-life grades between 0.067% and 0.020% Mo and 0.037% and 0.093 % WO₃, would be profitable and represent a viable financial investment. A recommendation to proceed with preliminary feasibility level studies directed toward the following specific issues was provided:

- Drilling and resource modeling to advance resources above the inferred level
- Metallurgical work on ore recovery, concentrates and other parameters
- Geotechnical studies to enable pit design and infrastructure layout
- Capital and operating cost studies
- Mine design and production scheduling
- Environmental studies including base line sampling
- Other work needed to support a decision to proceed (or not) with a feasibility study

Subsequent to provision of the scoping study report by Wardrop, substantive reduction in market values for both Mo and WO₃ occurred. This prompted Geodex to conservatively (downwardly) revise long term metal pricing figures from base case levels presented by Wardrop. As previously noted in section 16.3.6 of this report, client-supplied revised metal pricing figures, rather than higher base case values documented in the Wardrop scoping study were used to calculate the “Equivalent WO₃” parameter that appears in the current resource report. On this basis, the reader is cautioned that conclusions and recommendations based on base case technical and economic assumptions established by Wardrop in the 2007 scoping study, including long term metal pricing regimes and the processing flowsheet, should not be directly relied upon at the lower, long-term metal pricing level favoured by Geodex at the effective date of this report. Conclusions and assumptions presented in the Preliminary Economic Assessment report subsequently prepared by Geodex supercede those presented in the Wardrop study.

17.2 2009 Preliminary Economic Assessment By Geodex

A Preliminary Economic Assessment of the Sisson project was carried out by Geodex during 2009 and results were reported by Marr (2009). This served to update project technical and economic assessments subsequent to the Wardrop study in 2007 and incorporated new pit design, scheduling and metallurgical processing parameters. A new resource estimate that reflected results of drilling completed in 2008 was also included.

As described in Marr (2009), new testing carried out by SGS Canada indicated that an ore pre-concentration circuit would substantially benefit project operating and capital costs. This was modeled as providing a pre-grinding sorted ore product containing 96.0% of the tungsten and 83.8% of the molybdenum for run of mine feed, with retention of slightly more than fifty percent of the sorted feed. This approach affected the nature and sizing of mill infrastructure and also impacted capital and operating costing in comparison to earlier proposed flowsheets and costing factors presented in the Wardrop study. .

The Geodex study incorporates a mining rate of 20,000 tonnes/day for a mine life of 20 years, with overall recoveries for the ore sorter and milling process being 74% for tungsten and 70% for molybdenum. For base case consideration, tungsten is priced at \$US 220/tonne of Ammonium Paratungstate (APT) in concentrate, with a blended \$US 50/tonne reduction charge (gravity/flotation) for offsite costs. A long term Molybdenum price of \$US 15/lb was used with an 8% assessment for offsite costs and roasting. Mine operating cost was modeled at \$Can 1.30/tonne (\$US 1.11), beneficiation cost at \$Can 4.66/tonne (\$US 3.96) and general and administrative costs at \$Can 0.66/tonne (\$US 0.56). Pre-production capital costs total \$US 339 million, including a 30% contingency factor. Construction stage environmental costs of \$US 1.0 million apply and a sinking

fund provision for reclamation was assessed at 2.5% of original capital per production year. A conversion rate of \$Can 1.18 to \$US 1.00 pertains to the costing figures quoted.

Mine life average run of mine grades of 0.098% WO₃ and 0.031% Mo were assumed for the base case which provides an unleveraged internal rate of return (IRR) from Year -2 of 23%. The pre-tax net present value at an 8% discount rate is \$US 372 million and at a 10% rate this value drops to \$US 277 million. Project payback is in Year 4 and cumulative cash flow is estimated at \$US 1.18 billion (Marr, 2009).

Based on favourable results of the project analysis, Marr (2009) recommended that Geodex move forward with the Sisson project through completion of a pre-feasibility study by the end of 2009. At the current report date, this recommendation had not been met but it was understood that Geodex was actively pursuing pre-feasibility study completion during 2010. A more detailed summary extract from Marr (2009) appears in Appendix 3.

It is appropriate to note that respective long term tungsten and molybdenum pricing figures of \$US 9.00/pound and \$US 15.00/pound cited in the Geodex study were used in calculation of “Equivalent WO₃” values for current resource purposes. The same values were used in the last resource estimate prepared for Geodex (Cullen and Harrington, 2009).

17.3 Site Visit, Environmental Conditions and Surface Title Liabilities

The most recent site visit to the Sisson Brook property was carried out by the authors on September 15th, 2009, accompanied D. Martin, P. Geo. and geologist D. MacDonnell of Geodex. At that time, drilling sites from the 2007, 2008 and 2009 programs by Geodex were inspected as were the Ellipse and Zone III trenching sites. GPS locations for 15 drill holes were determined and showed excellent correlation with database values. Selected drill core from the 2009 Geodex program was subsequently viewed at the Geodex core logging facility located in nearby Tripp Settlement, NB and core handling, logging and sampling protocols were reviewed. Author Cullen had also visited the property prior to September, 15th, 2009.

At the time of the 2009 property visit, inspection of various past drilling setups, access trails, local water courses, and the Ellipse and Zone III Trench areas, showed that Geodex had placed a substantial priority on remediating surface effects of drilling on the landscape and local ecosystem. This included clean up of cutting debris, extensive use of hay mulch cover in areas of re-graded soil and removal of merchantable wood products. No obvious environmental liabilities related to exploration activities by Geodex were

noted by the authors during the 2009 site visit, but it is recognized that remediation of the referenced trenched areas is to be addressed in future in consultation with the NB government departments. No notice of existing site environmental liabilities was provided by Geodex personnel prior to, during or subsequent to the 2009 site visit.

On September 5th, 2008 the Sisson Brook Project was registered under the New Brunswick Clean Environment Act and on October 24th 2008 Geodex was advised that a comprehensive Environmental Impact Assessment was required for the project. Since that time base line environmental monitoring surveys of the property in support of ongoing pre-feasibility study programs and site permitting have continued and were ongoing at the effective date of this resource estimate. Several community meetings forming part of this process have also been completed to date.

Status and details of surface rights, titles or access agreements were not discussed in detail with Geodex staff, but at the effective date of this report it was understood that no substantive difficulties were present on that front. Mercator did not independently verify this assertion.

17.4 Investigations of Other Metals Present In Zone III

As reported in Cullen and Harrington (2009) and in earlier resource reports, during the course of the 2006 drilling program Geodex completed a limited program of core analysis directed toward identification of metals other than W-Mo that could be of economic interest. While such sampling was limited in scope, it did serve to identify Cu as increasing in importance in some areas and that both Gallium and Rhenium were present at slightly anomalous levels of less than 50 ppm. Results of 2007 drilling by Geodex north of Zone III also confirmed potential importance of copper in the adjacent Zone I and Zone II areas. While Cu is not extensively present in the Zone III and Ellipse deposits, local areas of enrichment are present and will require assessment with respect to recovery as a by product of Mo-WO₃ beneficiation. .

18.0 Interpretation and Conclusions

The Zone III and Ellipse Zone tungsten-molybdenum deposits that are the focus of this report consist predominantly of epigenetic vein, stringer and lesser disseminated styles of mineralization, developed in Devonian gabbro or diorite or in the hosting Cambro-Ordovician volcano-sedimentary sequence. As such, it is interpreted to reflect granite-related porphyry style mineralization developed above a buried Devonian intrusion. The near-vertical gabbro contact and strike-parallel stratified host sequences have exerted spatial control on mineralization, which broadly conforms to the regional north-northeast structural grain in this area. A shear zone is also present in the general vicinity of this

contact and parallels the northeast structural grain. The Ellipse Zone deposit is predominantly hosted by diorite and strikes northwesterly from its intersection with the southern area of Zone III. However, both the Zone III and Ellipse Zone deposits are contiguous and constitute sub-zones of a larger deposit.

The resource estimate and associated block model described in this report reflect updating and expansion of the project drilling database through incorporation of results from the substantial in-fill drilling program carried out by Geodex during 2009. Detailed results of the updated resource estimation program appear in Table 23 and are considered compliant with Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves *Definitions and Guidelines* (the CIM Standards) and disclosure requirements of National Instrument 43-101. A tabulation of combined resources appears in Appendix 3.

Table 25: Sisson Brook Mineral Resource Estimate – Effective December 17th, 2009

Sisson Brook Mineral Resource Estimate - Zone III				
*WO3 Equivalent % Threshold	Resource Category	Rounded Tonnes	WO3 %	Mo%
0.025	Measured	47,400,000	0.073	0.025
0.075	Measured	34,600,000	0.088	0.031
**0.100	Measured	27,500,000	0.097	0.034
0.125	Measured	20,200,000	0.110	0.038
0.175	Measured	9,500,000	0.133	0.048
0.225	Measured	3,800,000	0.157	0.061
0.025	Indicated	308,500,000	0.061	0.019
0.075	Indicated	179,500,000	0.082	0.026
**0.100	Indicated	125,400,000	0.094	0.030
0.125	Indicated	83,000,000	0.107	0.035
0.175	Indicated	32,700,000	0.133	0.045
0.225	Indicated	11,700,000	0.153	0.060
0.025	Inferred	168,100,000	0.055	0.020
0.075	Inferred	91,300,000	0.075	0.029
**0.100	Inferred	61,300,000	0.086	0.034
0.125	Inferred	39,400,000	0.098	0.040
0.175	Inferred	15,800,000	0.117	0.055
0.225	Inferred	6,100,000	0.133	0.072
Sisson Brook Mineral Resource Estimate - Ellipse Zone				
*WO3 Equivalent % Threshold	Resource Category	Rounded Tonnes	WO3 %	Mo%
0.025	Measured	2,700,000	0.069	0.021

0.075	Measured	1,800,000	0.086	0.027
**0.100	Measured	1,300,000	0.095	0.031
0.125	Measured	900,000	0.104	0.037
0.175	Measured	400,000	0.124	0.048
0.225	Measured	100,000	0.134	0.071
0.025	Indicated	58,900,000	0.062	0.019
0.075	Indicated	34,100,000	0.081	0.026
**0.100	Indicated	23,200,000	0.092	0.032
0.125	Indicated	15,300,000	0.102	0.038
0.175	Indicated	6,200,000	0.117	0.054
0.225	Indicated	2,300,000	0.127	0.076
0.025	Inferred	22,900,000	0.057	0.017
0.075	Inferred	13,000,000	0.073	0.024
**0.100	Inferred	7,700,000	0.085	0.029
0.125	Inferred	4,600,000	0.092	0.036
0.175	Inferred	1,300,000	0.093	0.060
0.225	Inferred	400,000	0.088	0.085

Notes: * $WO_3\% \text{ Equiv} = WO_3\% + (Mo\% * 2.02)$ based on \$US 9.00 /lb WO_3 and \$US 15/lb Mo pricing plus 70% WO_3 and 85% Mo recoveries as in previous estimate; ** Marr(2009)PEA base case threshold

The resource estimate reported above reflects an increase of Indicated and Measured category mineral resources by 31% over those of Cullen and Harrington (2009) in January, 2009 for combined Zone III and Ellipse Zone deposits. Average grades for WO_3 and Mo in the current estimate are directly comparable to those reported in earlier estimates.

19.0 Recommendations and Proposed Budget

19.1 Recommendations

The Zone III and Ellipse Zone deposits has been substantively delineated through drilling to date but potential exists in both cases for deposit expansion both along strike and down dip. Opportunity also exists within currently defined deposit limits to upgrade mineral resources to higher levels of classification. However, the current resource estimate includes sufficient Indicated resource tonnage at grades of economic interest to support pre-feasibility study requirements anticipated by Geodex. On this basis, it is recommended that additional deposit extension drilling not be pursued until results of the pre-feasibility study are available. This recommendation does not apply to deposit extension drilling that may be required for “sterilization” or geotechnical program purposes or for drilling carried out to provide metallurgical or bulk sample materials.

Assuming that additional extension drilling is carried out at some time in the future, the four main areas of opportunity identified above should be considered. As in the past, extension drilling at 100 meter spaced sections with holes spaced 50 meters along the sections should provide sufficient information to initially assess potential. As recommended earlier by Cullen and Harrington (2009), completion of 4 holes within the near-surface Indicated resource area at a spacing pattern of 25 meters by 25 meters should be considered to provide assessment of resource block model grade assignments. A summary budget for such drilling is provided below.

Work completed in support of the current resource estimate demonstrated that improvement in correlation potential for lithologic units within the volcano-sedimentary section is possible if careful review and refinement of database lithocodes is undertaken based on original drill log descriptions. On this basis, completion of a desktop database review and upgrading program is recommended. An additional aspect of such review should be to extract valuable geological data from existing highly detailed text field descriptions in project drill logs, and to establish these as digitally accessible database parameters. Attributes targeted for such extraction include density, character and orientation of quartz veining, bedding or foliation surface types, orientation and intensity, and character of alteration and metallic mineral assemblages. A summary budget for such a program is provided below.

19.2 Proposed Budget

Cost estimates for the block grade assessment and database review programs discussed above are presented in Tables 24 and 25 and reflect estimates of current market pricing.

Table 26: Budget Estimate for Recommended Core Drilling

Project Components	Number of Holes	Meters	Estimated \$CDN
(1) Drilling @ \$130 per Meter			
Infill at 25 m x 25 m	4	600	78,000
(2) *Professional and Technical Support			
Geologist and site support staff			12,000
Senior project management			2,000
Database management and support			2,000
Reporting and technical supervision			2,000
Vehicle support (4x4 truck and fuel)			2,000
Analytical charges for core and QA/QC			35,000
Subtotal			55,000
Total of (1) and (2) above			133,000
Contingency			12,000
Grand Total			145,000

* Assumes local professionals not needing site support

Table 27: Budget Estimate for Database Review and Upgrading Project

<i>Professional and Technical Support</i>			
Database review geologist and hardware			25,000
Senior project management			2,500
Reporting and technical supervision			5,000
Subtotal			32,500
Contingency			2,500
Grand Total			35,000

Respectfully submitted,

[Original signed and sealed by]

[Original signed by]

Michael P. Cullen, M.Sc. (Geol.), P. Geo.
Senior Geologist
Mercator Geological Services Limited

Matthew Harrington, B.Sc. (Geol.)
Geologist
Mercator Geological Services Limited

Date: January 30th, 2010

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Appendix 1: Statements of Qualification and Consent

MERCATOR GEOLOGICAL SERVICES LIMITED

65 Queen St., Dartmouth, NS B2Y 1G4

Ph. (902) 463-1440; Fax (902) 463-1419; e-mail info@mercatorgeo.com

CERTIFICATE of AUTHOR

I, Michael P. Cullen, *P. Geo.* do hereby certify that:

I am currently employed as a Senior Geologist by:

Mercator Geological Services Limited
65 Queen St.
Dartmouth, Nova Scotia, Canada
B2Y 1G4

1. I graduated with a Masters Degree in Science (Geology) from Dalhousie University in 1984. In addition, I obtained a Bachelor of Science degree (Honours, Geology) in 1980 from Mount Allison University.
2. I am a registered member in good standing of (1) Association of Professional Geoscientists of Nova Scotia, registration number 064, (2) Newfoundland and Labrador Professional Engineers and Geoscientists and (3) Association of Professional Engineers and Geoscientists of New Brunswick, registration number L4333.
3. I have worked as a geologist in Canada and internationally since graduation from university.
4. 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
5. I am the qualified person responsible for preparation of the Technical Report entitled:

TECHNICAL REPORT ON
DECEMBER 2009 MINERAL RESOURCE ESTIMATE
GEODEX MINERALS LTD.
SISSON BROOK PROPERTY
TUNGSTEN-MOLYBDENUM DEPOSIT
YORK COUNTY
NEW BRUNSWICK
CANADA

Prepared For: Geodex Minerals Ltd.
Effective Date: December 17th, 2009

6. I last visited the Sisson Brook Property on September 15th, 2009, accompanied by Mercator staff geologist M. Harrington plus D. Martin, P. Geo. and geologist D. MacDonnell of Geodex. At that time, drilling sites from the 2007, 2008 and 2009 programs by Geodex were inspected as were the Ellipse and Zone III trenching sites. Selected drill core from 2009 Geodex program was subsequently viewed at the Geodex core logging facility and core handling, logging and sampling protocols were reviewed. I also visited the property prior to September, 15th, 2009 and have participated in numerous Sisson Brook project planning discussions and meetings with Geodex staff during the 2006 through 2009 period, some of these at the company's Fredericton offices. I co-authored four earlier mineral resource estimates prepared by Mercator for Geodex, these being in 2007, 2008 and 2009.
7. Beyond that specified in item 6 above, I have no prior involvement with the property that is the subject of the Technical Report.
8. That, as of this certificate date, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
9. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and believe that this Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 30th Day of January, 2010

[Original signed and sealed by]

Signature of Qualified Person

Michael P. Cullen, M. Sc., P. Geo.
Senior Geologist
Mercator Geological Services Limited

MERCATOR GEOLOGICAL SERVICES LIMITED

65 Queen St., Dartmouth, NS B2Y 1G4

Ph. (902) 463-1440; Fax (902) 463-1419; e-mail info@mercatorgeo.com

CERTIFICATE of AUTHOR

I, Matthew Harrington, B.Sc. (Hons., Geol.), do hereby certify that:

1. I currently reside in Halifax, Nova Scotia Canada and am employed as a Geologist by:

Mercator Geological Services Limited
65 Queen St.,
Dartmouth, Nova Scotia, Canada
B2Y 1G4

2. I graduated with a Bachelor of Science (Hons., Geol.) degree from Dalhousie University in Halifax, Nova Scotia, Canada in 2003.
3. I have worked as a geologist in Canada for more than 5 years since graduation from university and have been employed by Mercator Geological Services Limited since 2003.
4. I participated in preparation of the Sisson Brook Zone III mineral resource estimate and three dimension block model described in the Technical Report named below. My participation was supervised by Mr. Michael P. Cullen, P. Geo. and was focused on chapters 13 and 16 of the report. I also participated in preparation of three previous resource estimates for the property prepared for Geodex by Mercator, these being in 2007 and 2008.

TECHNICAL REPORT ON
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YORK COUNTY
NEW BRUNSWICK
CANADA

Prepared For: Geodex Minerals Ltd.

Effective Date: December 17th, 2009

5. I visited the Sisson Brook Property on September 15th, 2009, accompanied by Mercator Senior Geologist M. Cullen, P. Geo., plus D. Martin, P. Geo. and geologist D. MacDonnell of Geodex. At that time, drilling sites from the 2007, 2008 and 2009 programs by Geodex were inspected as were the Ellipse and Zone III trenching sites. Selected drill core from 2009 Geodex

- program was subsequently viewed at the Geodex core logging facility and core handling, logging and sampling protocols were reviewed. I also visited the property prior to September, 15th, 2009 and have participated in numerous Sisson Brook project planning discussions and meetings with Geodex staff during the 2006 through 2009 period, some of these at the company's Fredericton offices. I co-authored four earlier mineral resource estimates prepared by Mercator for Geodex, these being in 2007, 2008 and 2009.
6. Other than as specified in item 5 above, I have had no prior involvement with the property that is the subject of the Technical Report.
 7. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
 8. That, as of this certificate date, to the best of my knowledge, information and belief, the Technical Report sections for which I am responsible, as referenced in 4.0 above, contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.
 9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 30th Day of January, 2009

[Original signed by]

Signature

Matthew Harrington, B. Sc. (Hons., Geol.)
Geologist
Mercator Geological Services Limited

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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
New Brunswick Securities Commission
Securities Commission of Newfoundland & Labrador
Nova Scotia Securities Commission
Registrar of Securities, Prince Edward Island
Government of Northwest Territories, Department of Justice, Securities Registry
Nunavut Legal Registries
Registrar of Securities, Government of the Yukon Territory

I, Michael P. Cullen, M.Sc., P.Geo., do hereby consent to the public filing, with the regulatory authorities referred to above, of the Technical Report entitled

TECHNICAL REPORT ON
DECEMBER 2009 MINERAL RESOURCE ESTIMATE
GEODEX MINERALS LTD.
SISSON BROOK PROPERTY
TUNGSTEN-MOLYBDENUM DEPOSIT
YORK COUNTY
NEW BRUNSWICK
CANADA

Prepared For: Geodex Minerals Ltd.

Effective Date: December 17th, 2009

(the "Technical Report") and to extracts from, or a summary of, the Technical Report in the written disclosure being filed, dated December 17th, 2009, and I am confirming that I have read the Written Disclosure being filed and that it fairly and accurately represents the information for which I am responsible in the Technical Report that supports the disclosure.

Dated this 17th Day of December, 2009

(Original signed and sealed by)

Michael P. Cullen, M.Sc., P.Geo.

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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
New Brunswick Securities Commission
Securities Commission of Newfoundland & Labrador
Nova Scotia Securities Commission
Registrar of Securities, Prince Edward Island
Government of Northwest Territories, Department of Justice, Securities Registry
Nunavut Legal Registries
Registrar of Securities, Government of the Yukon Territory

I, Matthew B. Harrington, B.Sc., (Hons., Geol), do hereby consent to the public filing,
with the regulatory authorities referred to above, of the Technical Report entitled

TECHNICAL REPORT ON
DECEMBER 2009 MINERAL RESOURCE ESTIMATE
GEODEX MINERALS LTD.
SISSON BROOK PROPERTY
TUNGSTEN-MOLYBDENUM DEPOSIT
YORK COUNTY
NEW BRUNSWICK
CANADA

Prepared For: Geodex Minerals Ltd.
Effective Date: December 17th, 2009

(the “Technical Report”) and to extracts from, or a summary of, the Technical Report in the written disclosure being filed, dated December 17th, 2009, and I am confirming that I have read the Written Disclosure being filed and that it fairly and accurately represents the information to which I contributed in the Technical Report that supports the disclosure.

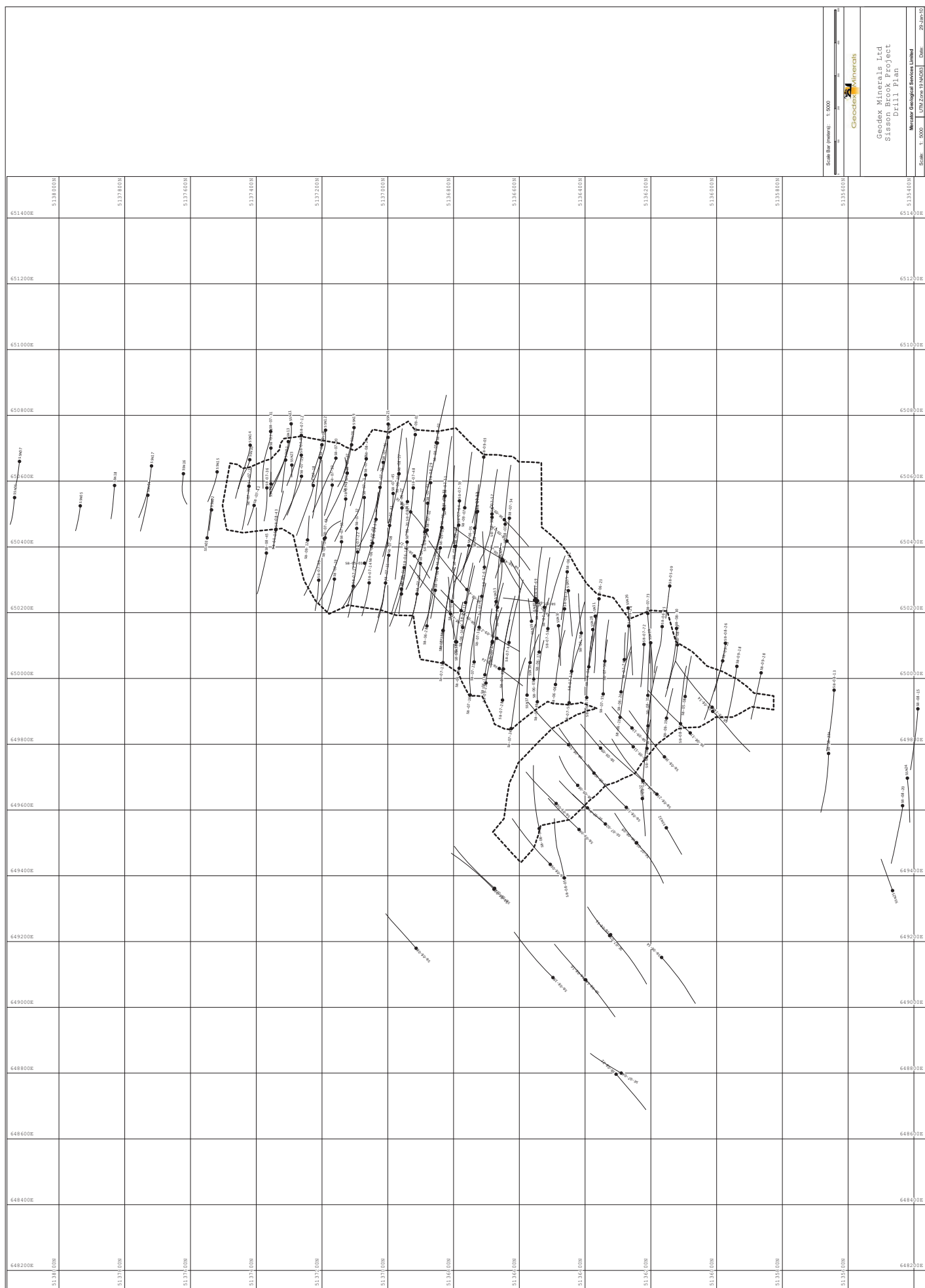
Dated this 17th Day of December, 2009

(Original signed by)

Matthew B. Harrington, B. Sc., (Hons., Geol.)

Appendix 2: Drilling Program Information

Drill Hole Location Plan



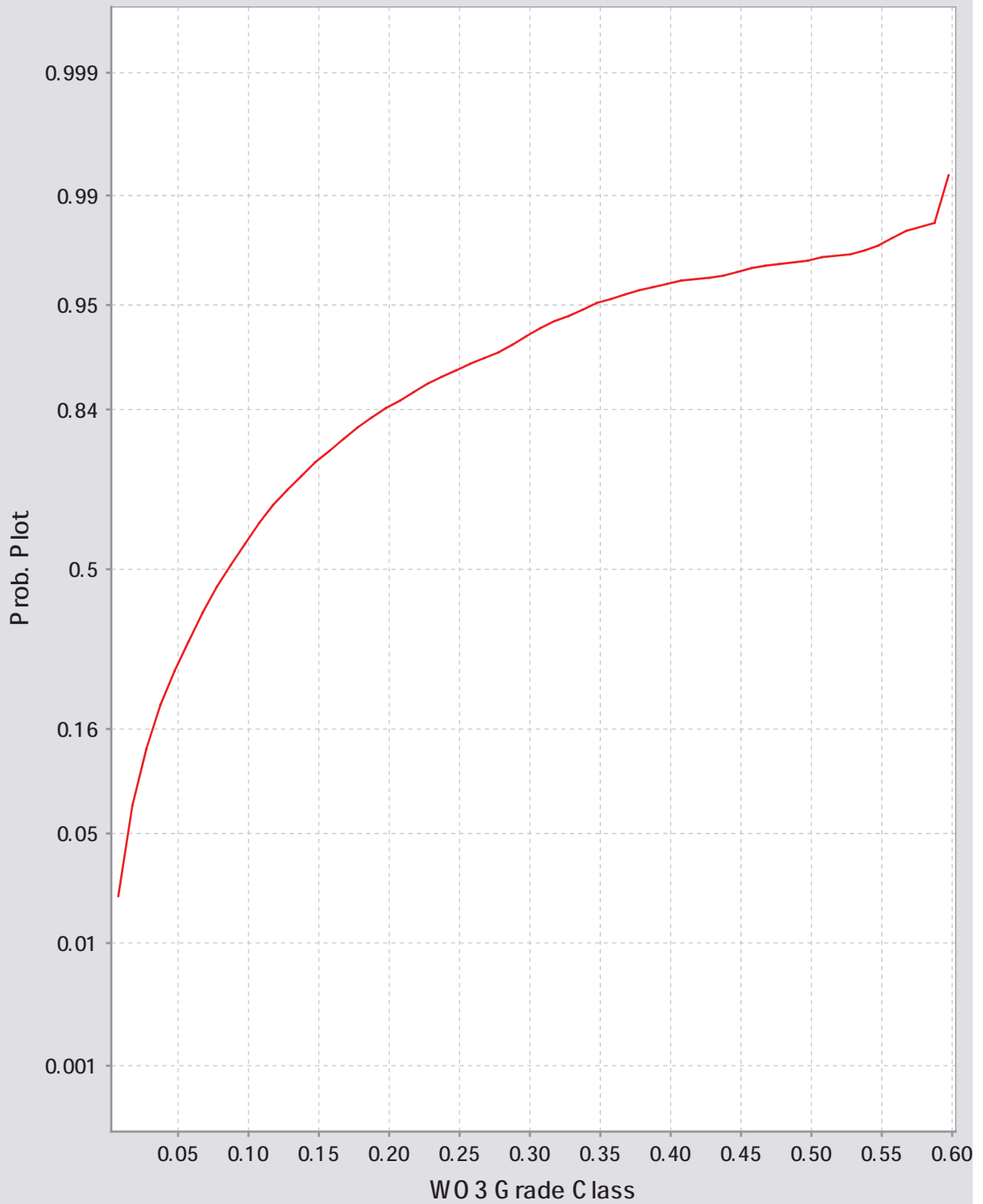
Appendix 3: Resource Estimate Support Documents
Mercator Support Documents
Wardrop Scoping Study Summary Excerpt From Ozturk et al. (2007)

Sisson Brook Mineral Resource Estimate
Combined Zone III and Ellipse Zone Deposits

Resource Category	Tonnes (Rounded)	WO3 %	Mo%	*WO3 Equivalent %	*WO3 Equivalent. % Threshold	% Change from Jan. 2009 Resource Tonnage Estimate
Measured	50,100,000	0.073	0.025	0.123	0.025	81%
Measured	36,400,000	0.087	0.031	0.150	0.075	79%
Measured	28,800,000	0.097	0.034	0.167	**0.100	82%
Measured	21,100,000	0.109	0.038	0.186	0.125	83%
Measured	9,900,000	0.132	0.048	0.229	0.175	87%
Measured	3,900,000	0.156	0.061	0.279	0.225	105%
Indicated	367,300,000	0.061	0.019	0.099	0.025	29%
Indicated	213,500,000	0.082	0.026	0.134	0.075	23%
Indicated	148,600,000	0.094	0.030	0.155	**0.100	23%
Indicated	98,300,000	0.107	0.035	0.177	0.125	24%
Indicated	38,900,000	0.131	0.047	0.225	0.175	24%
Indicated	14,000,000	0.149	0.062	0.275	0.225	30%
Total M&I	417,400,000	0.063	0.020	0.102	0.025	33%
Total M&I	249,900,000	0.082	0.027	0.137	0.075	29%
Total M&I	177,400,000	0.094	0.031	0.157	**0.100	30%
Total M&I	119,400,000	0.107	0.036	0.179	0.125	31%
Total M&I	48,800,000	0.131	0.047	0.225	0.175	33%
Total M&I	17,900,000	0.150	0.062	0.276	0.225	41%
Inferred	191,000,000	0.056	0.019	0.095	0.025	-27%
Inferred	104,200,000	0.074	0.028	0.131	0.075	-27%
Inferred	69,000,000	0.086	0.033	0.153	**0.100	-25%
Inferred	44,100,000	0.098	0.040	0.178	0.125	-22%
Inferred	17,100,000	0.115	0.056	0.227	0.175	-11%
Inferred	6,500,000	0.130	0.073	0.278	0.225	+3%

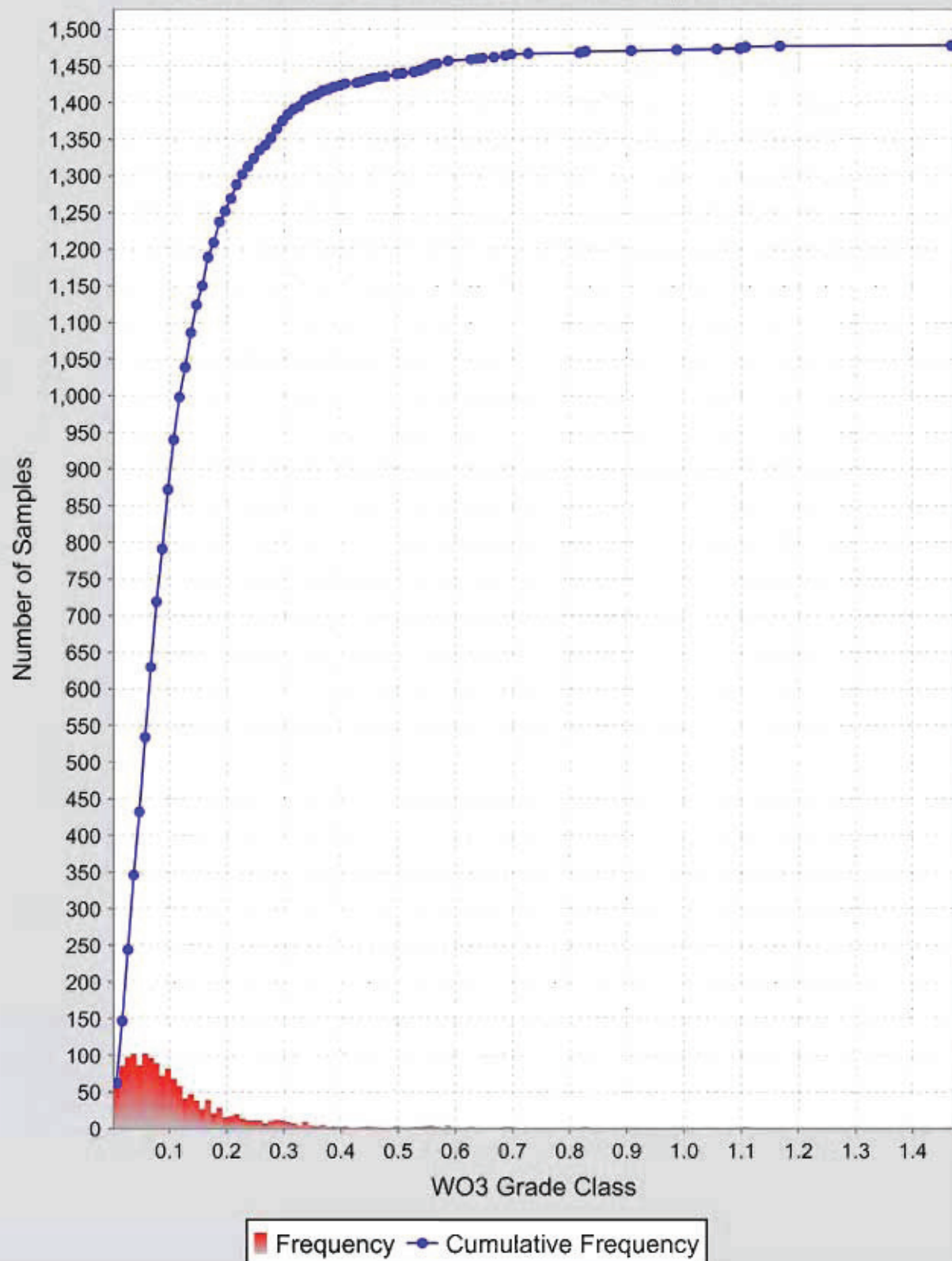
Notes: * WO3% Equiv = WO3% + (Mo%* 2.02) based on \$US 9.00 /lb WO₃ and \$US 15/lb Mo pricing plus 70% WO₃ and 85% Mo recoveries as in previous estimate; ** Marr(2009)PEA base case threshold

Zone III - Main WO3 Zone 2: Probability Plot of WO3 Grades in 3m Cut Composites

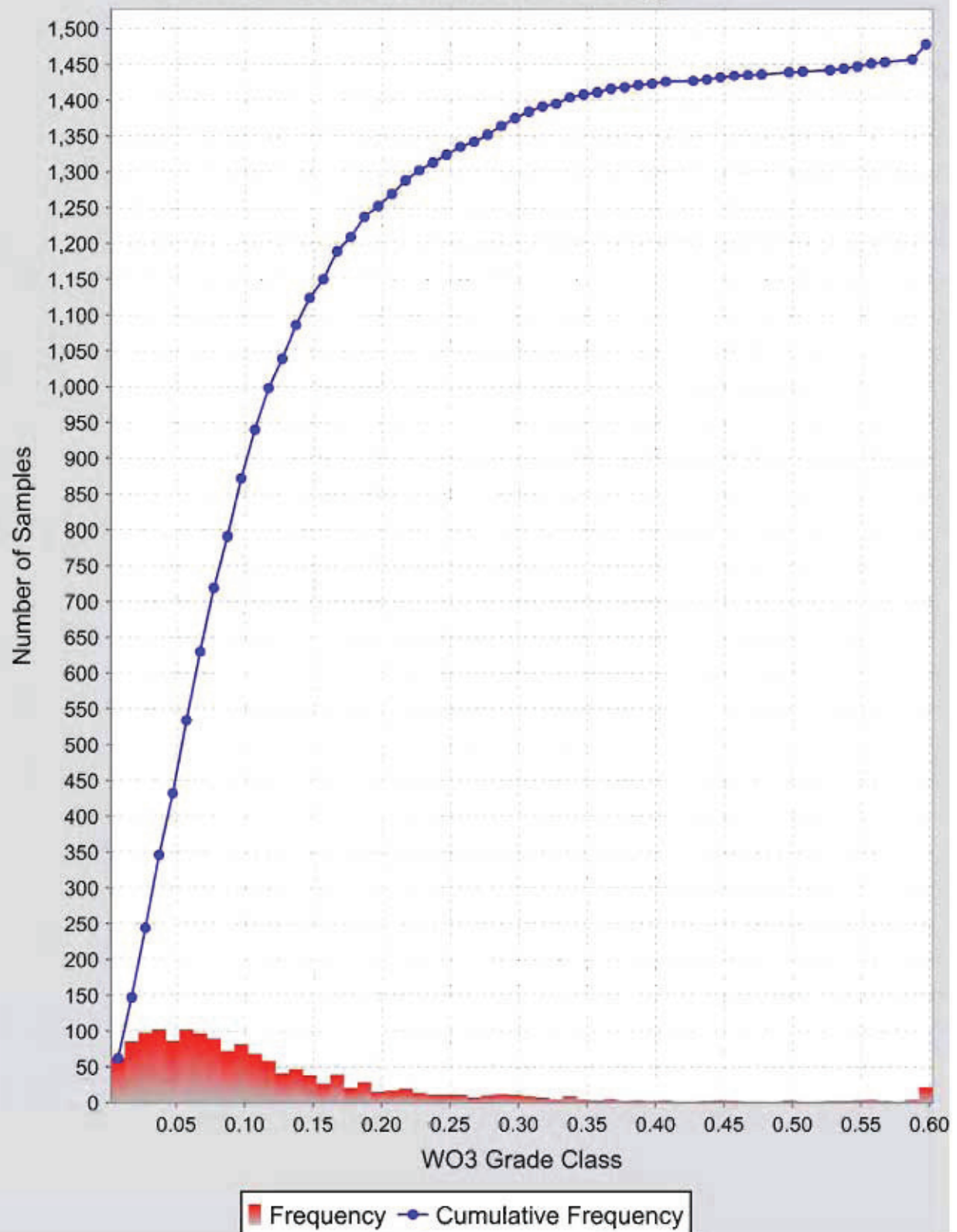


— Prob. Plot

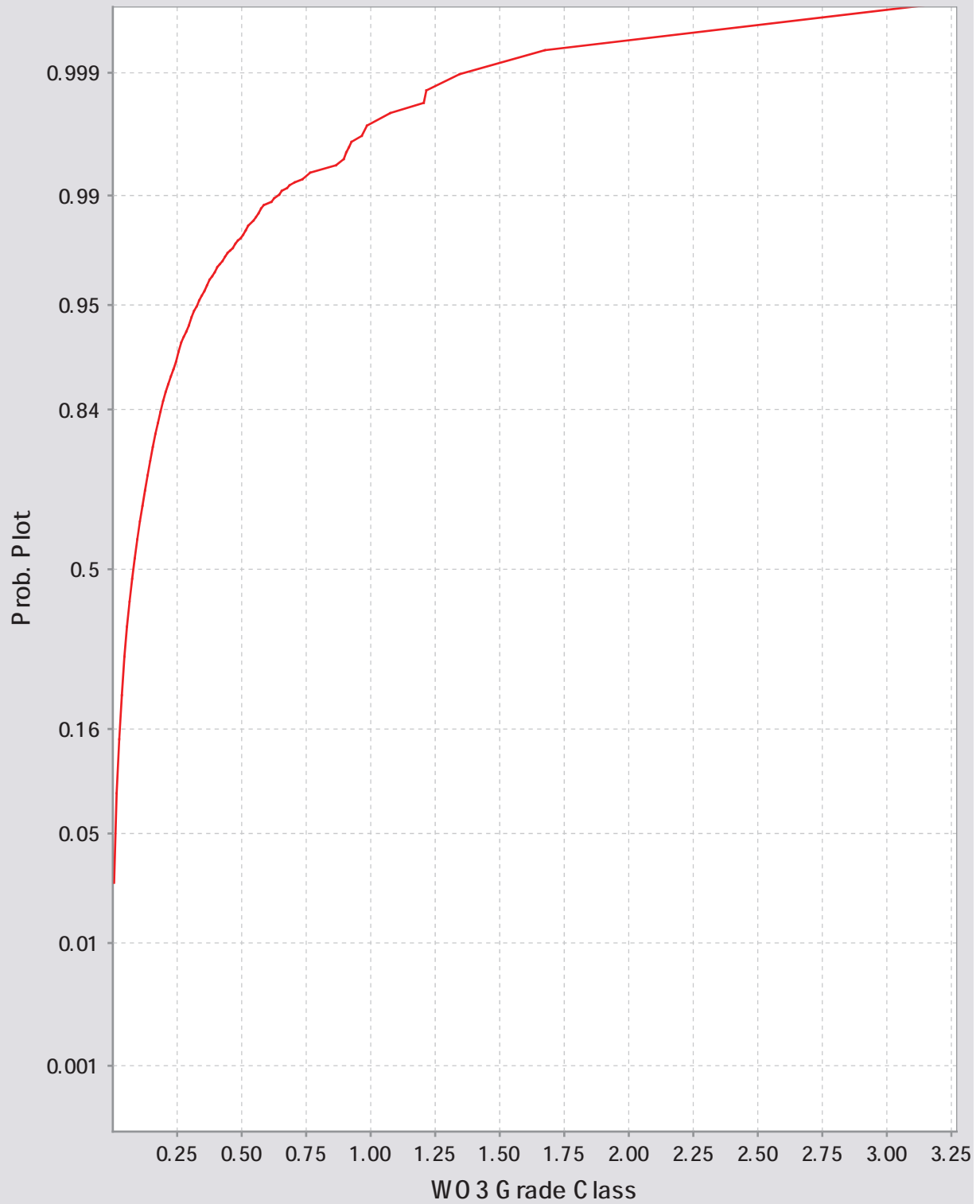
Zone III - Main WO3 Zone 2: Cumulative Frequency of WO3 Grades in 3m Raw Composites



Zone III - Main WO3 Zone 2: Cumulative Frequency of WO3 Grades in 3m Cut Composites

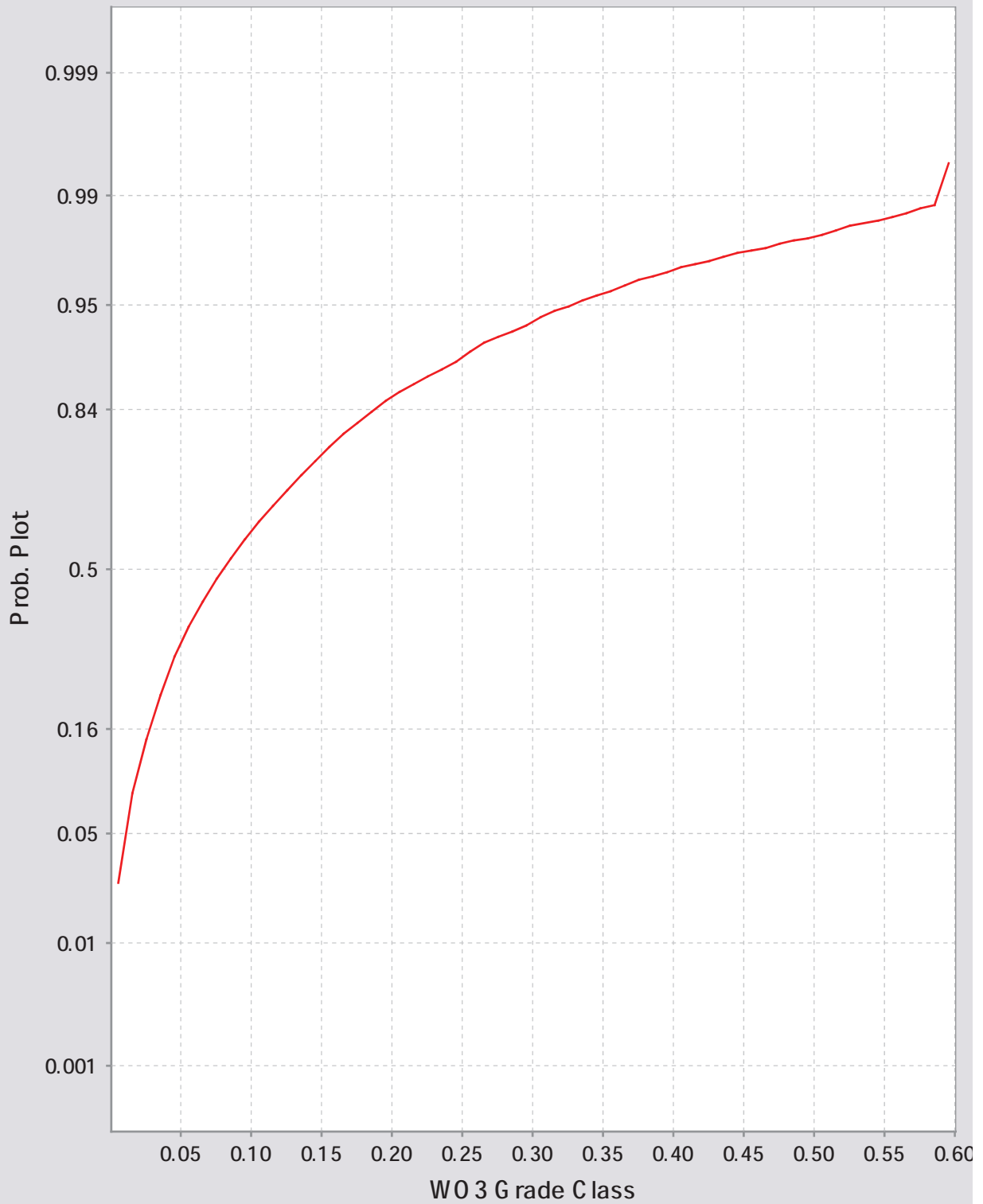


Zone III - Main WO3 Zone 1: Probability Plot of WO3 Grades in 3m Raw Composites



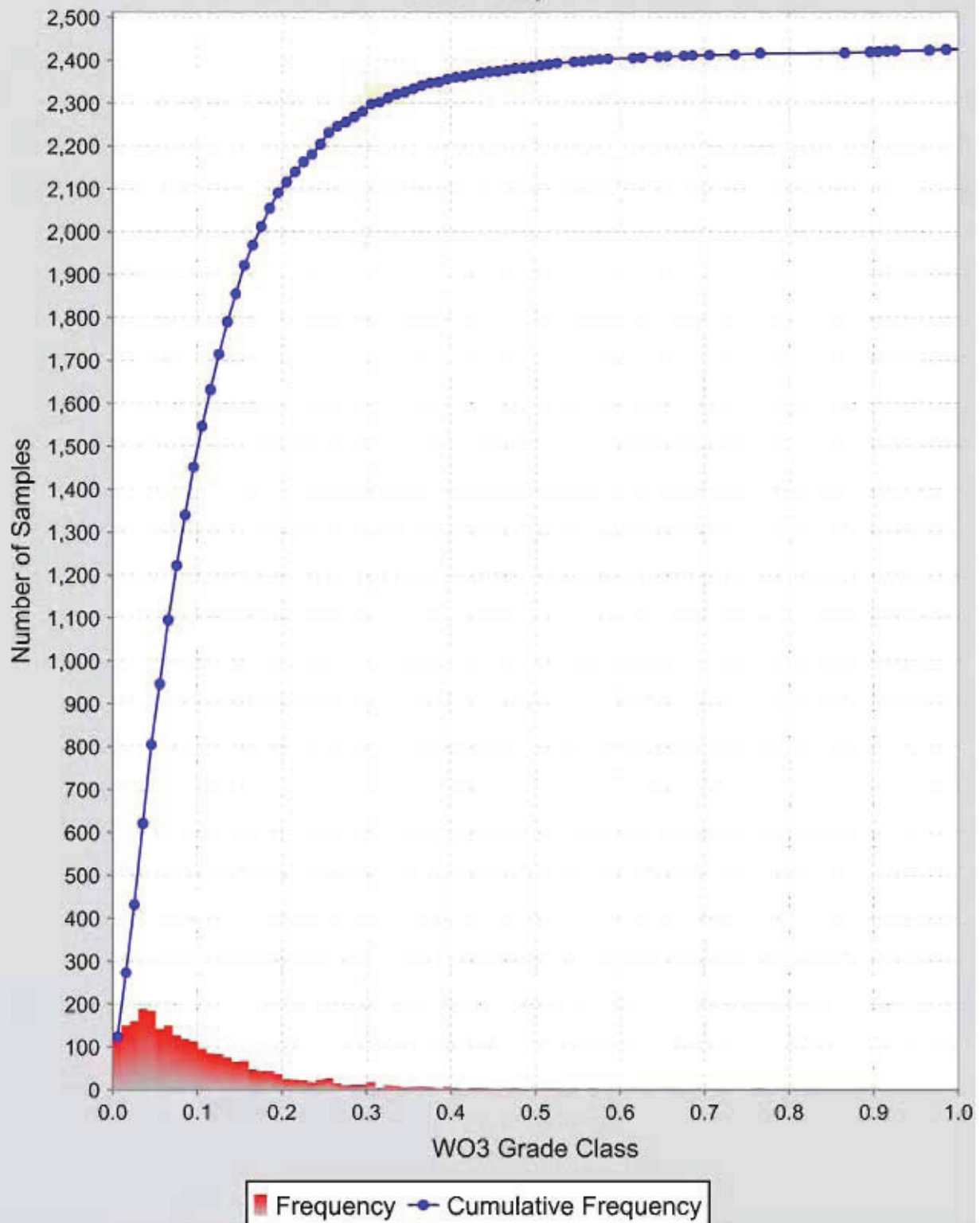
— Prob. Plot

Zone III - Main WO3 Zone 1: Probability Plot of WO3 Grades in 3m Cut Composites

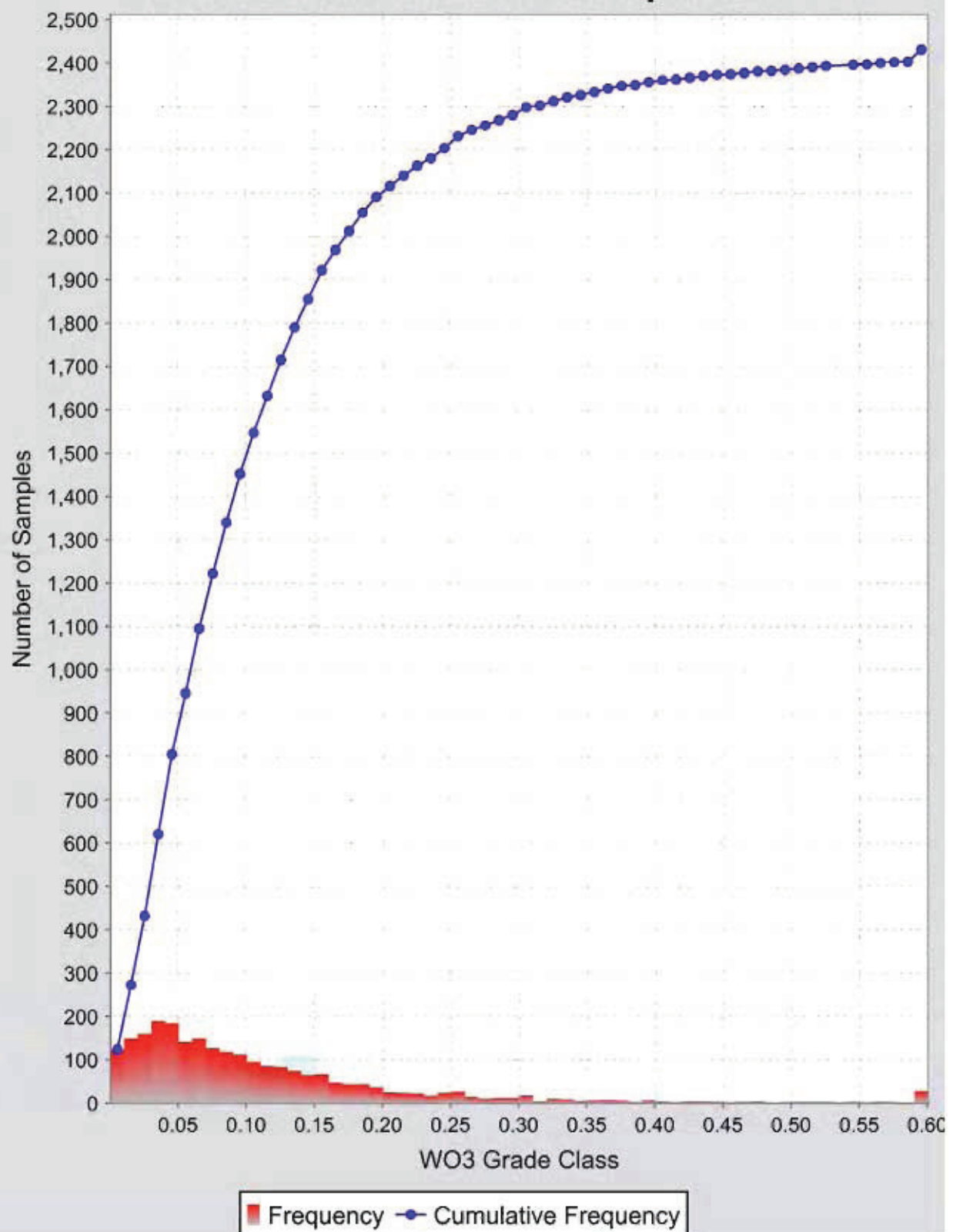


— Prob. Plot

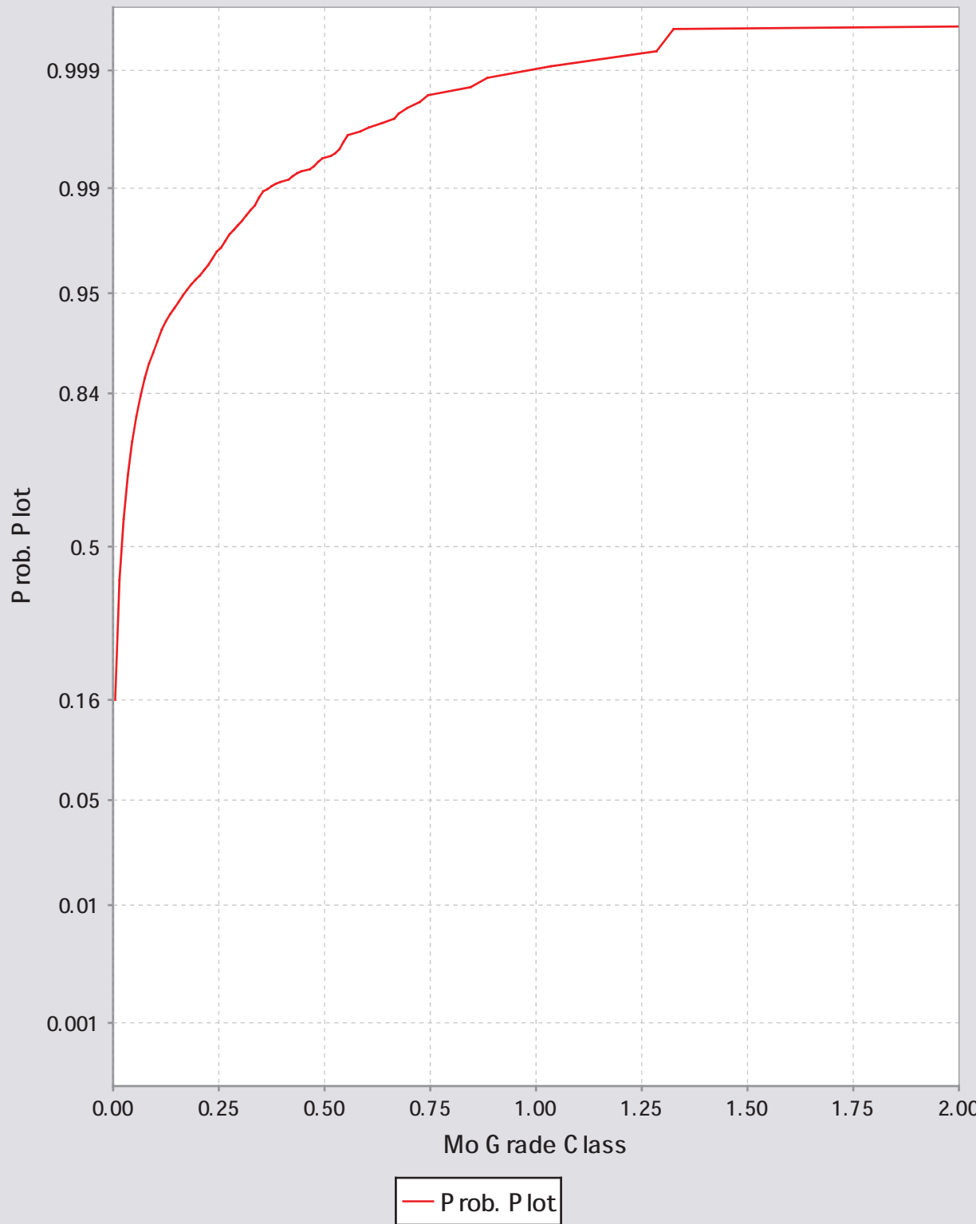
Zone III - Main WO3 Zone 1: Cumulative Frequency of WO3 Grades in 3m Raw Composites (Max 1% WO3 Shown)



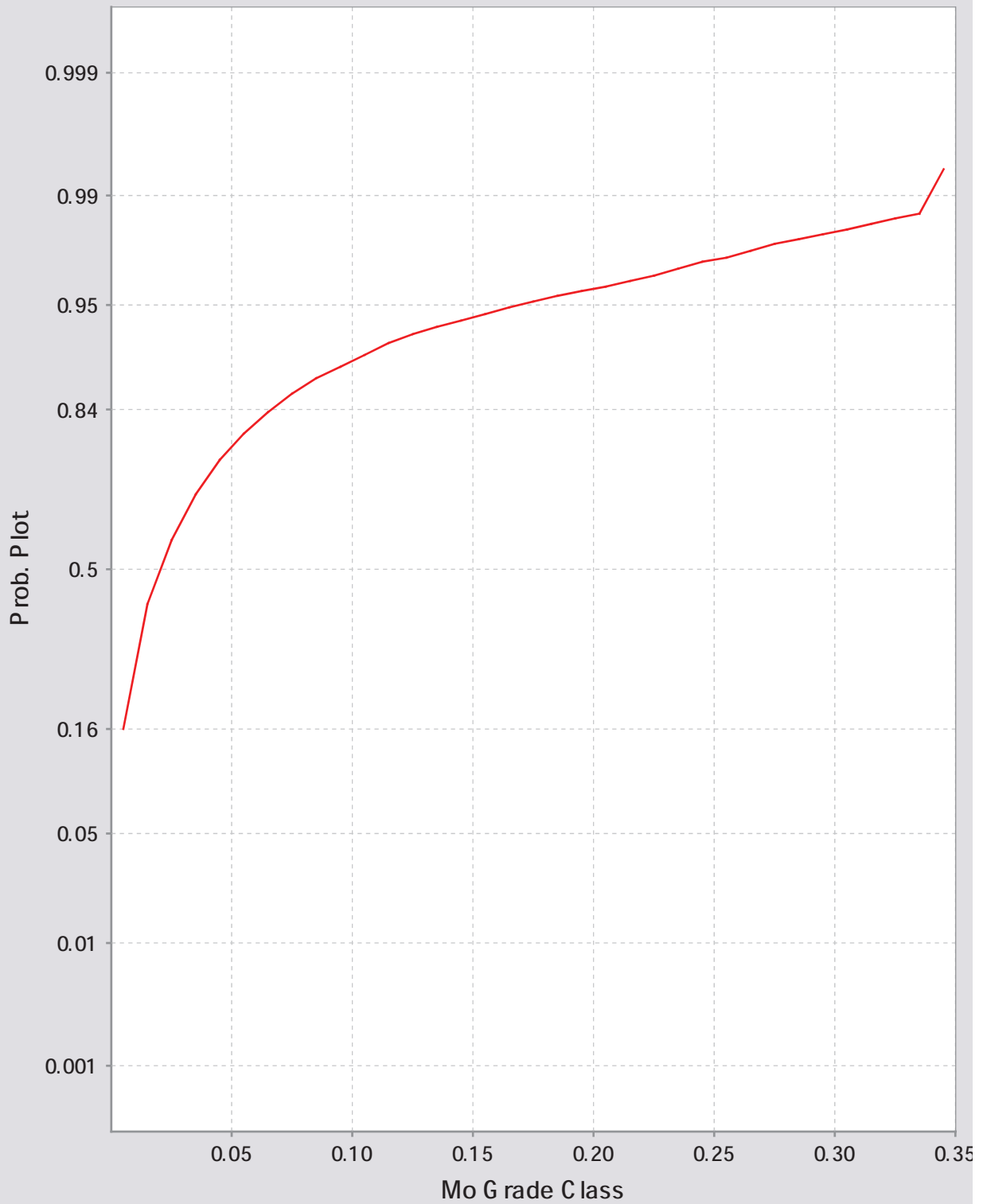
Zone III - Main WO3 Zone 1: Cumulative Frequency of WO3 Grades in 3m Cut Composites



**Zone III - Main Mo Zone and East Flank Mo Zone:
Probability Plot of Mo Grades in 3m Raw Composites
(Max 2% Mo Shown)**

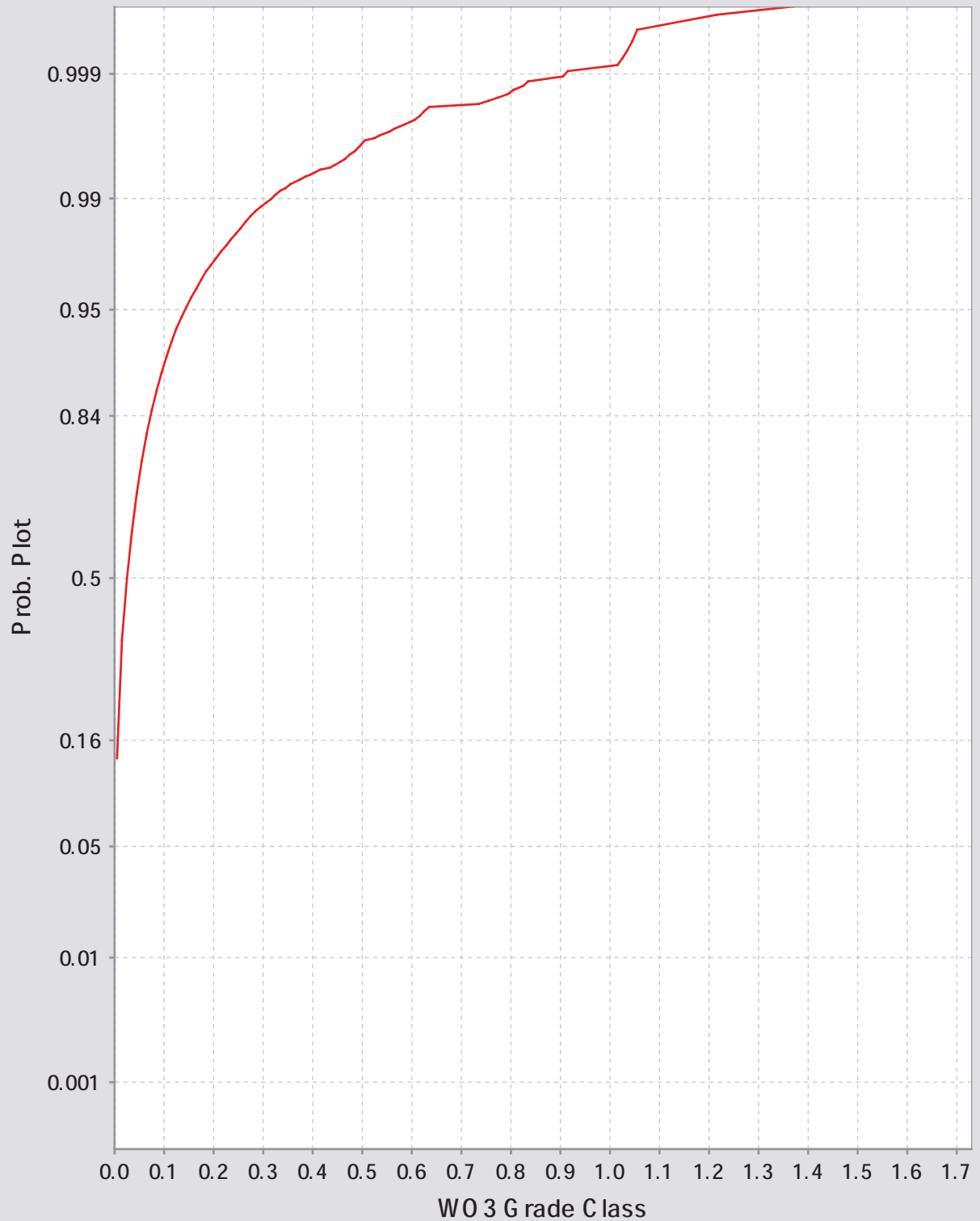


Zone III - Main Mo Zone and East Flank Mo Zone: Probability Plot of Mo Grades in 3m Cut Composites



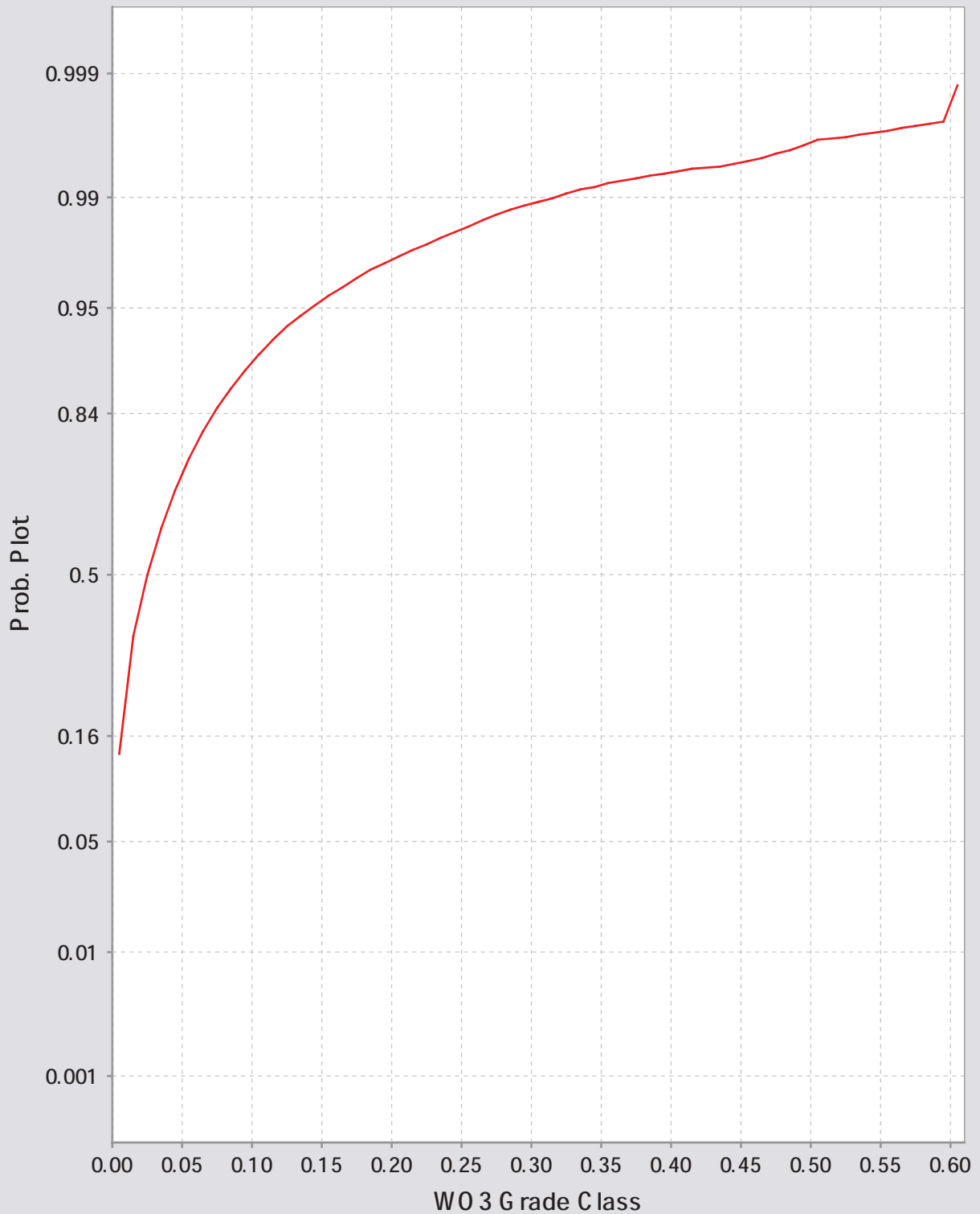
— Prob. Plot

Zone III - Peripheral WO3 Zone: Probability Plot of WO3 Grades in 3m Raw Composites



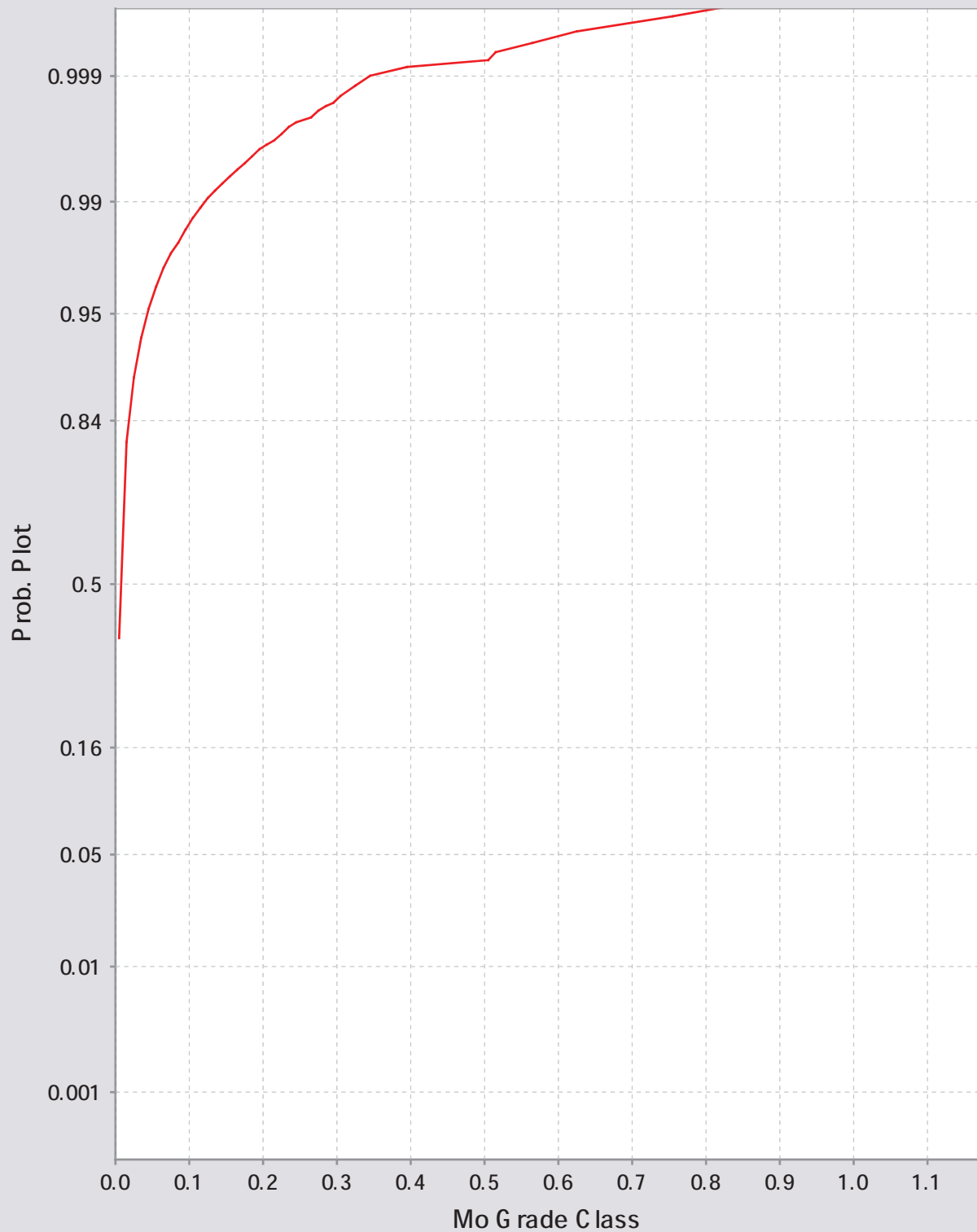
— Prob. Plot

Zone III - Peripheral WO3 Zone: Probability Plot of WO3 Grades in 3m Cut Composites



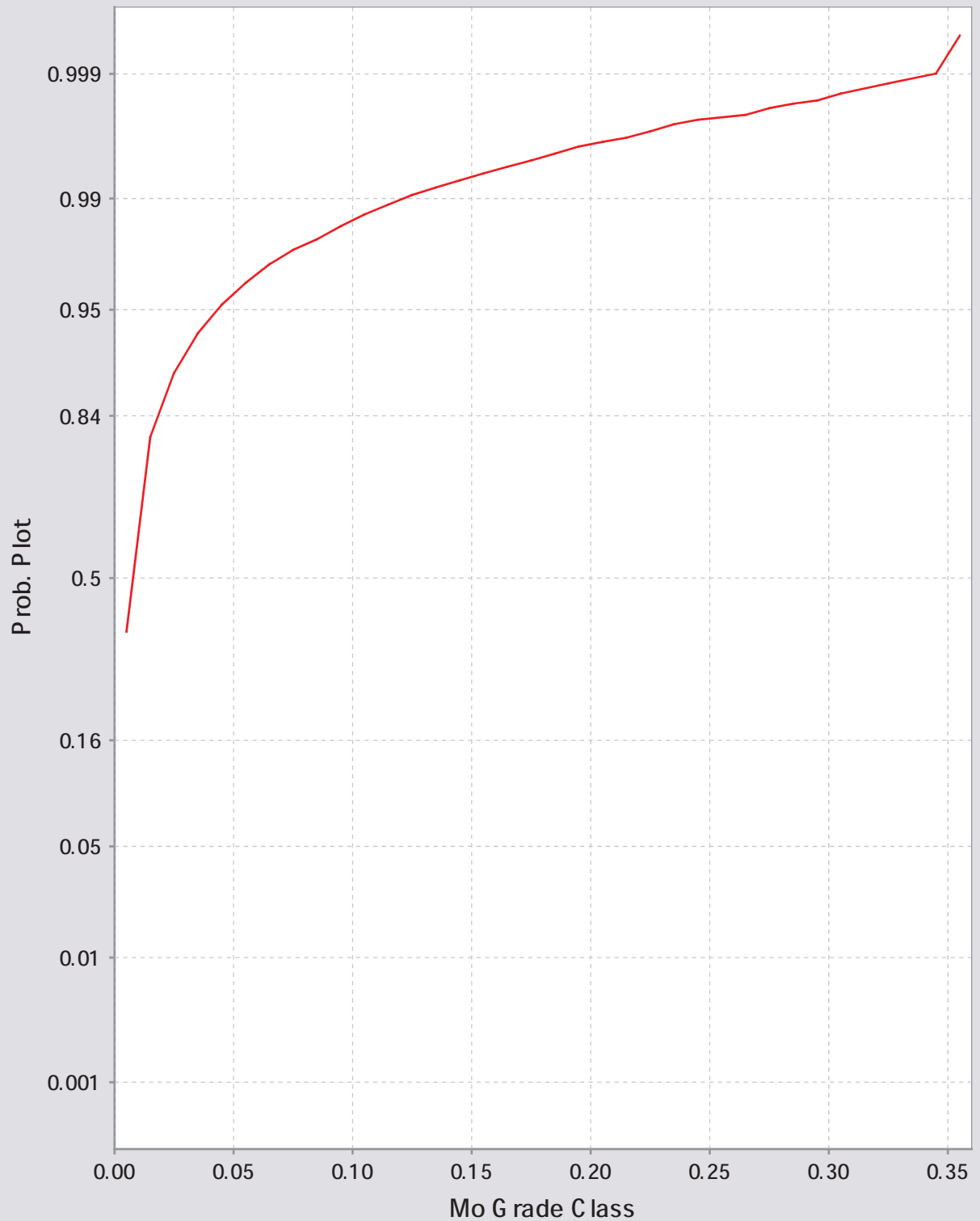
— Prob. Plot

Zone III - Peripheral Mo Zone: Probability Plot of Mo Grades in 3m Raw Composites



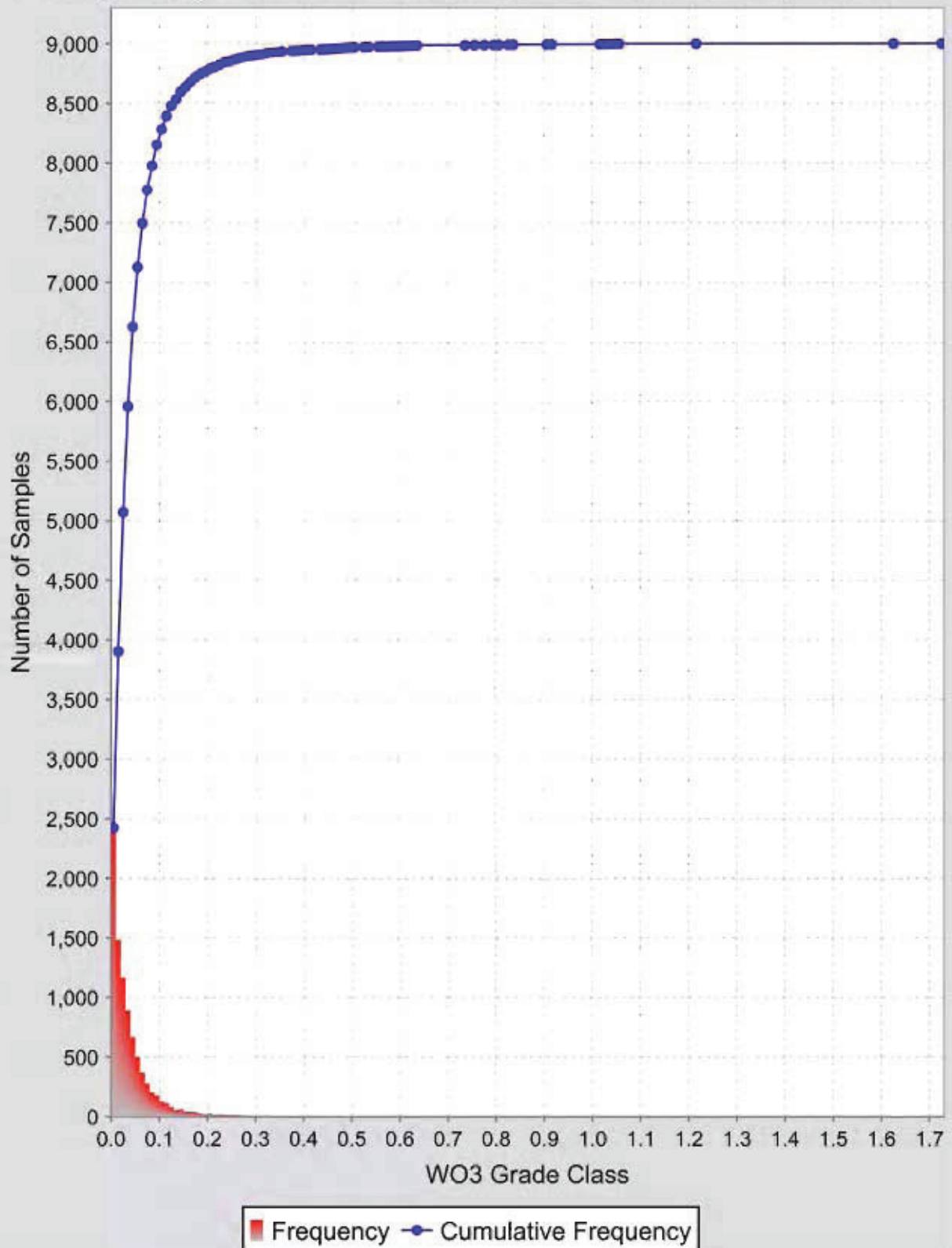
— Prob. Plot

Zone III - Peripheral Mo Zone: Cumulative Frequency of Mo Grades in 3m Cut Composites

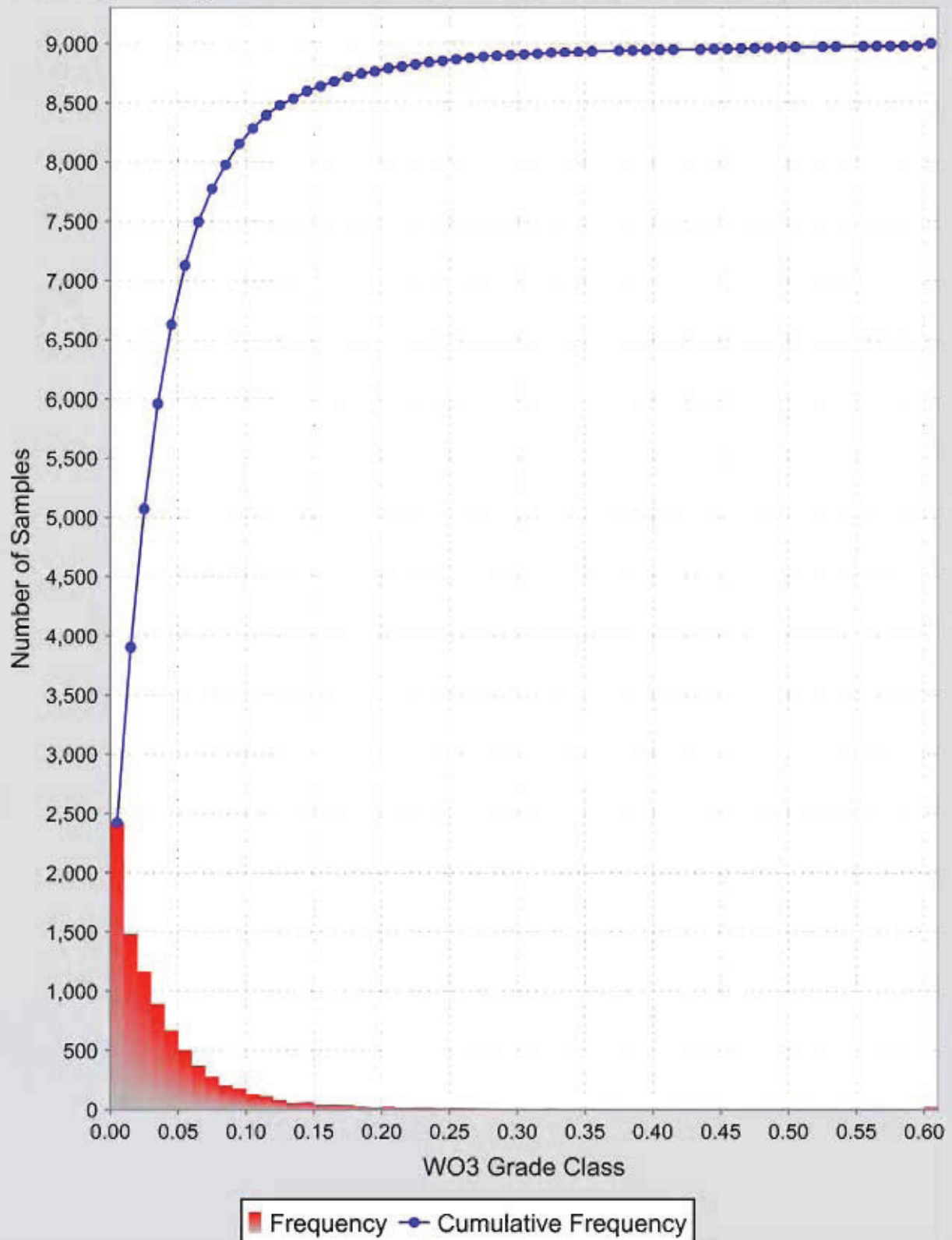


— Prob. Plot

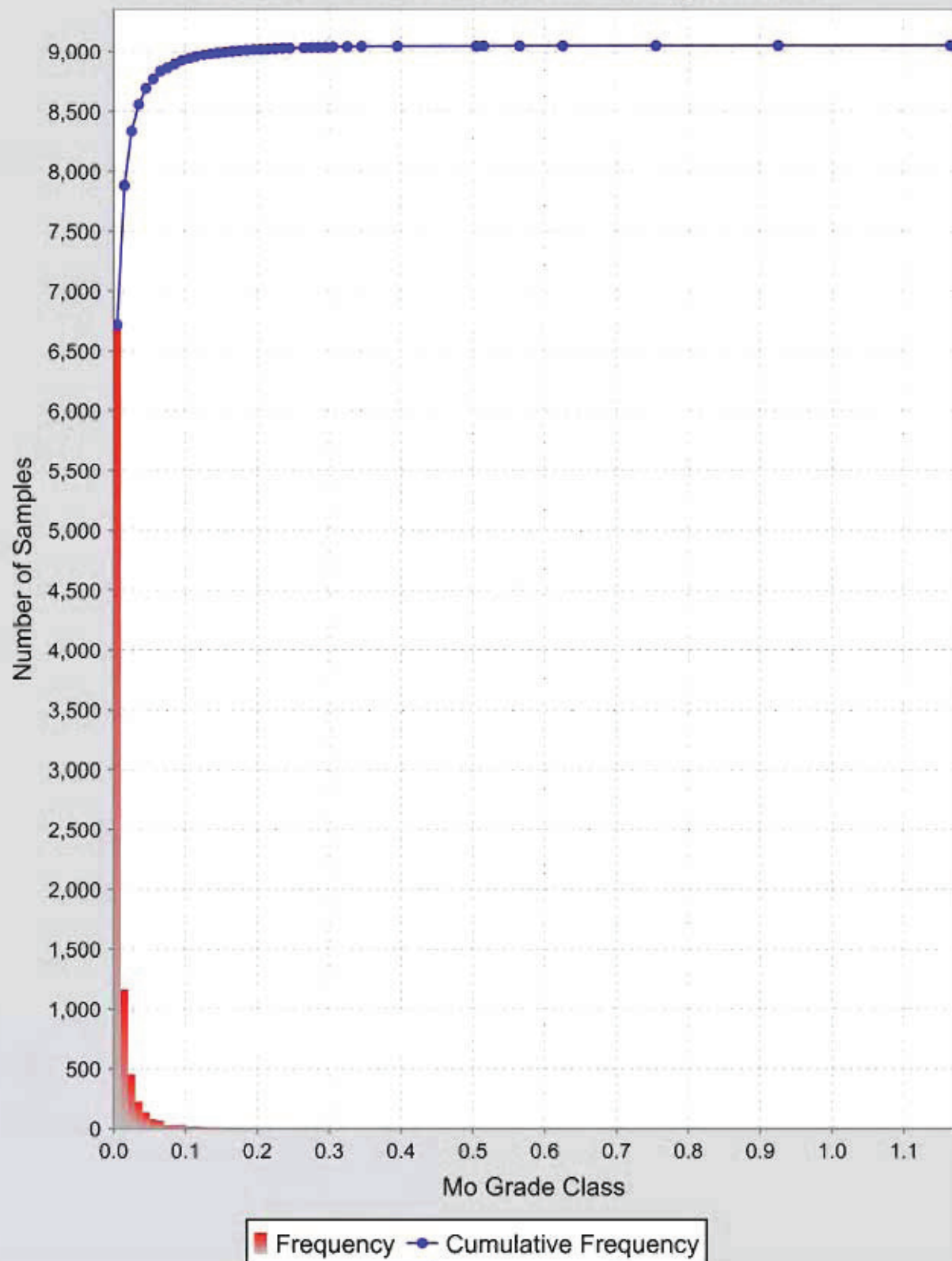
Zone III - Peripheral WO3 Zone: Cumulative Frequency of WO3 Grades in 3m Row Composites



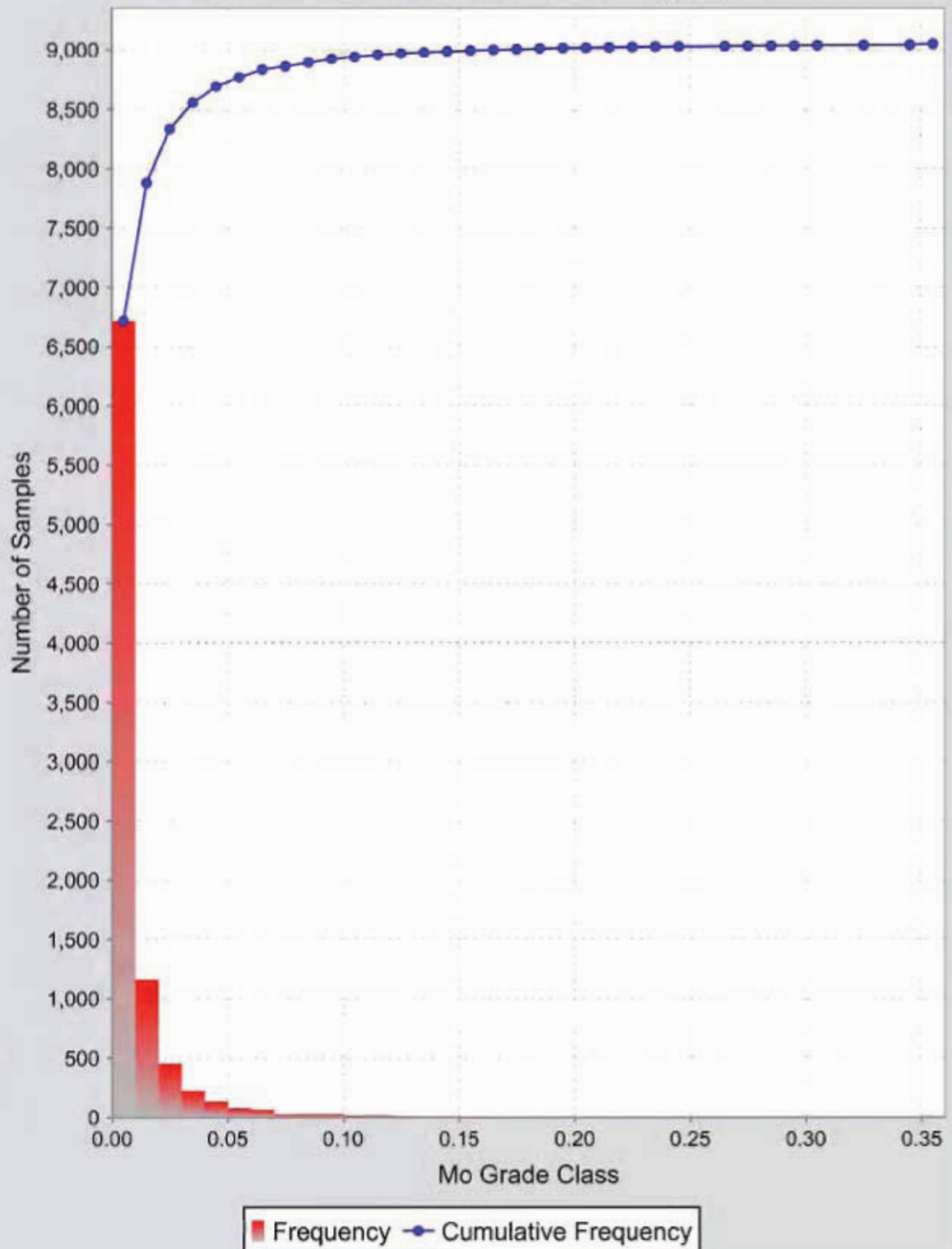
Zone III - Peripheral WO₃ Zone: Cumulative Frequency of WO₃ Grades in 3m Cut Composites



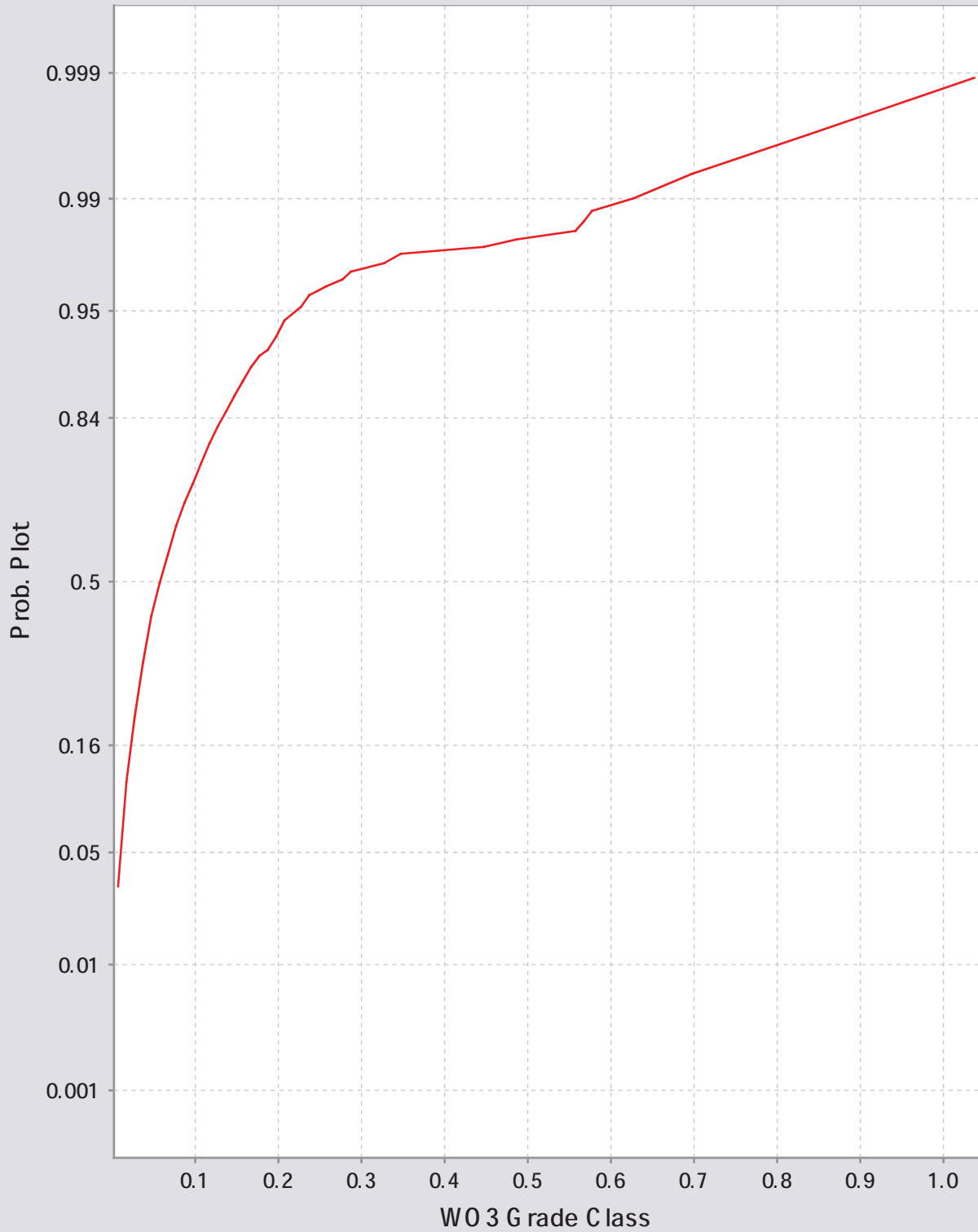
Zone III - Peripheral Mo Zone: Cumulative Frequency of Mo Grades in 3m Raw Composites



Zone III - Peripheral Mo Zone: Cumulative Frequency of Mo Grades in 3m Cut Composites

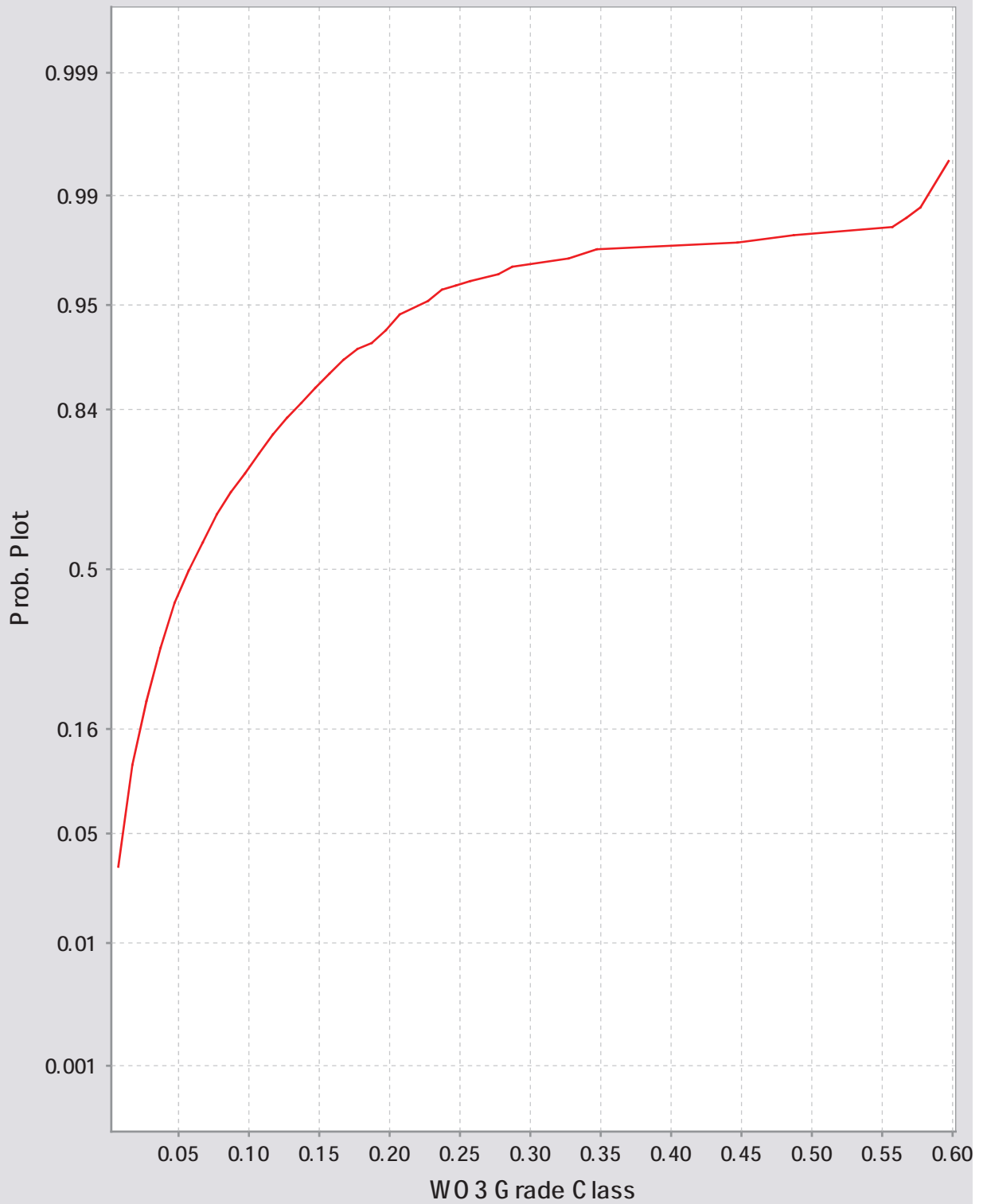


Ellipse Zone - WO3 Zone 2 - Probability Plot of WO3 Grades in 3m Raw Composites



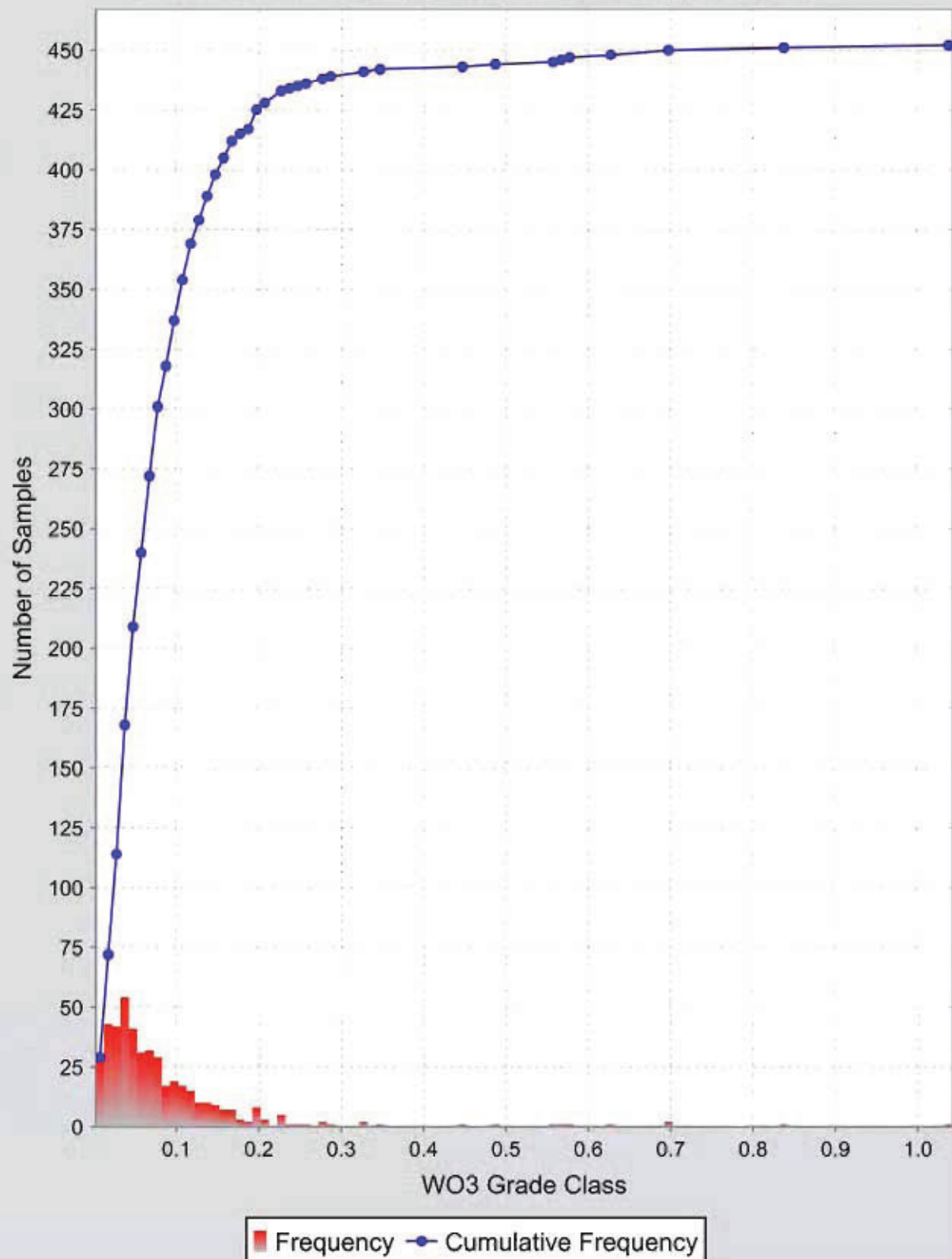
— Prob. Plot

Ellipse Zone - WO3 Zone 2 - Probability Plot of WO3 Grades in 3m Cut Composites

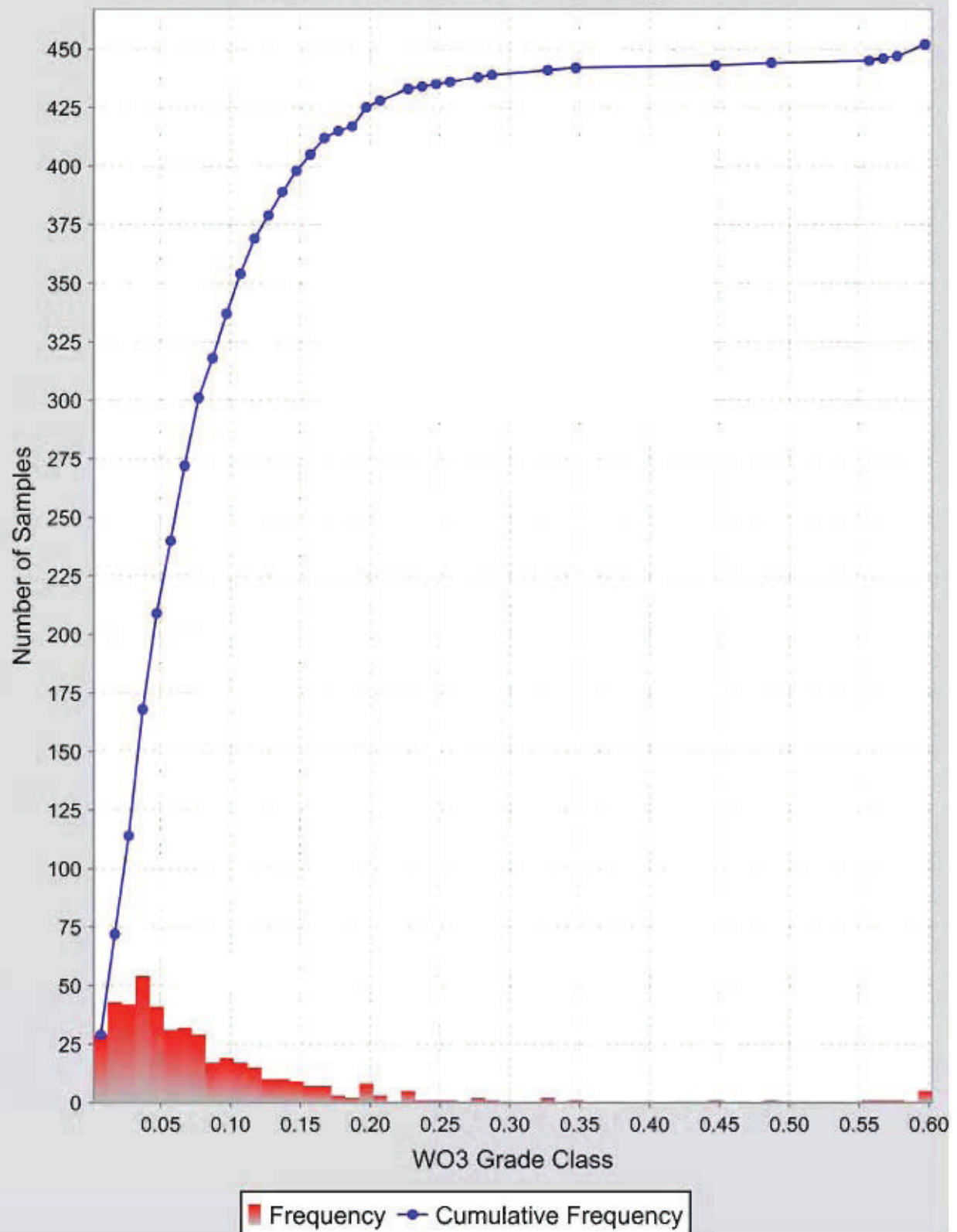


— Prob. Plot

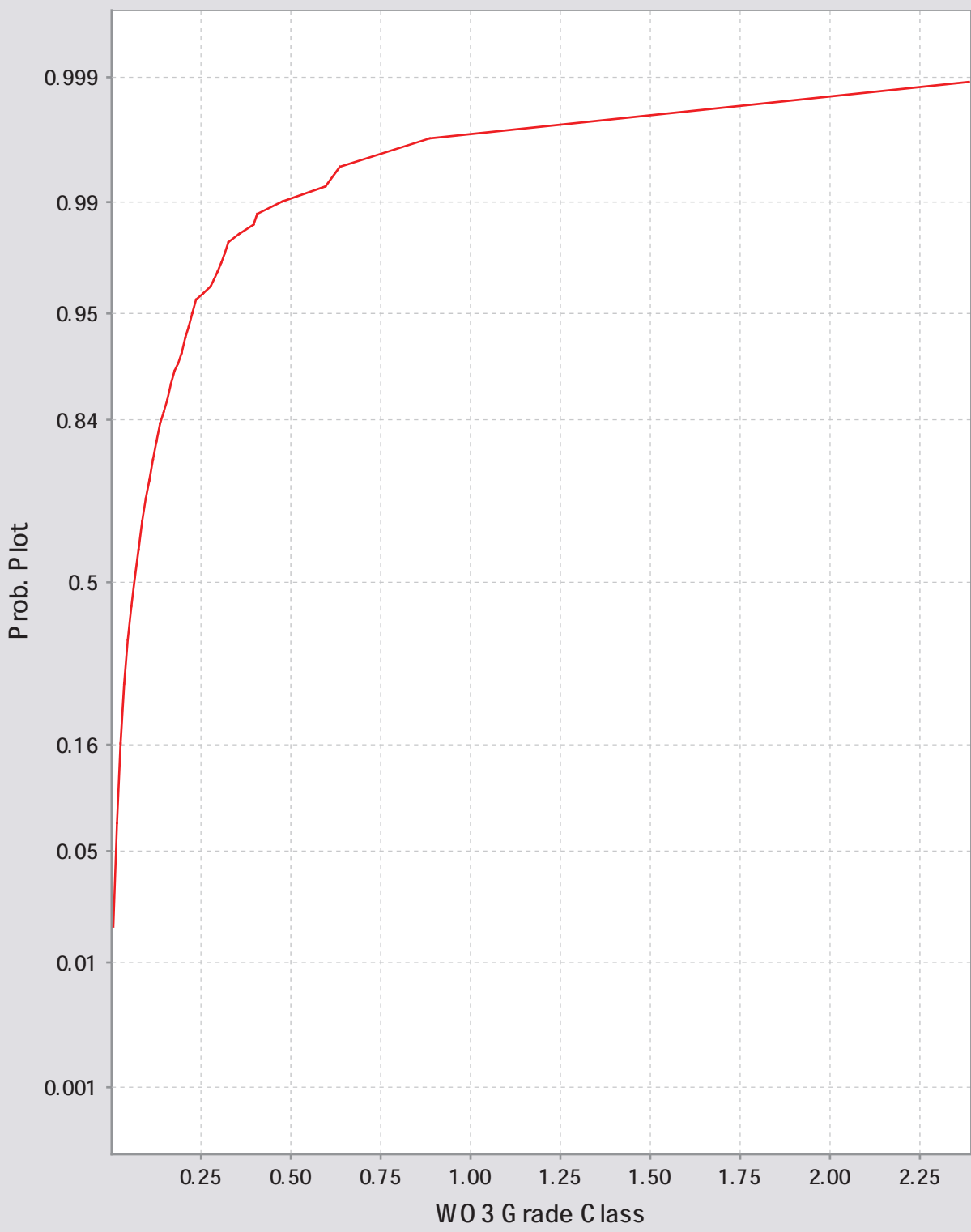
Ellipse Zone - WO3 Zone 2 - Cumulative Frequency of WO3 Grades in 3m Raw Composites



Ellipse Zone - WO3 Zone 2 - Cumulative Frequency of WO3 Grades in 3m Cut Composites

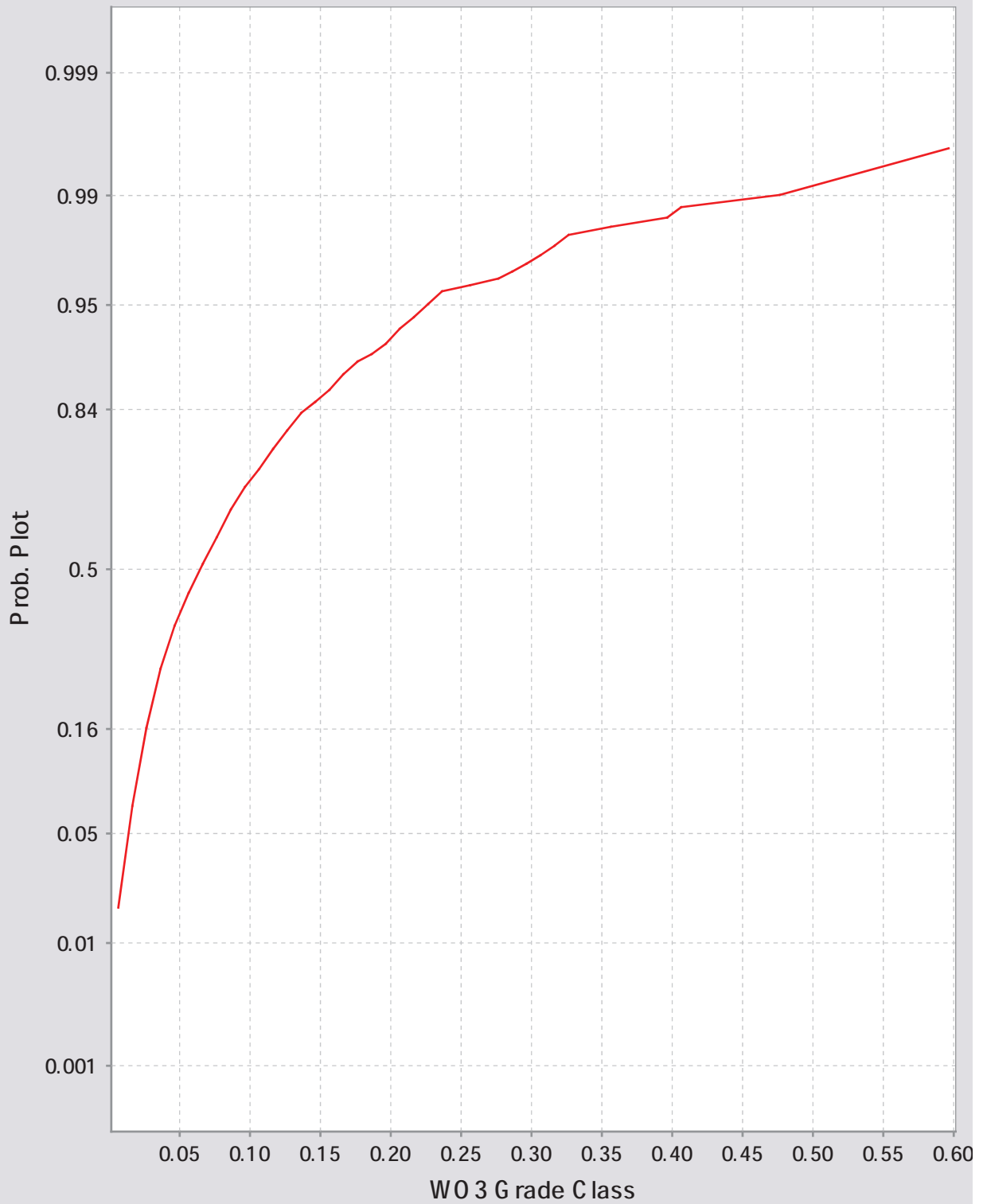


Ellipse Zone - WO3 Zone 1 - Probability Plot of WO3 Grades in 3m Raw Composites



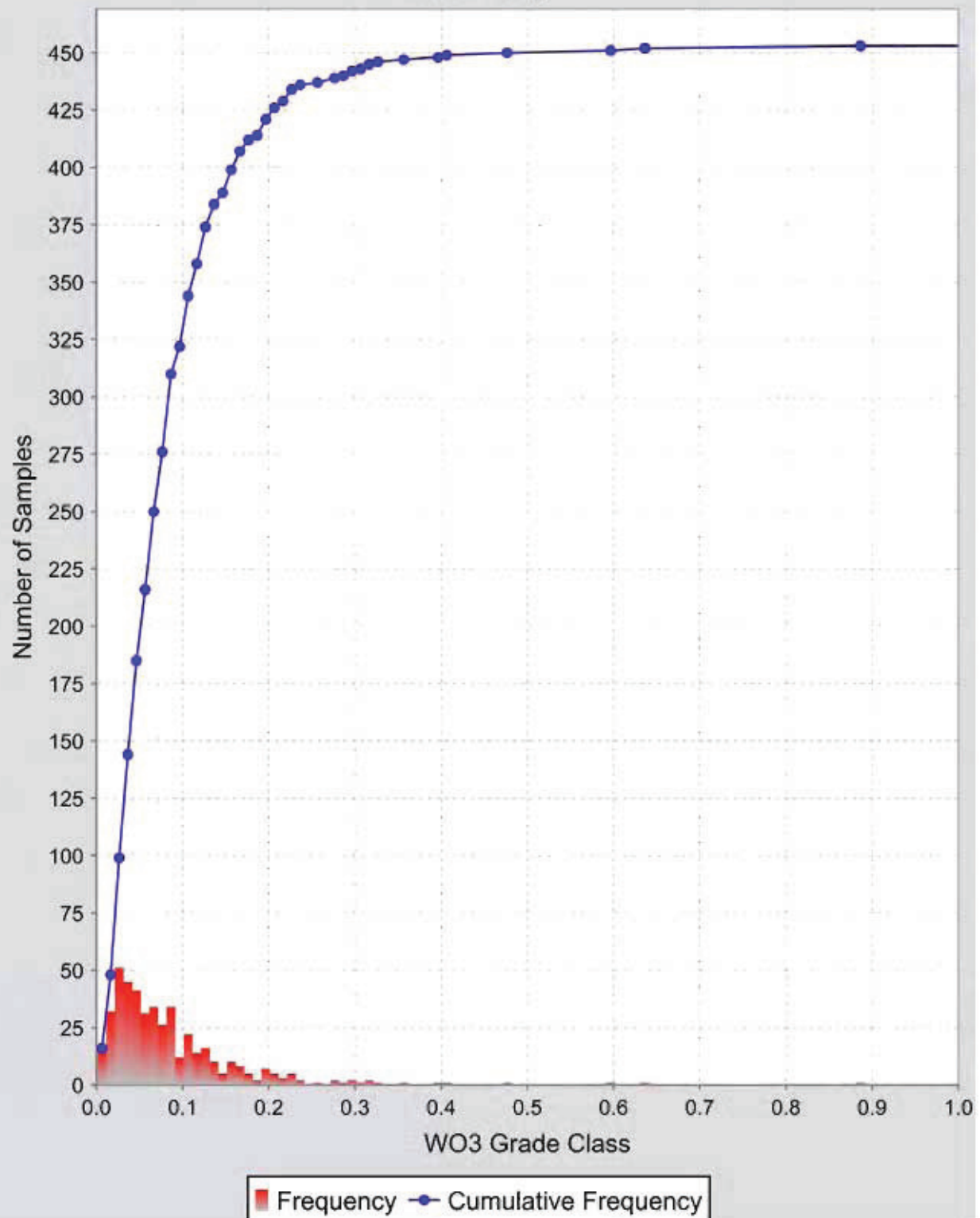
— Prob. Plot

Ellipse Zone - WO3 Zone 1 - Probability Plot of WO3 Grades in 3m Cut Composites

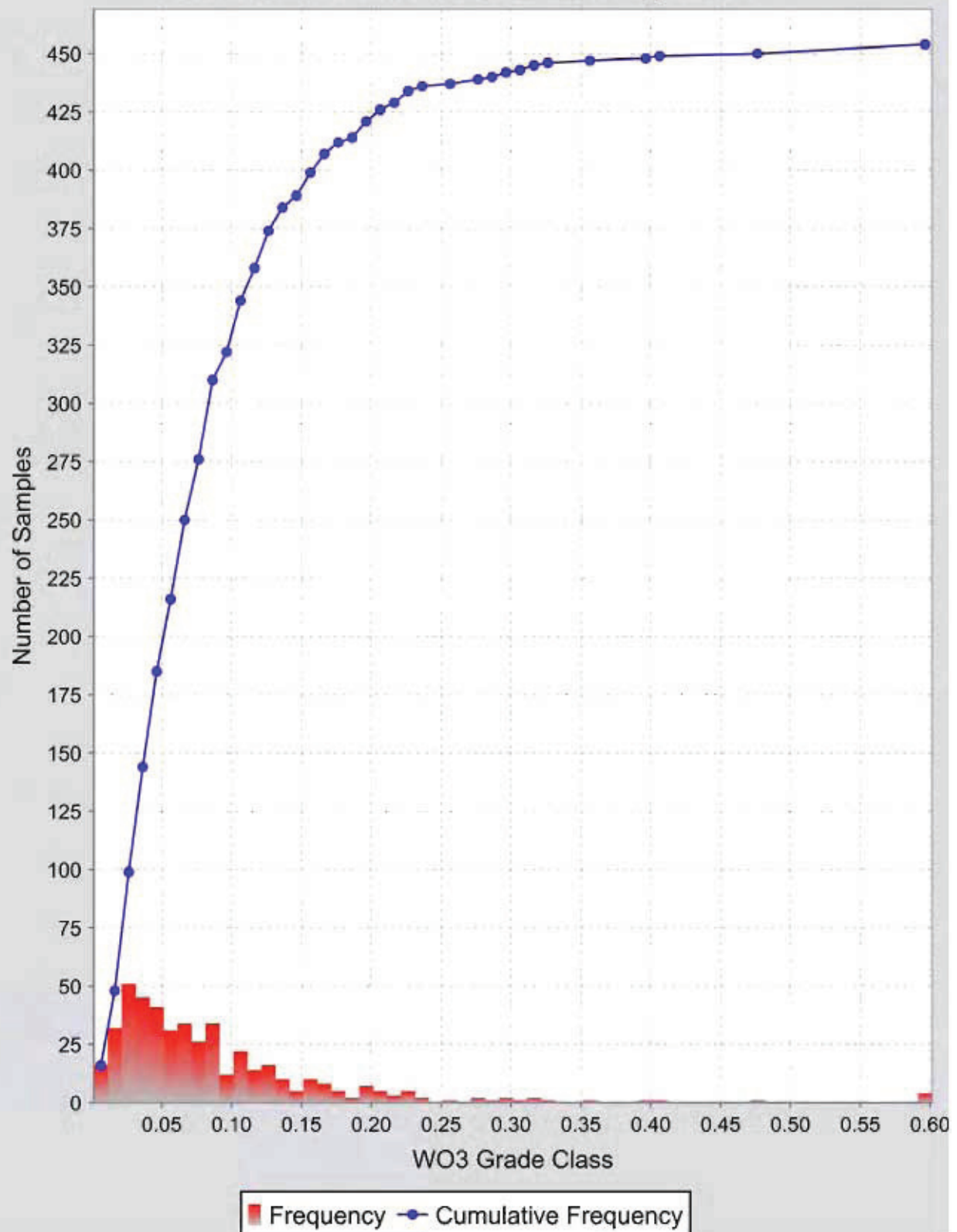


— Prob. Plot

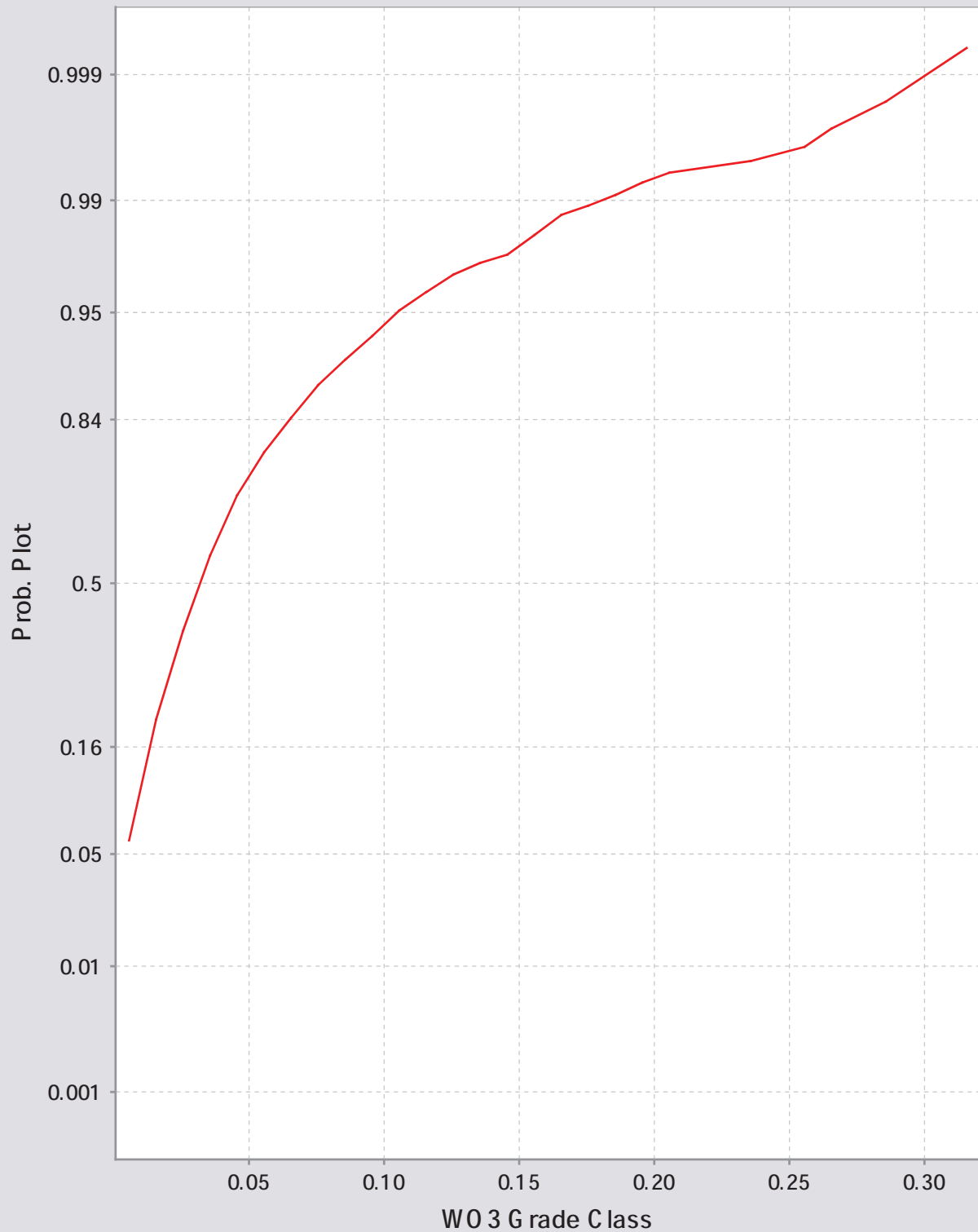
Ellipse Zone - WO3 Zone 1 - Cumulative Frequency of WO3 Grades in 3m Raw Composites (Max 1% WO3 Shown)



Ellipse Zone - WO3 Zone 1 - Cumulative Frequency of WO3 Grades in 3m Cut Composites

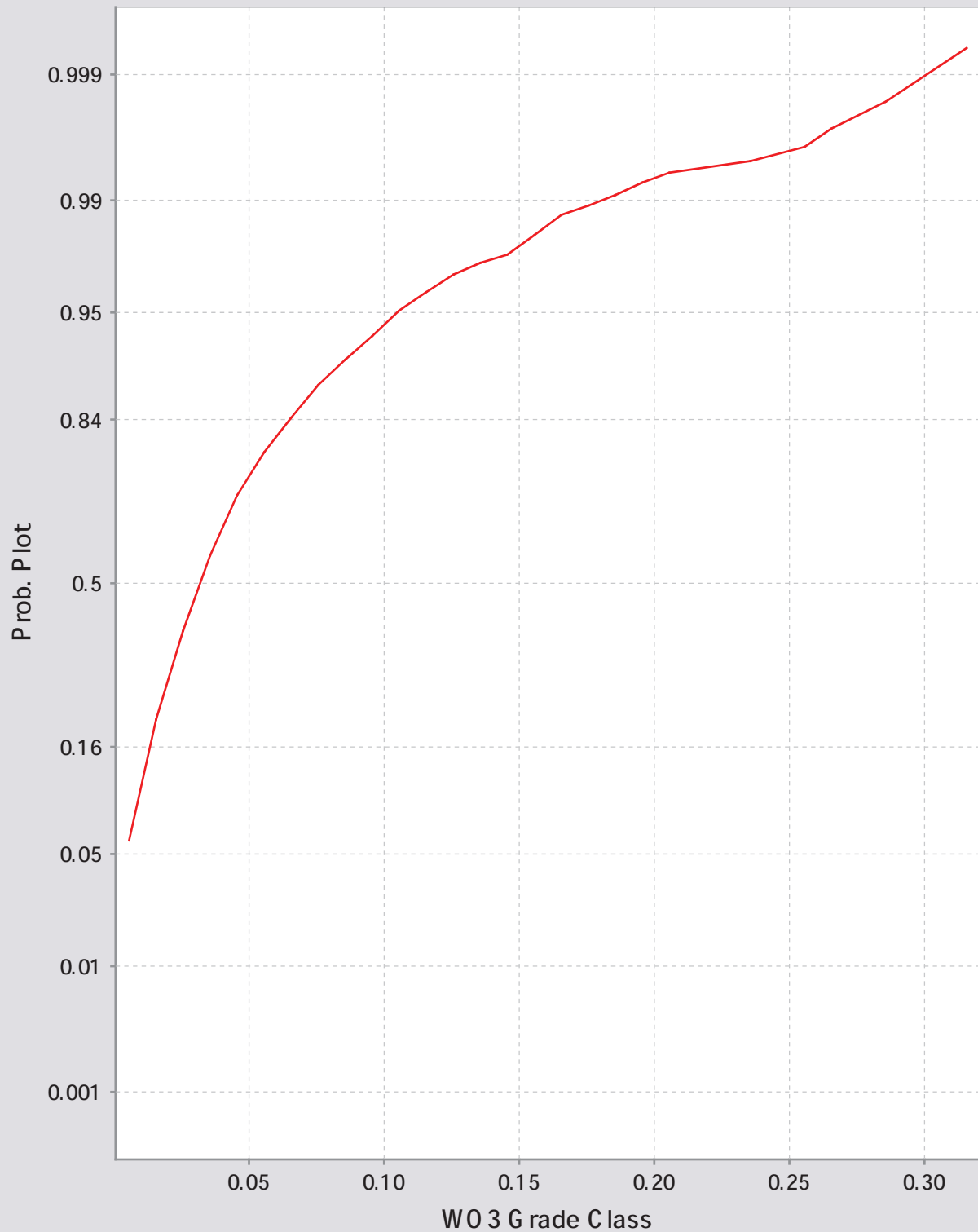


Ellipse Zone - WO3 Peripheral Zone - Probability Plot of WO3 Grades in 3m Row Composites



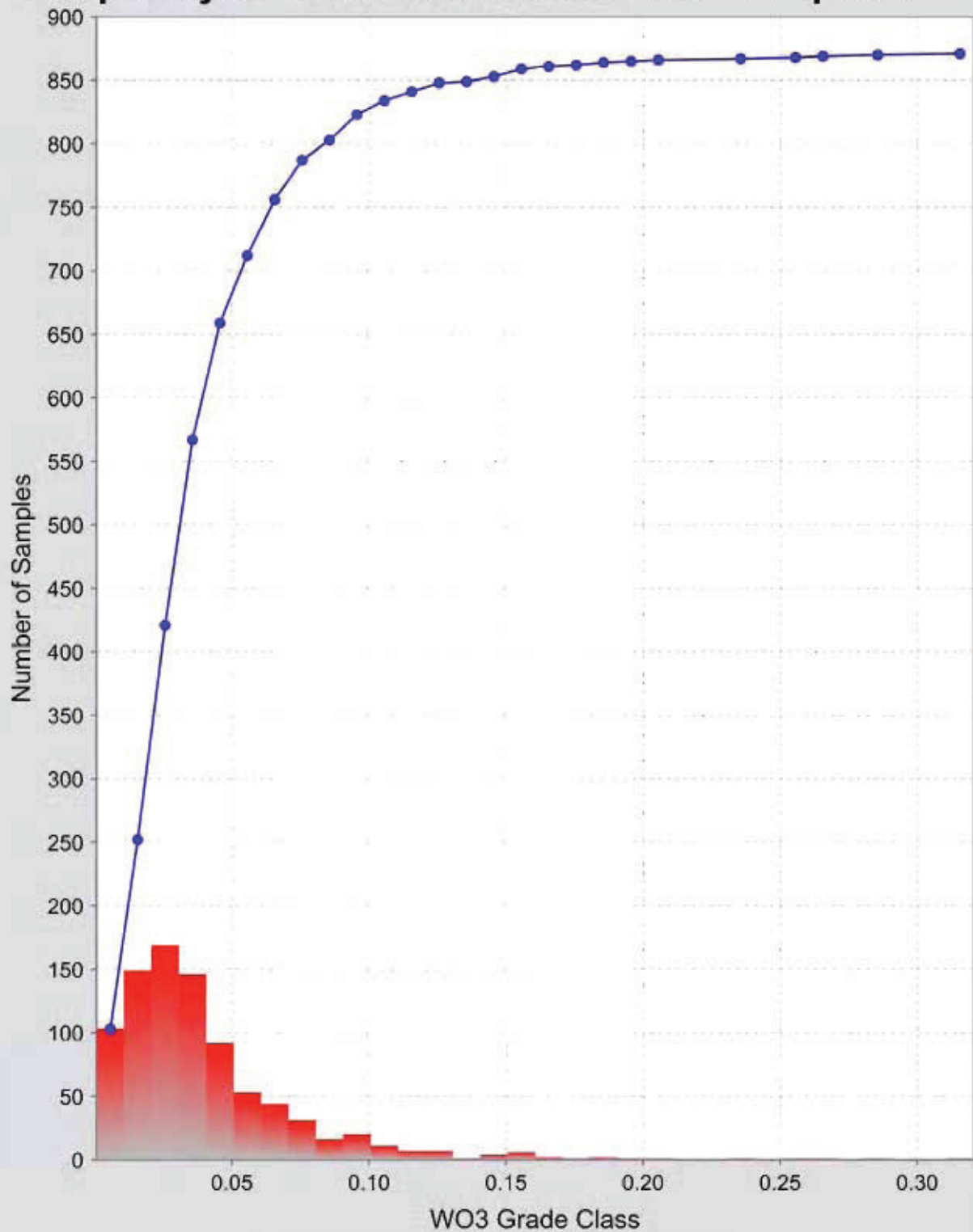
— Prob. Plot

Ellipse Zone - WO3 Peripheral Zone - Probability Plot of WO3 Grades in 3m Cut Composites



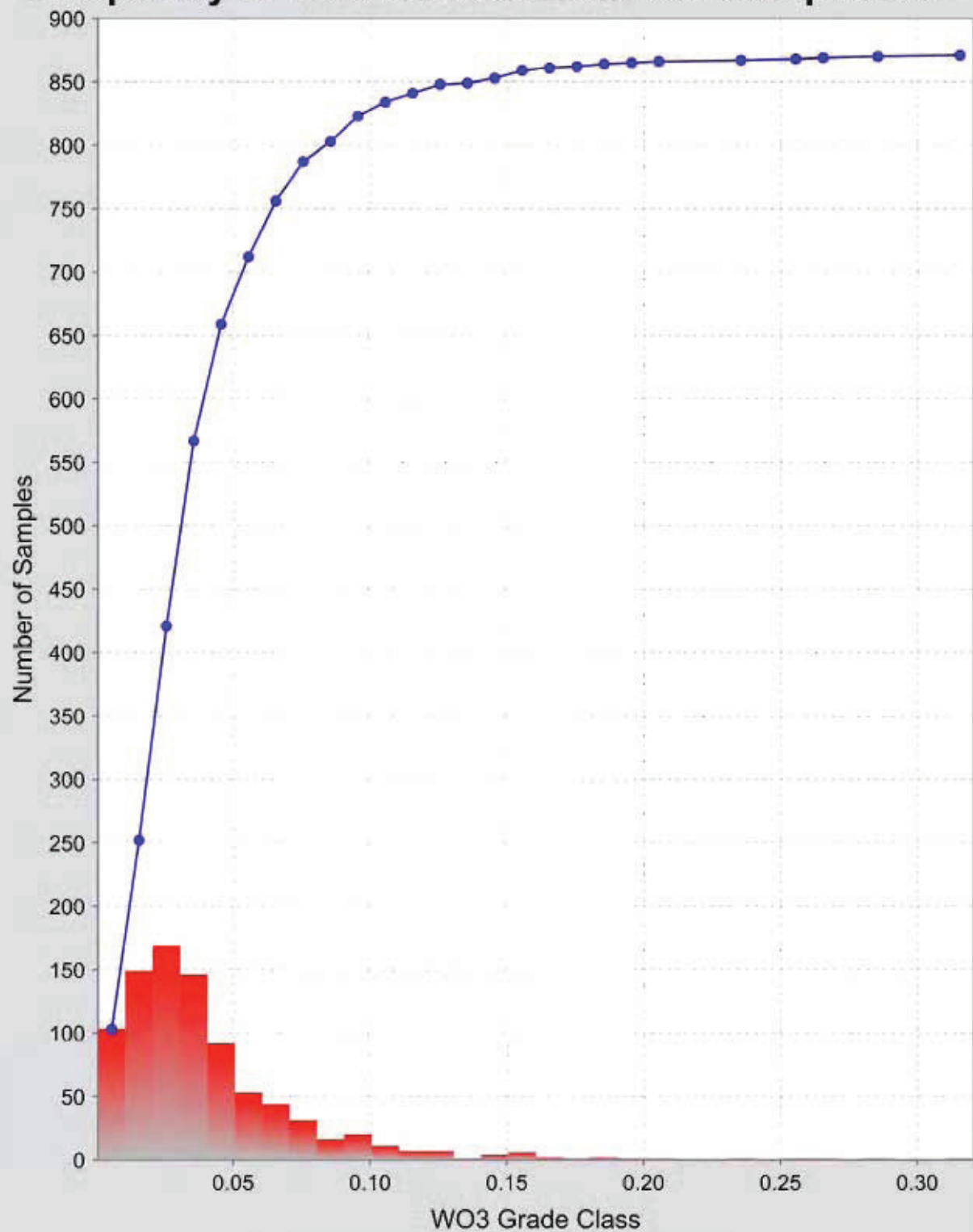
— Prob. Plot

Ellipse Zone - WO3 Peripheral Zone - Cumulative Frequency of WO3 Grades in 3m Row Composites



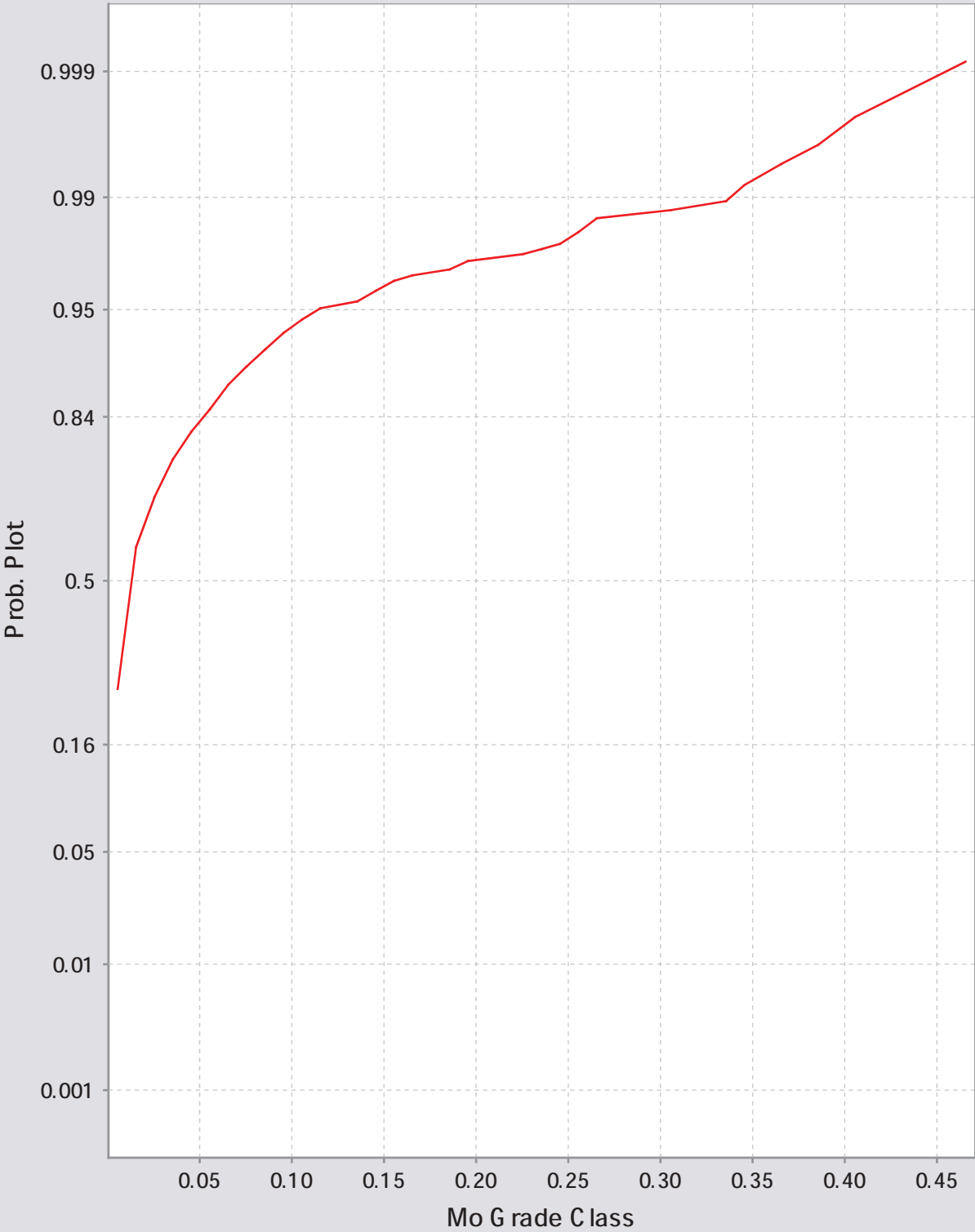
■ Frequency — Cumulative Frequency

Ellipse Zone - WO3 Peripheral Zone - Cumulative Frequency of WO3 Grades in 3m Cut Composites



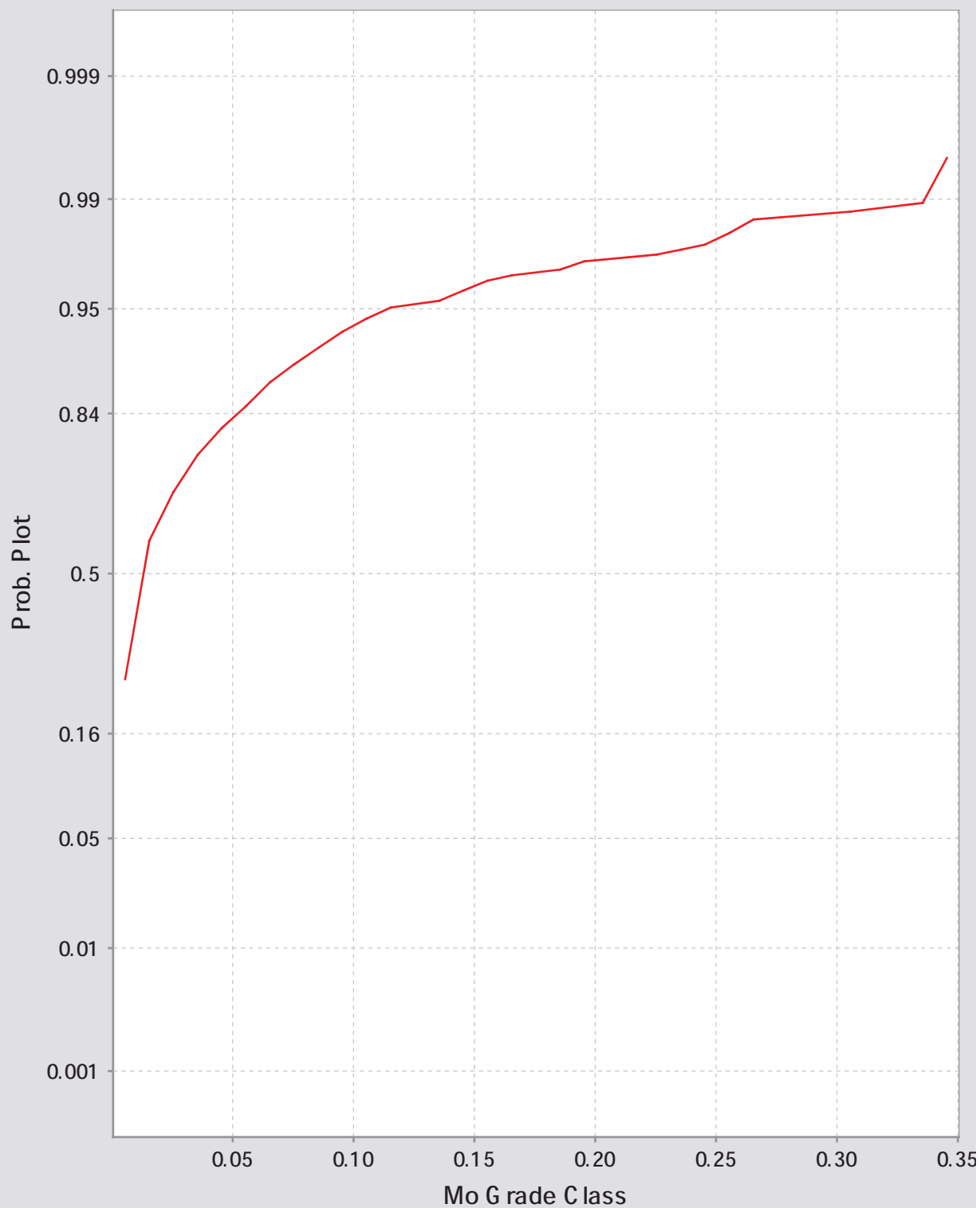
■ Frequency — Cumulative Frequency

Ellipse Zone - Mo Zone 2: Probability Plot of Mo Grades in 3m Raw Composites



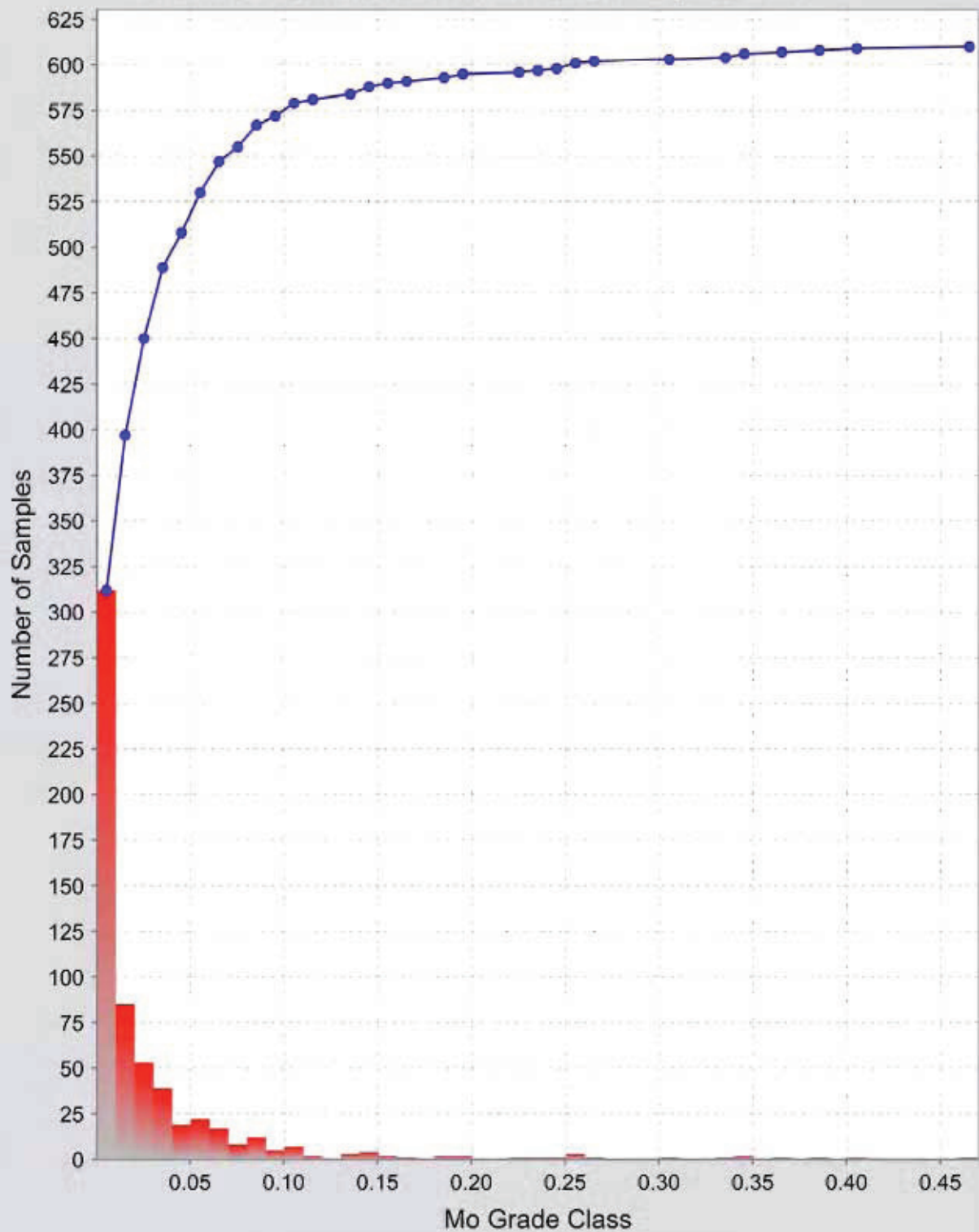
— Prob. Plot

Ellipse Zone - Mo Zone 2: Probability Plot of Mo Grades in 3m Cut Composites



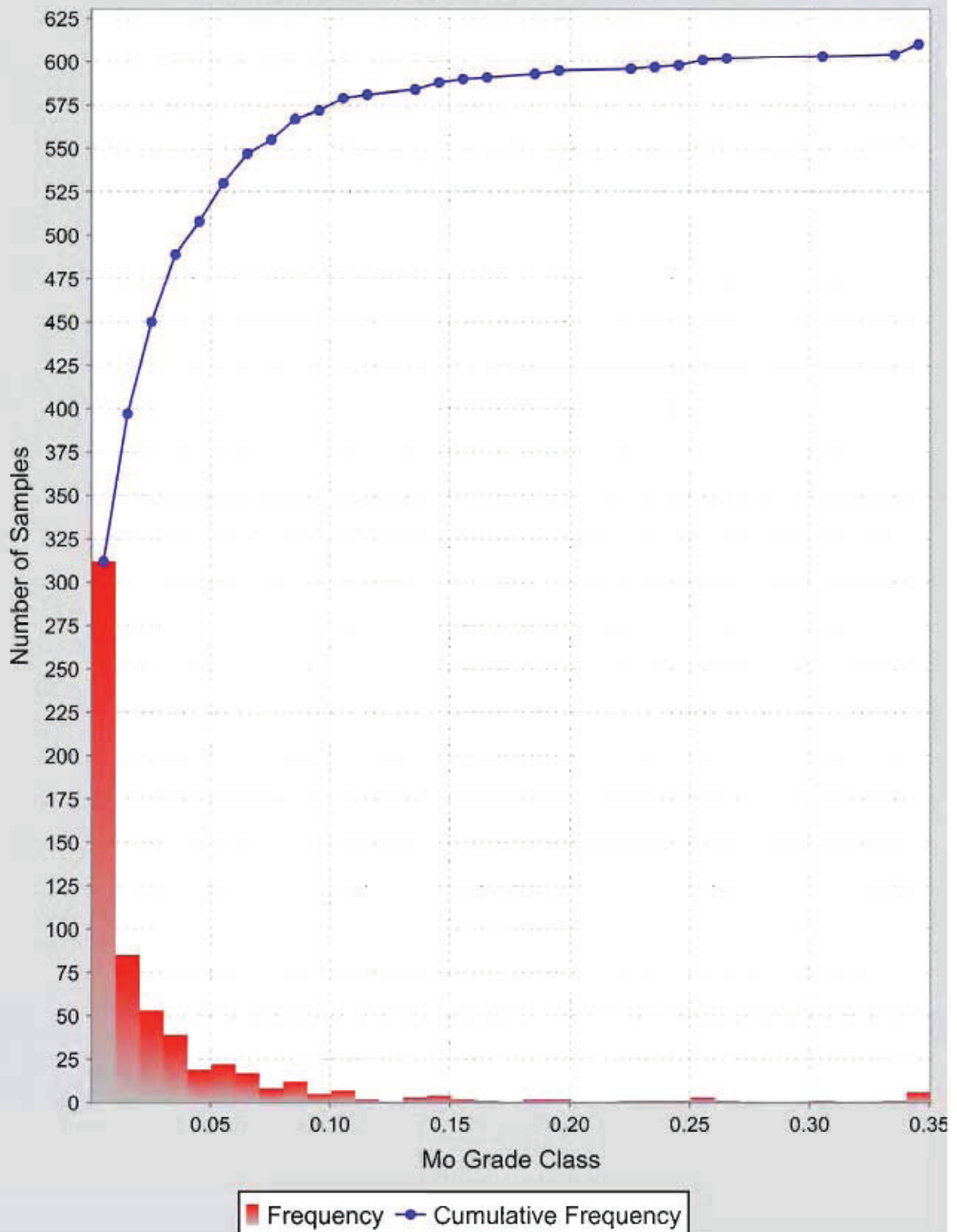
— Prob. Plot

Ellipse Zone - Mo Zone 2: Cumulative Frequency of Mo Grades in 3m Raw Composites

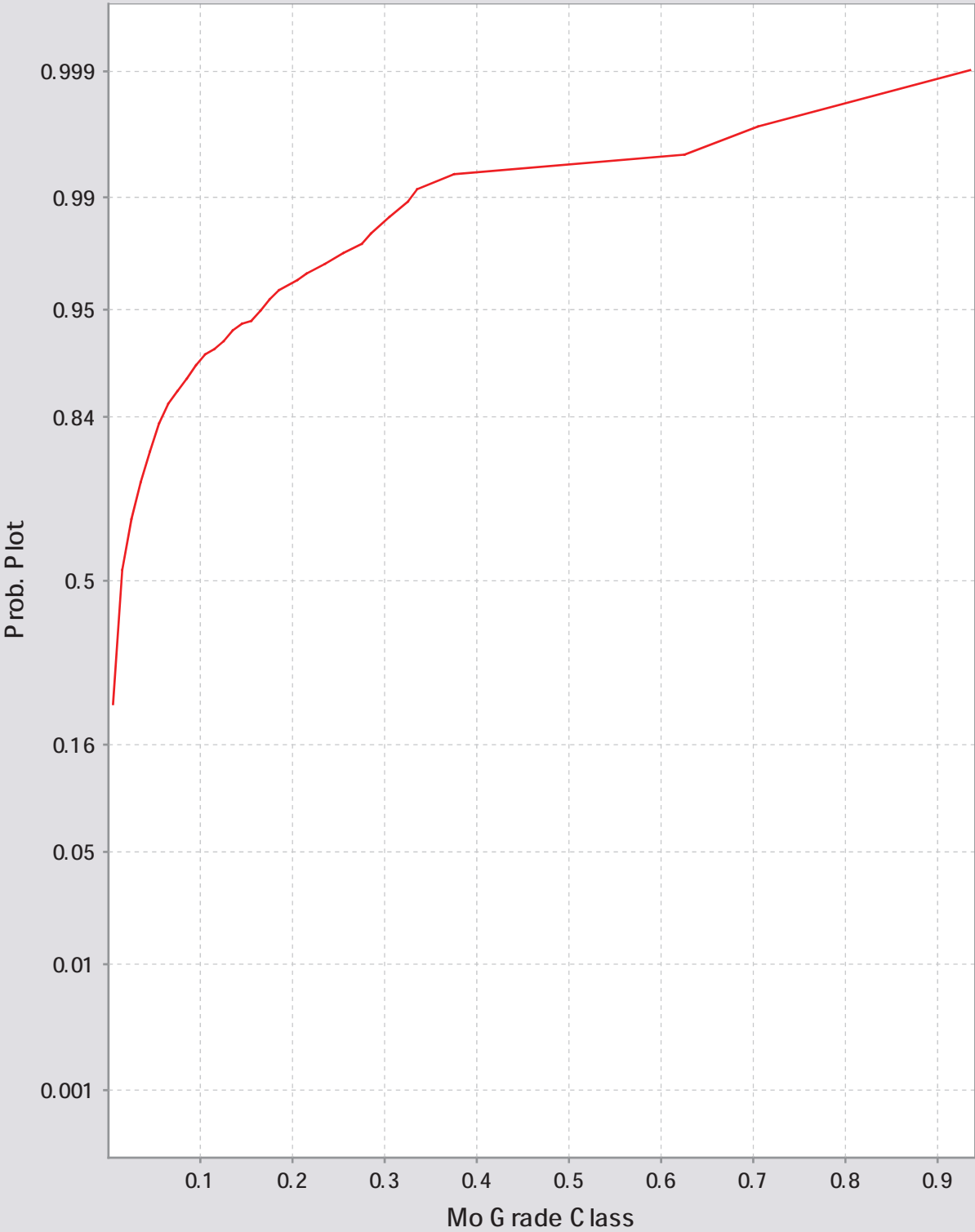


Frequency Cumulative Frequency

Ellipse Zone - Mo Zone 2: Cumulative Frequency of Mo Grades in 3m Cut Composites

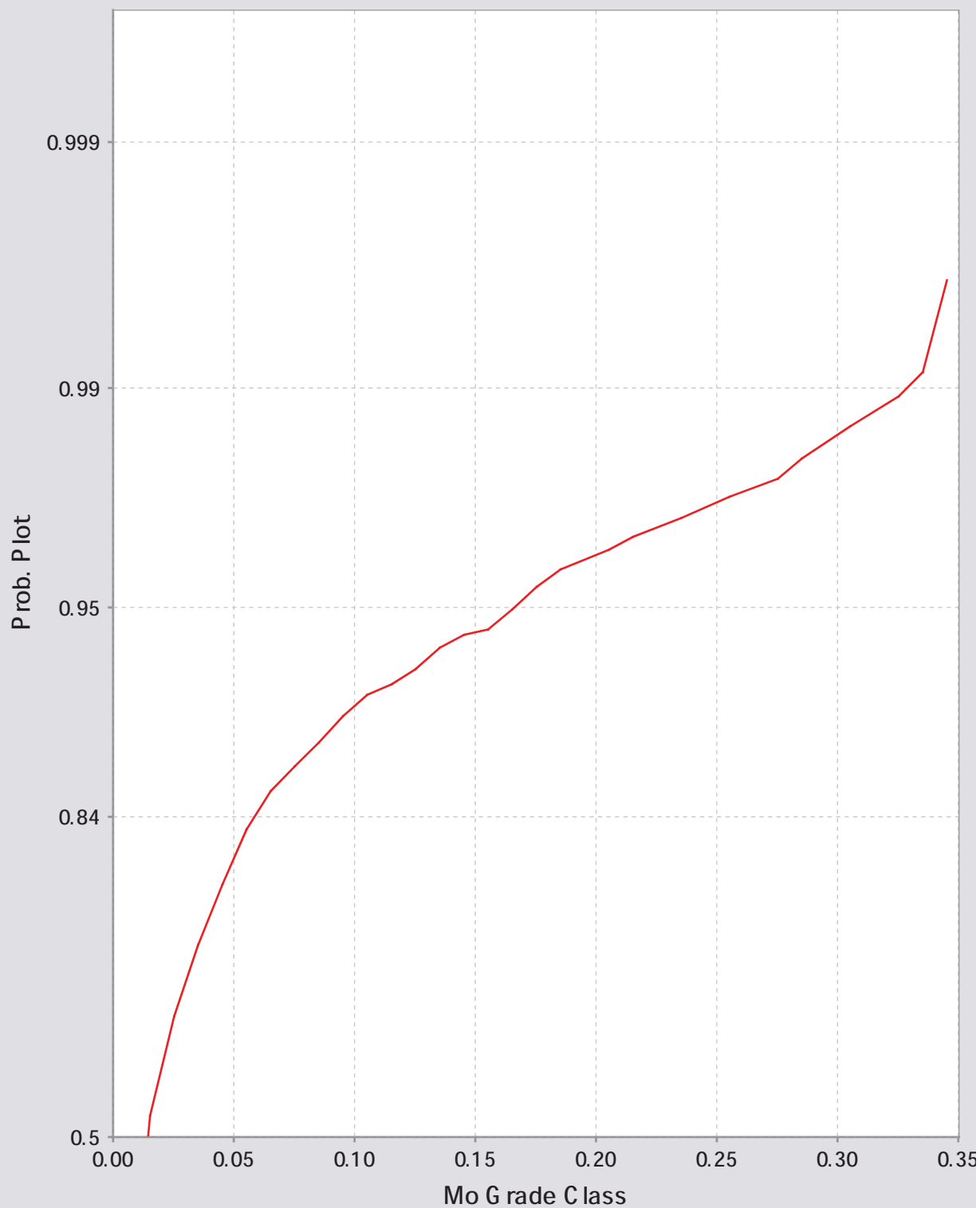


Ellipse Zone - Mo Zone 1: Probability Plot of Mo Grades in 3m Raw Composites



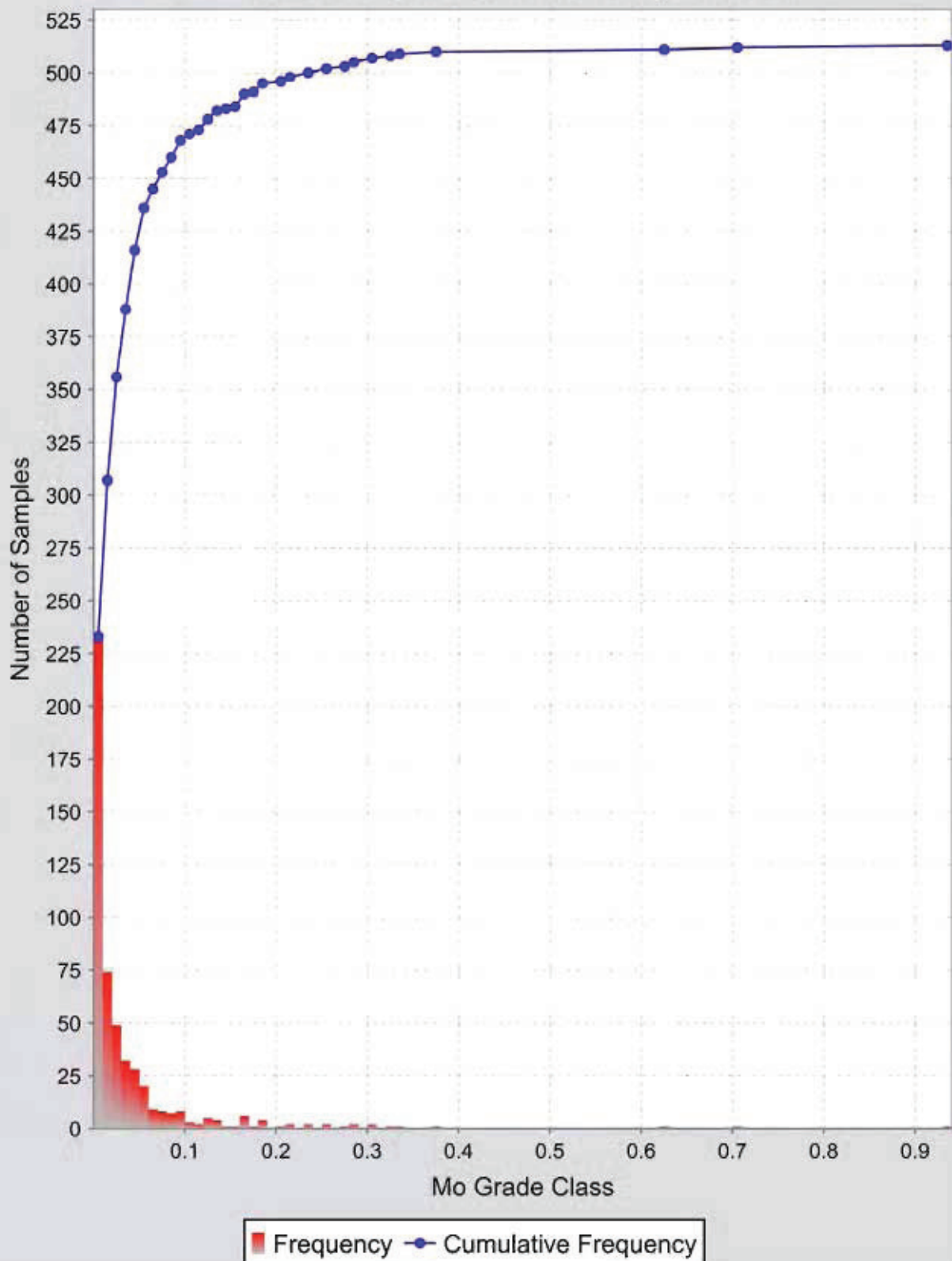
— Prob. Plot

Ellipse Zone - Mo Zone 1: Probability Plot of Mo Grades in 3m Cut Composites

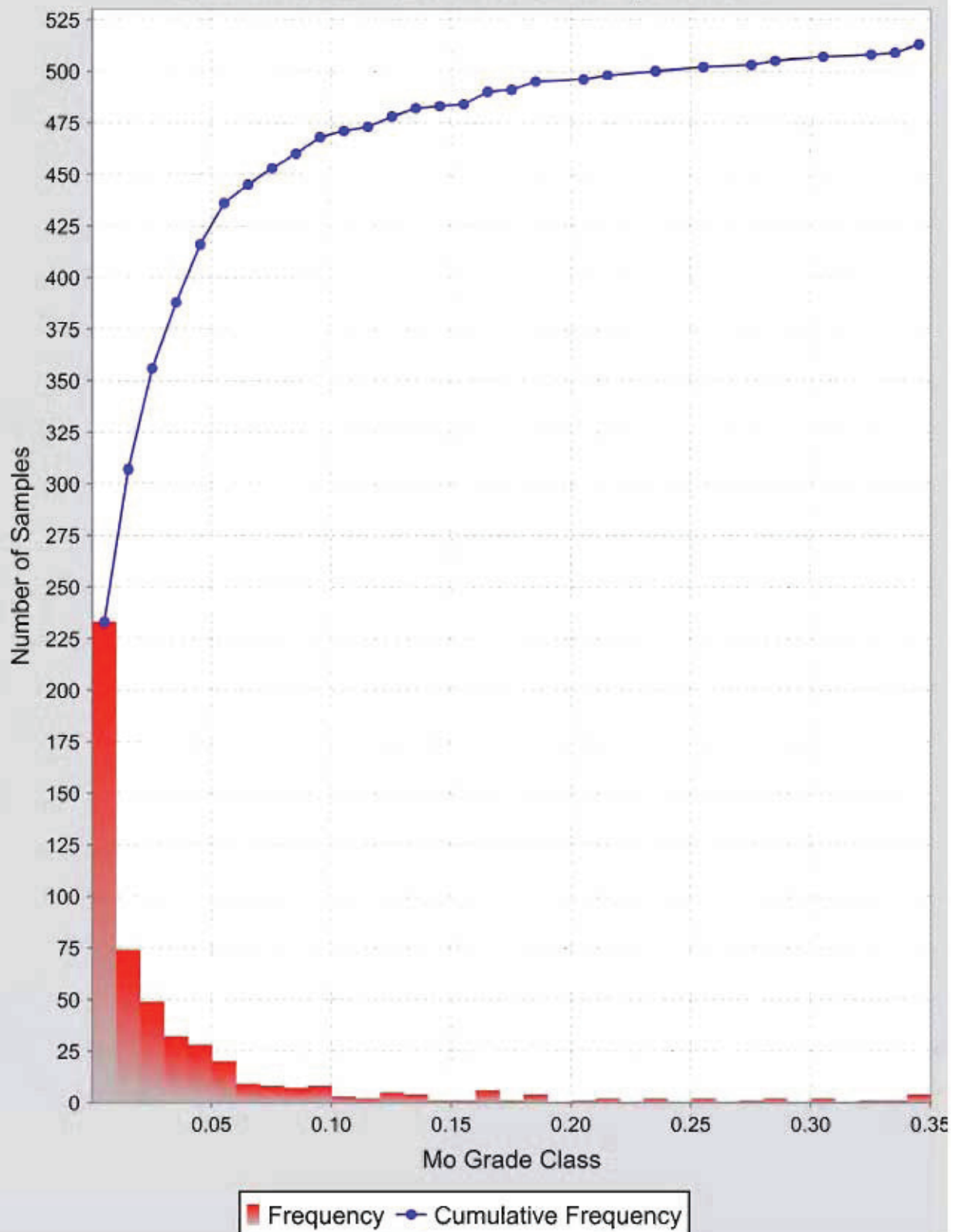


— Prob. Plot

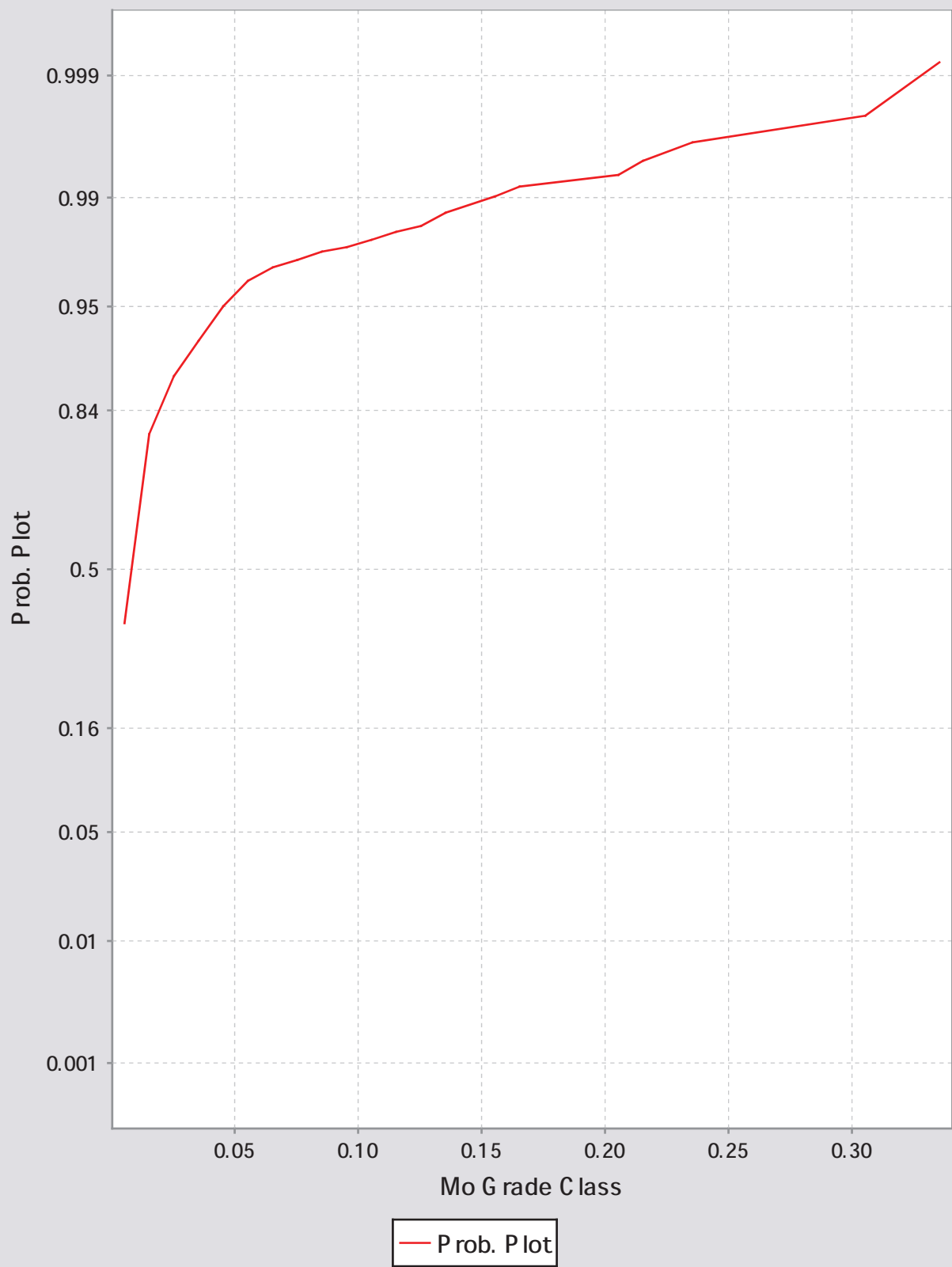
Ellipse Zone - Mo Zone 1: Cumulative Frequency of Mo Grades in 3m Raw Composites



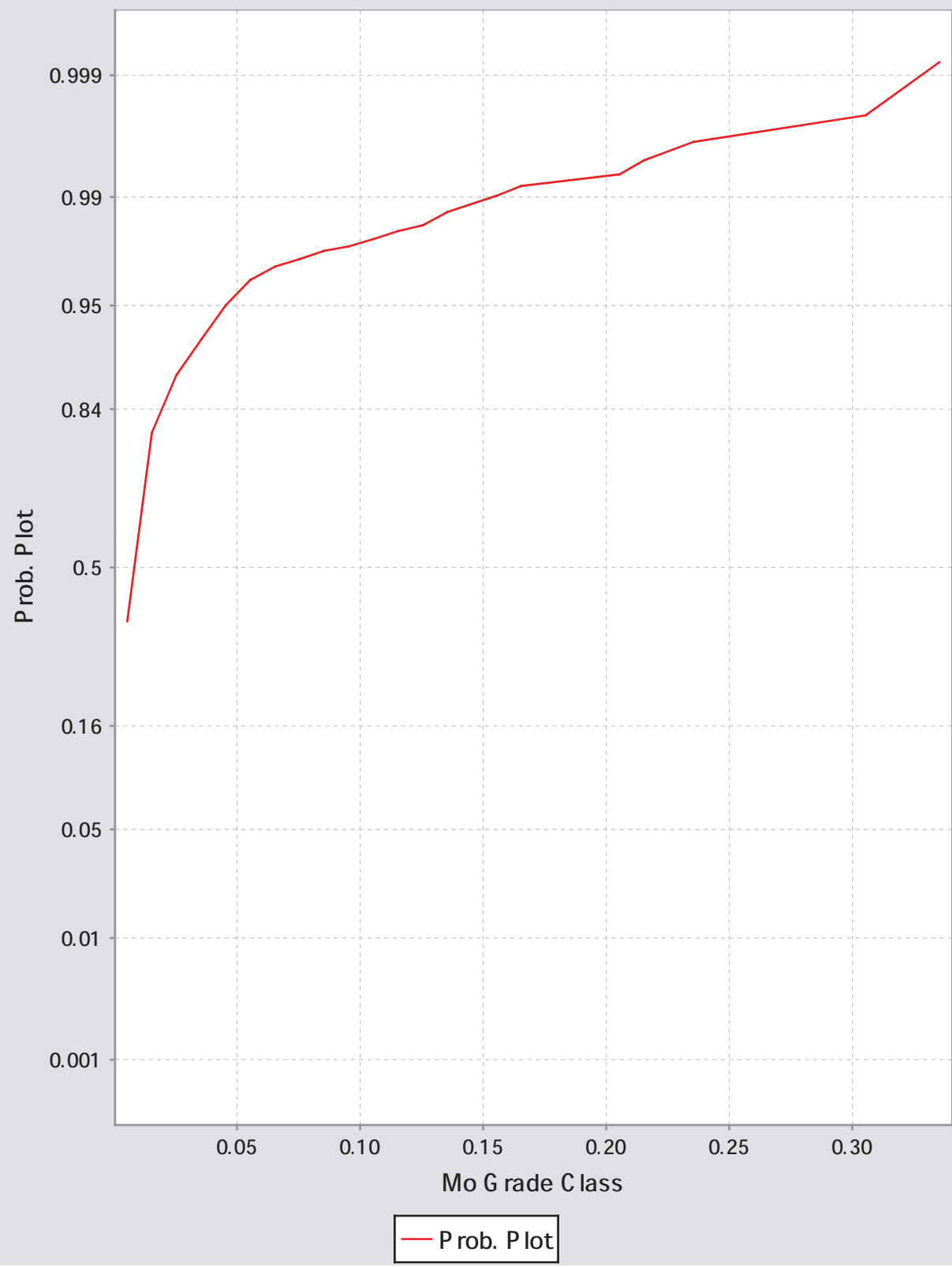
Ellipse Zone - Mo Zone 1: Cumulative Frequency of Mo Grades in 3m Cut Composites



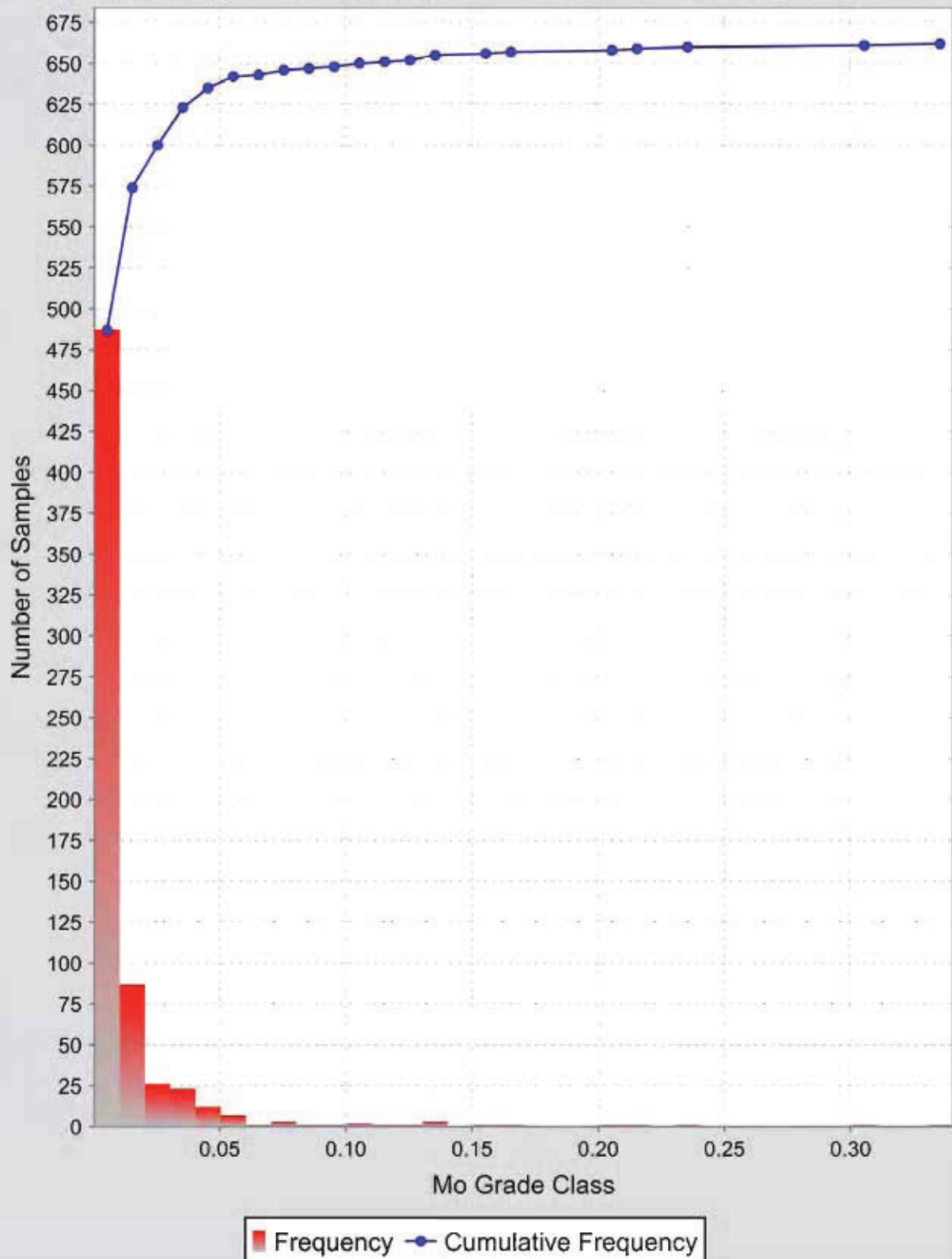
Ellipse Zone - Peripheral Mo Zone: Probability Plot of Mo Grades in 3m Raw Composites



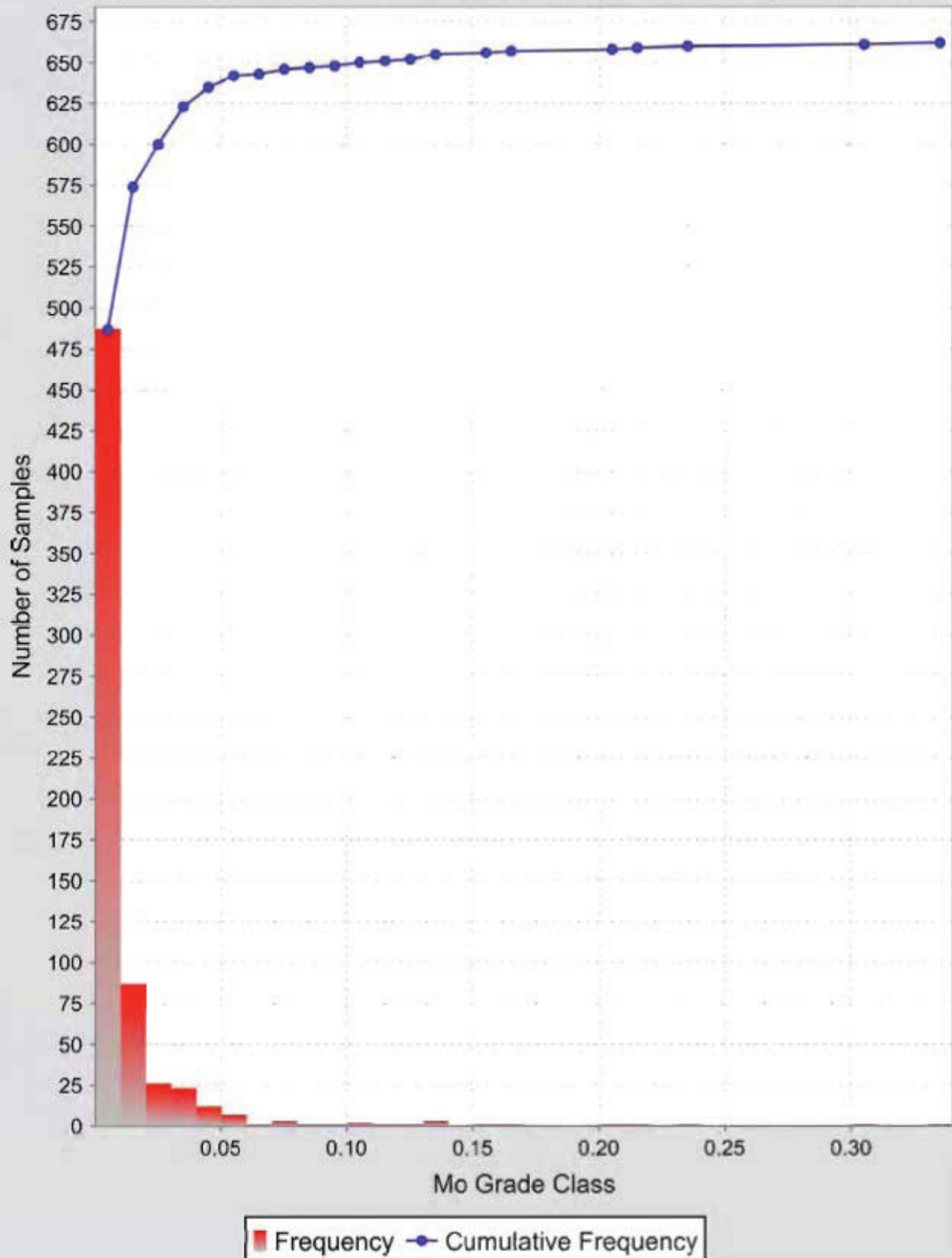
Ellipse Zone - Peripheral Mo Zone: Probability Plot of Mo Grades in 3m Cut Composites



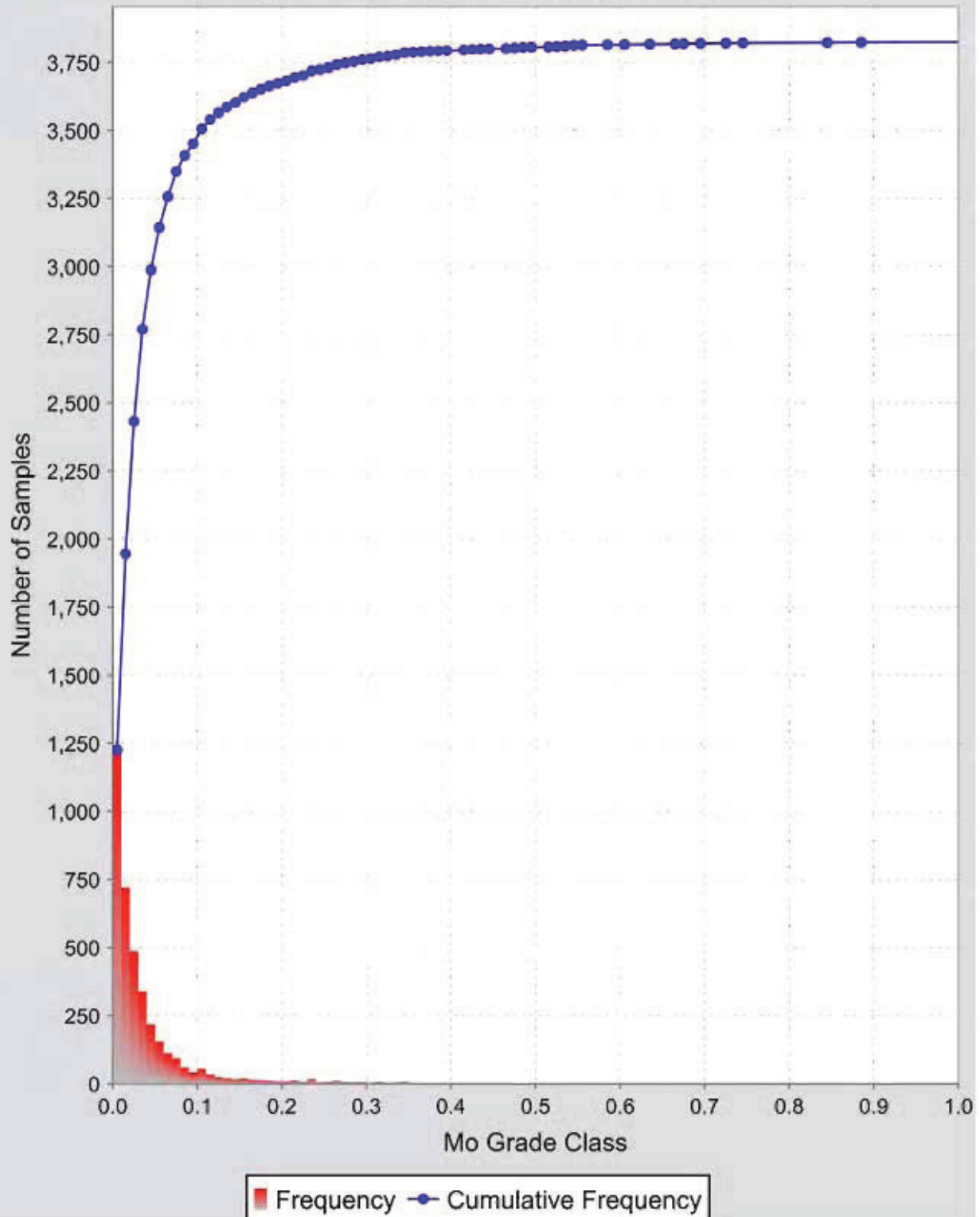
Ellipse Zone - Peripheral Mo Zone: Cumulative Frequency of Mo Grades in 3m Raw Composites



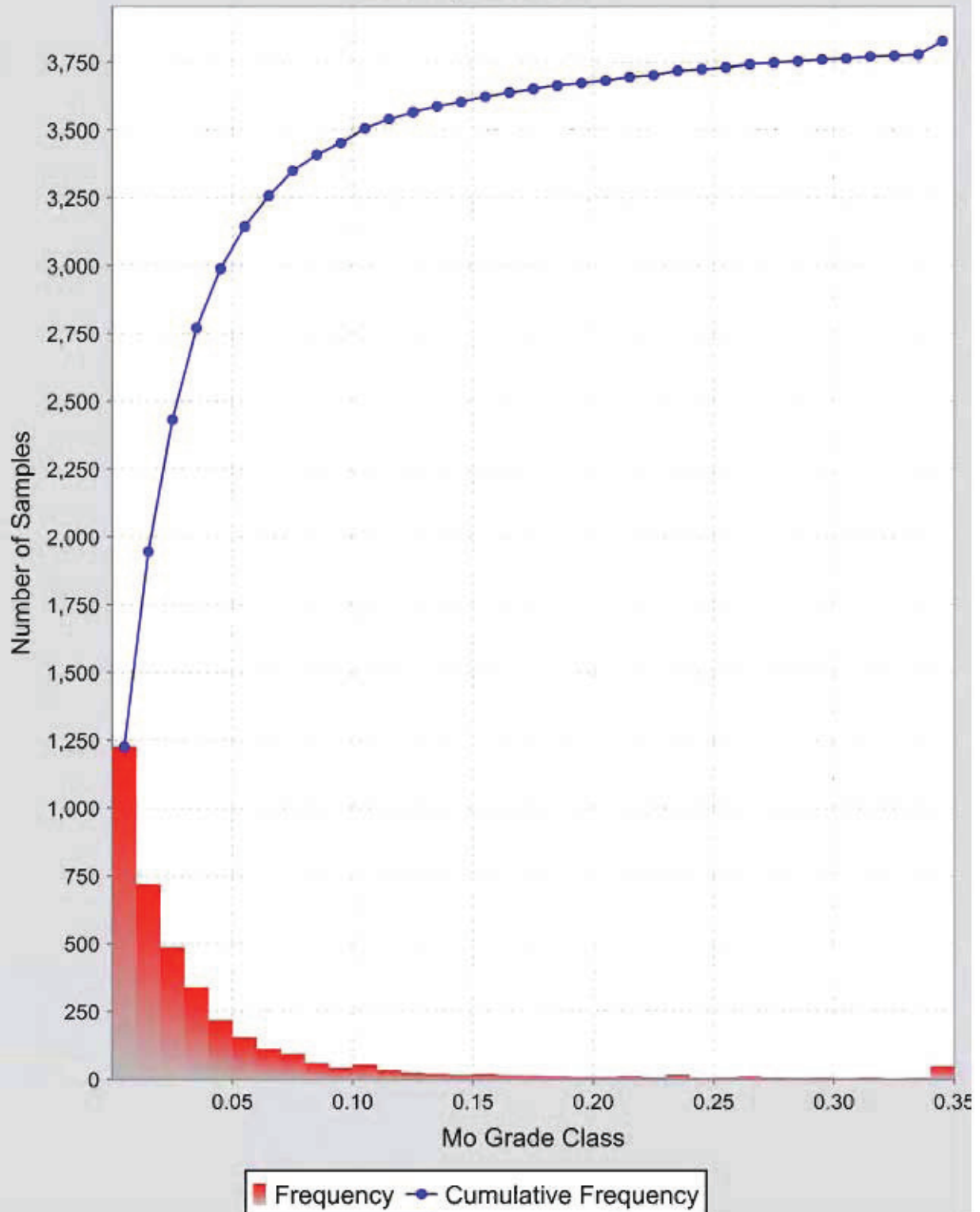
Ellipse Zone - Peripheral Mo Zone: Cumulative Frequency of Mo Grades in 3m Cut Composites



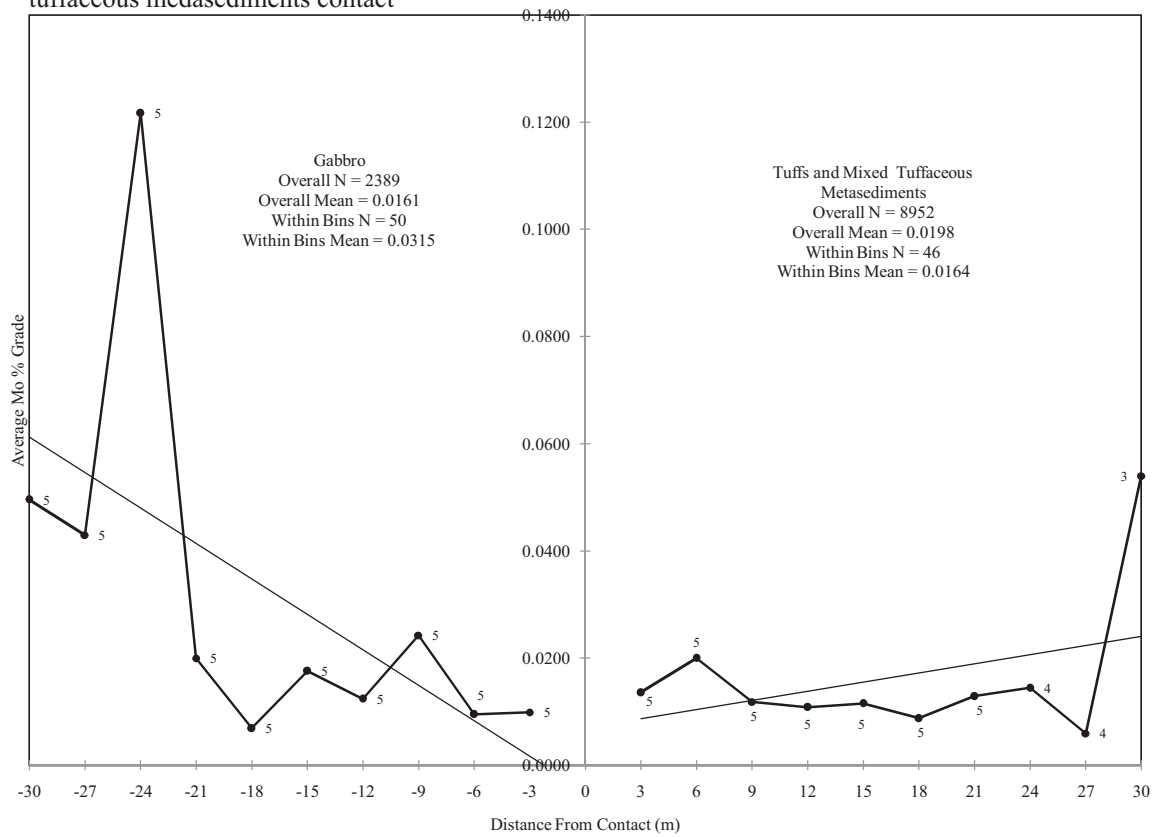
Zone III - Main Mo Zone and East Flank Mo Zone: Cumulative Frequency of Mo Grades in 3m Raw Composites (Max 1% Mo Shown)



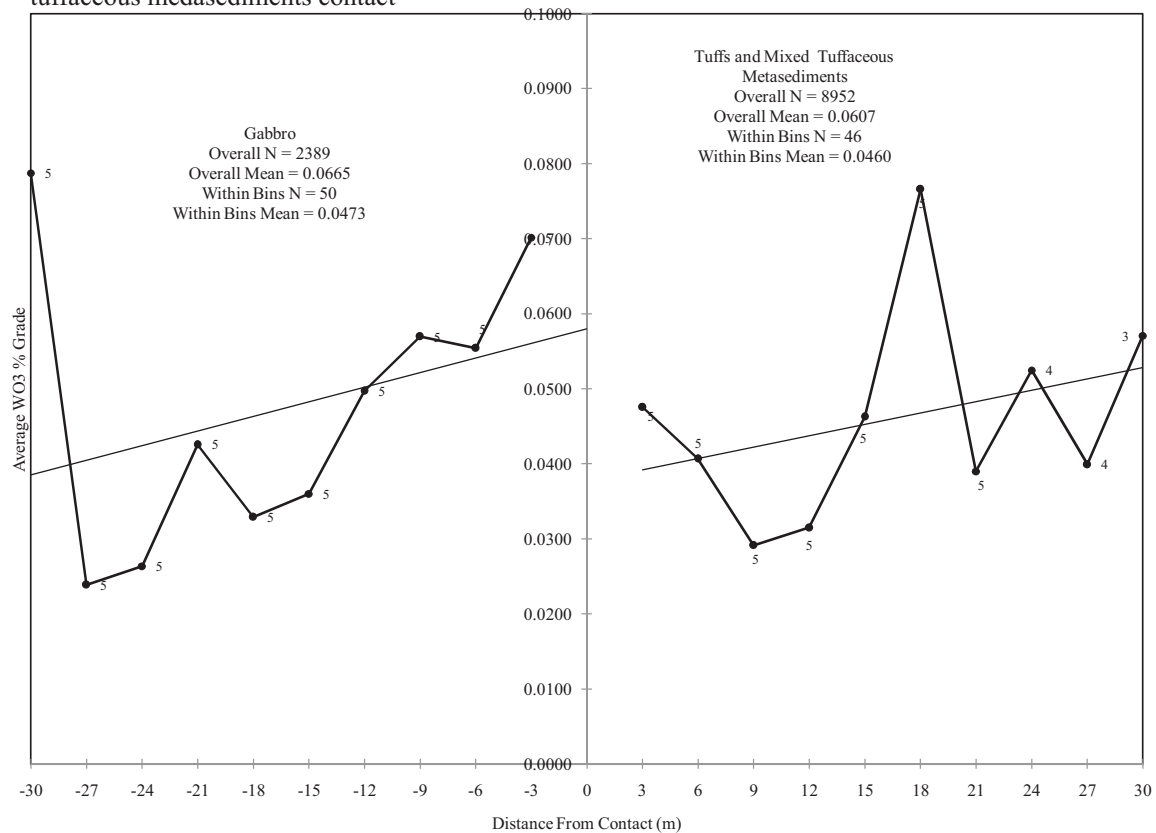
Zone III - Main Mo Zone and East Flank Mo Zone: Cumulative Frequency of Mo Grades in 3m Cut Composites



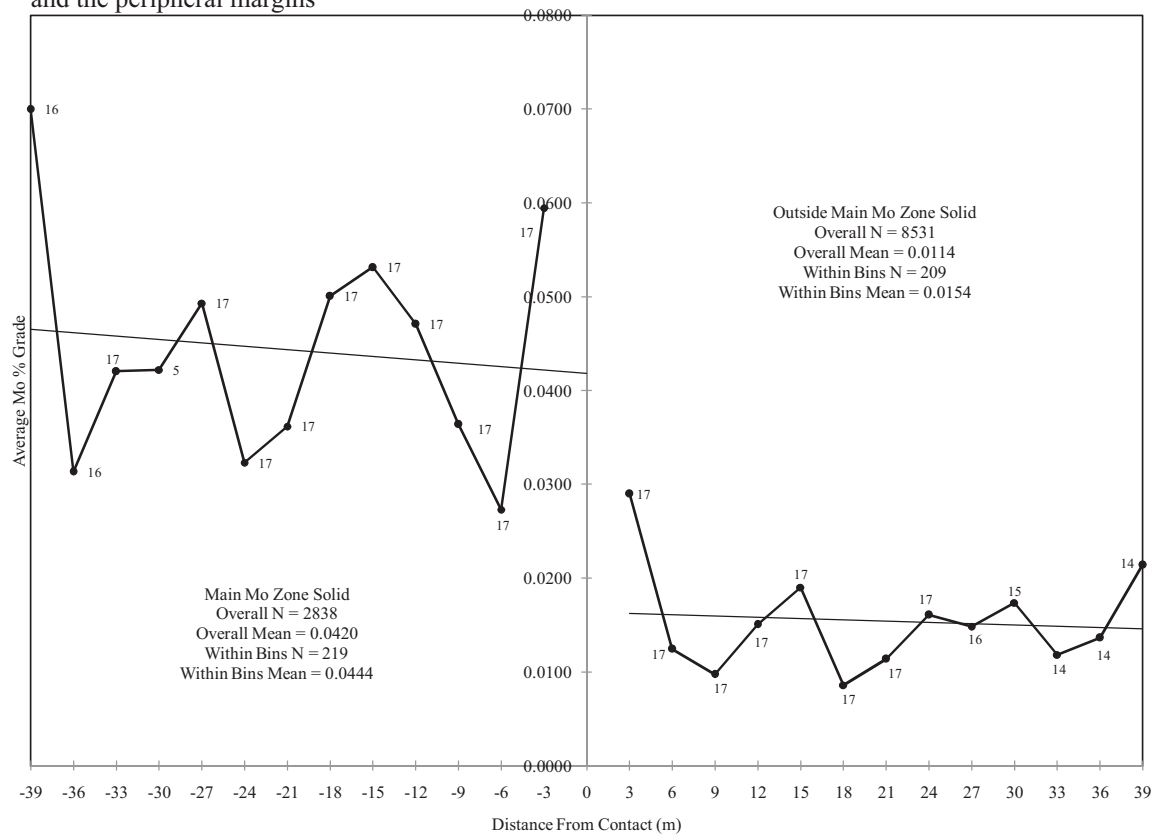
Contact plot of 3 meter Mo% composites of select drill holes between the gabbro and mixed tuffs and tuffaceous metasediments contact



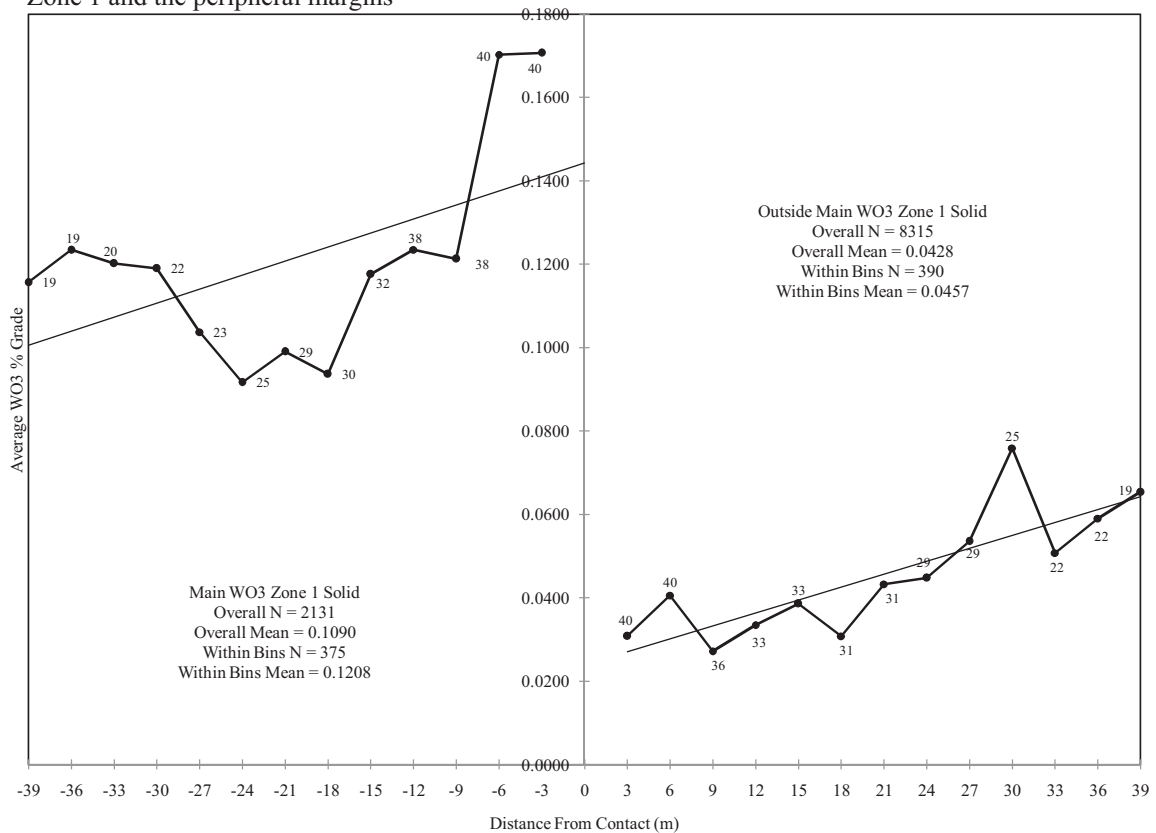
Contact plot of 3 meter WO3% composites of select drill holes between the gabbro and mixed tuffs and tuffaceous metasediments contact



Contact plot of 3 meter Mo% composites of select drill holes between the contact of the Main Mo Zone and the peripheral margins



Contact plot of 3 meter WO3% composites of select drill holes between the contact of the Main WO3 Zone 1 and the peripheral margins



hole_id	x	y	z	max_depth
SB-05-01	650350.62	5137070.72	302.54	
SB-05-05	650397.47	5136840.19	305.24	171.9
SB-05-06	650451.82	5137340.62	294.27	158.2
SB-05-08	649945.11	5136095.68	299.14	168
SB-05-09	650281.23	5136142.7	311.25	146.5
SB-06-02	650411.67	5137046.14	305.05	193.5
SB-06-03	649998.14	5136556.26	306.31	350
SB-06-04	650035.19	5136388.69	305.66	269
SB-06-05	650403.86	5136753.66	300.86	186
SB-06-06	649981.65	5136490.05	307.45	276
SB-06-07	649941.83	5136395.15	311.59	281
SB-06-08	650111.64	5136793.83	307.21	305
SB-06-09	650030.94	5136783.2	311.73	354
SB-06-10	650154.92	5136772.23	303.64	276
SB-06-11	650230.59	5136763.6	302.86	189
SB-06-12	650216.51	5136666.47	301.39	281
SB-06-13	650011.17	5136704.62	304.07	318
SB-06-14	650109.54	5136682.12	303.92	323
SB-06-15	650459.34	5136835.77	306.65	294
SB-06-16	650335.31	5136850.01	302.93	302
SB-06-17	650080.19	5136539.57	301.8	276
SB-06-18	650337.07	5136950.32	306.02	236
SB-06-19	649881.91	5136293.82	299.96	344
SB-06-20	650414.95	5136941.27	306.59	263
SB-06-21	650324.39	5136454.43	305.38	252
SB-06-22	650211.65	5136462.54	308.39	255
SB-06-23	650242.2	5136357.67	315.12	273
SB-06-24	650159.77	5136267.21	307.27	177
SB-06-25	650157.83	5136165.67	303.2	231
SB-06-26	649959.08	5136290.52	301.68	246
SB-06-27	650518.71	5136956.97	301.48	300
SB-06-28	650159.64	5136881.04	304.41	201
SB-06-29	650483.71	5137035.79	304.65	147
SB-06-30	650671.03	5137204.75	296.51	255
SB-07-01	650272.27	5136958.68	298.64	173
SB-07-02	650451.44	5136880.26	309.64	300
SB-07-03	650402.52	5137050.35	304.09	332
SB-07-04	650349.94	5136901.12	304.16	321
SB-07-05	650256.93	5136911.13	303.59	143
SB-07-06	650268.31	5136855.67	303.19	131
SB-07-07	650233.85	5136805.16	303.94	251
SB-07-08	650374.56	5136997.18	305.57	302
SB-07-09	650679.09	5137263.12	291.45	307
SB-07-10	650145.74	5136831.97	304.4	55
SB-07-10A	650145.74	5136831.97	304.4	326

SB-07-11	650290.39	5137006.94	303.49	252
SB-07-12	650739.1	5137262.9	288	246.23
SB-07-13	650048.03	5136832.13	313.15	383
SB-07-14	650290.77	5137056.76	302.46	177
SB-07-15	650614.92	5137262.5	288.66	245
SB-07-16	649949.67	5136749.43	312.89	395
SB-07-17	650280.96	5137104.84	302.62	167
SB-07-18	650586.77	5137226.39	291.2	260
SB-07-19	650302.21	5137162.43	303.42	177
SB-07-20	650669.87	5137157.93	297.89	290
SB-07-21	650050.18	5136737.49	306.16	371
SB-07-22	650384.56	5137091.54	301.73	262
SB-07-23	650588.13	5137169.01	299.03	164
SB-07-24	649847.55	5136624.85	313.36	367
SB-07-25	650624.51	5137123.57	302.08	83
SB-07-26	650581.13	5137023.67	300.63	292
SB-07-27	650624.51	5137123.57	302.08	254
SB-07-28	649934.31	5136651.09	310.34	395
SB-07-29	650618.79	5137067.36	299.83	275
SB-07-30	650545.81	5137128.05	301.03	221
SB-07-31	650751.14	5137356.35	276.62	287
SB-07-32	650456.47	5137094.51	304.64	201
SB-07-33	650249.53	5136714.24	304.01	341
SB-07-34	650700.59	5137355.44	277.45	199
SB-07-35	650415.73	5137140.72	297.28	303
SB-07-36	650579.57	5137367.59	286.69	161
SB-07-37	650584.8	5137422.18	280.6	224
SB-07-38	650155.62	5136722.4	302.38	230
SB-07-39	650584.8	5137422.18	280.6	98
SB-07-40	650298.97	5137210.04	307.35	155
SB-07-41	650526.26	5137406.6	284.75	113
SB-07-42	650425.08	5137193.22	294.51	284
SB-07-43	650465.08	5136994.66	305.07	251
SB-07-44	650109.41	5136631.42	303.44	344
SB-07-45	650562.59	5136983.77	300.05	295
SB-07-46	650657.17	5137013.81	295.51	248
SB-07-47	650028.67	5136648.21	305	332
SB-07-48	650579.7	5136922.55	298.1	253
SB-07-49	649929.05	5136545.19	309.78	302
SB-07-50	649926.21	5136448.53	313.26	313
SB-07-51	650555.25	5136825.99	298.26	276
SB-07-52	650021.85	5136441.03	305.68	319
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SB-07-54	650487.39	5136630.33	296.36	298.3
SB-07-55	649952.8	5136345	304.576	266
SB-07-56	650052.6	5136340	305.026	207
SB-07-57	650500.12	5136683.24	298.08	252

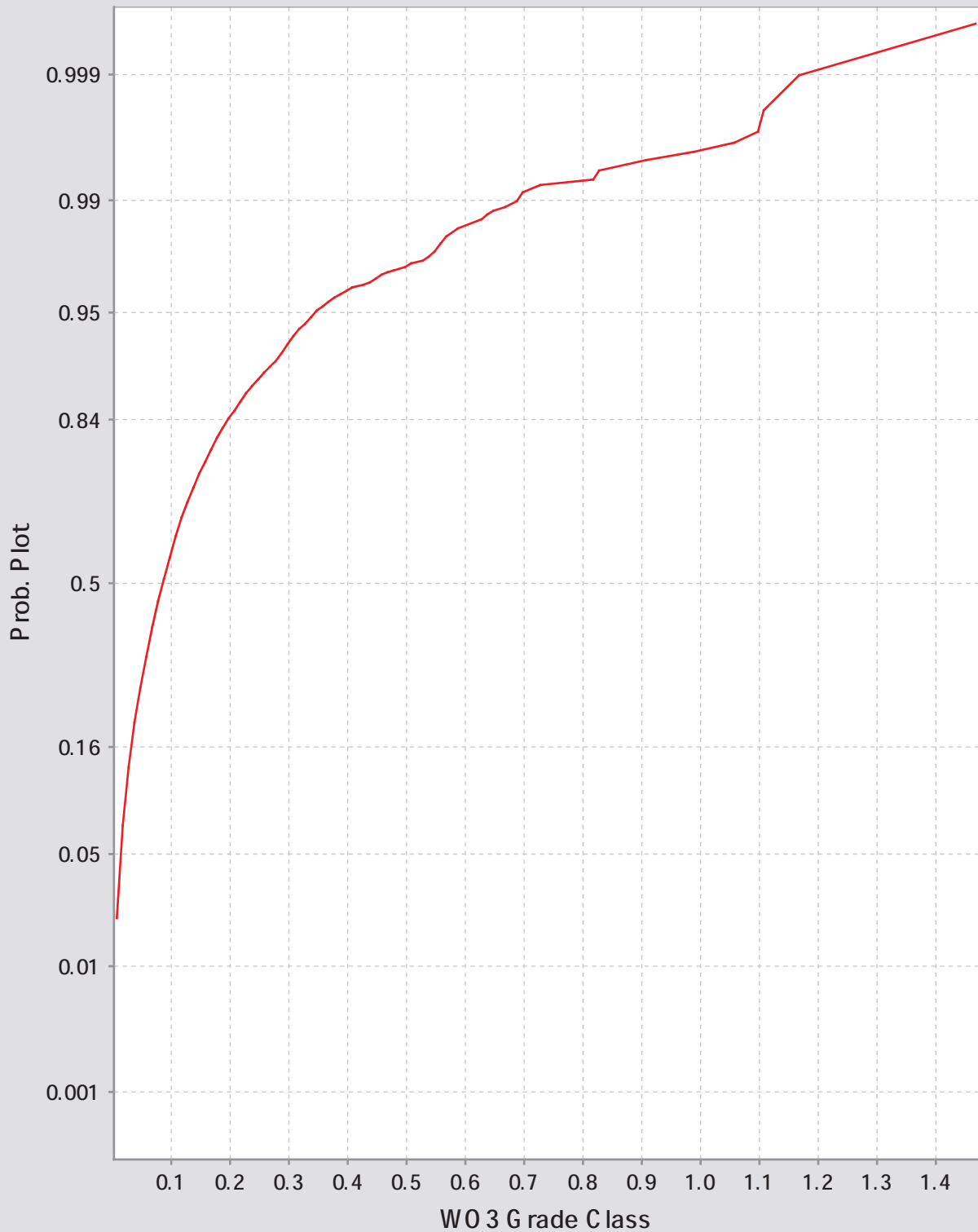
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SB-07-60	650216.66	5136524.04	304.8	236.2
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SB-08-05	649393.473	5136463.06	306.3284	250
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SB-08-12	649689.186	5136223.96	296.9235	252
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SB-08-28	649787.263	5136211.86	299.3013	281
SB-08-29	650595.45	5136869.72	295.4699	251
SB-08-30	650152.245	5136121.96	304.9739	298
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SB-09-19	649879.318	5136152.42	298.133	128
SB-09-21	650206.163	5136776.95	302.575	131
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SB-09-23	650122.058	5136668.65	302.452	125
SB-09-24	650030.209	5136660.89	305.151	131
SB-09-25	650482.89	5136645.78	297.612	167

SB-09-26	650357.401	5136648.96	302.572	152
SB-09-27	650418.001	5136637.57	300.155	170
SB-09-28	650017.145	5135864.65	297.322	197
SBM-07-01	650112.791	5136681.91	303.6505	173
SE-07-01	649500.001	5136244.32	298.2578	155
SE-07-02	649557.553	5136338.27	299.2803	187
SE-07-03	649218.089	5136325.34	301.8618	151
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SSN15	650628.178	5137518.94	279.21	167.64
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SSN35	650267	5136450.98	309.81	213.36
SSN36	650048.41	5136567.24	306.02	199.95

SSN37	649949.33	5136576.58	308.78	325.54
SSN38	650111.07	5136790.75	307.41	211.84
SSN39	650174	5136563	310.1	127.1
SSN40	650238.11	5136553.8	303.44	77.11

Zone III - Main WO3 Zone 2: Probability Plot of WO3 Grades in 3m Raw Composites



— Prob. Plot

Report to:



**Technical Report on the Sisson
Brook Project, New Brunswick
Canada**

Document No. 0753050100-REP-R0001-03

NOTE

The following pages of text were taken from
Ozturk et al. (2007) to provide a summary of
financial and operating parameters applied to the
Sisson Brook Project in the Wardrop Engineering
Ltd. Scoping Study

1.0 SUMMARY

1.1 INTRODUCTION

Geodex Minerals Inc. (**Geodex**) commissioned Wardrop Engineering Inc. (**Wardrop**) to prepare an independent National Instrument 43-101-compliant (**NI 43-101**) Technical Report for the Sisson Brook Project in New Brunswick (**NB**), Canada.

The preliminary economic evaluation, or scoping study, involved developing a conceptual design of all aspects of the project, including mine design, mineral processing, tailings disposal and economic evaluation. This scoping study has been completed to a $\pm 35\%$ level of accuracy, suitable for this level of study. This report deals primarily with Zone III of Sisson Brook, one of several mineral zones contained within the property.

In March 2007 (Mercator 2007), Mercator Geological Services Ltd. (**Mercator**) completed a NI 43-101-compliant resource estimate and technical report (Mercator, 2007). Wardrop's work began in July of 2007 and is based on an updated resource estimate (Geodex 2007, Mercator 2007a).

Mr. Michael P. Cullen, P.Geo., of Mercator is the Qualified Person for matters relating to the mineral resource estimate (Section 2-18 in this report).

Mr. Andy Nichols, P.Eng., Chief Mining Engineer of Wardrop Engineering Inc., is the Qualified Person for matters relating to mine design and financial analysis (Sections 1, 19 and 21-35).

Mr. Andre De Ruijter, P.Eng., Senior Metallurgical Engineer of Wardrop Engineering Inc., is the Qualified Person for matters relating to metallurgy and mineral processing (Section 20).

Certificates of Qualified Persons are included in Section 35.

1.2 PROPERTY DESCRIPTION AND LOCATION

The Sisson Brook property is located approximately 100 kilometres (**km**) northwest of the city of Fredericton, New Brunswick, Canada. The property is accessible by traveling west approximately 60 km from Fredericton via the Trans Canada Highway to the town of Nackawic, then north approximately 45 km on secondary highways and the Valley Forest Products forestry access road to the property centre. Numerous secondary forestry access roads cross the property and these have been

Table 1.4 Operating Costs

Operating Costs	
Unit Mining Cost (CDN\$/t)	1.30
Unit Processing Cost (CDN\$/t ore)	5.33
G & A Cost (CDN\$/t ore processed)	1.09

1.19 FINANCIAL EVALUATION

1.19.1 INTRODUCTION

The scope of the Preliminary Economic Assessment includes the development of a spreadsheet designed to evaluate the sensitivity of the project to various inputs. Modifying the inputs would allow the impact of updated field results to be examined quickly as to their impact on the overall project. It would also allow Geodex to set priorities and determine how best to target their exploration program to enhance value.

The schedules themselves were fixed in terms of tonnes of ore and waste. The economics used to define the pit designs were fixed based on the most accurate information available at the time.

The financial evaluation spreadsheet calculated the Net Present Value (**NPV**) assuming a discount rate of 8%, but the rate is adjustable in the spreadsheet. The NPV and the Internal Rate of Return (**IRR**) was calculated for each of the options. All the calculations are pre-tax.

1.19.2 REVENUE

Revenue for tungsten is based on the two streams (gravity and flotation) of scheelite concentrate (Table 1.5) and adjusted for losses, insurance, representations, transportation costs, and royalties.

Table 1.5 Tungsten Concentrate Properties

	% Grade WO ₃	% Recovery
G ravity (G 1)	70%	35%
F lotation	50%	35%
		70%

The Securities and Exchange Commission (**SEC**) requirements state that, in the absence of client-supplied metal price forecasting, metal pricing is established using the average metal price and exchange rate over three years. For this scoping study, the base case revenue is calculated using 80% of three-year average prices for molybdenum and tungsten.

Scheelite (tungsten) concentrate prices are based on 80% of three-year average discounted ammonium paratungstate (APT, 79%) price. Since tungsten concentrate grades are not 79%, the prices were discounted for 70% gravity and 50% flotation concentrates.

US\$164.8/mtu for gravity concentrate

US\$117.6/mtu for flotation concentrate

Revenue for molybdenum is determined by grade, molybdenum price and 85% mill recovery; it is adjusted for losses, insurance, representations, transportation costs, and royalties.

The base case molybdenum price is US\$21.6/lb. A roasting charge for US\$0.11/lb of Mo contained in concentrate to convert MoS₂ to MoO₃ and a conversion loss of 1.5% is applied.

The other deductions are as follows (Table 1.6):

Table 1.6 Tungsten and Molybdenum Deductions

Tungsten and Molybdenum Deductions		
Transport Cost		
Tungsten Ore	150	US\$/wet metric tonne concentrate
Molybdenum Ore	150	US\$/wet metric tonne concentrate
Losses, Insurance, Representation for tungsten & molybdenum		
Losses	0.50%	Net smelter return
Insurance	0.15%	Net smelter return
Representation	0.5	US\$/wet metric tonne

Net revenue= Net smelter return (**NSR**)-royalty (if any)

Net smelter return (NSR) = Net Invoice Value (NIV) – losses – representation - transportation

Net Invoice value (NIV) = Gross revenue - smelting

1.19.3 NET PRESENT VALUE AND IRR SUMMARY

The financial analysis for the scoping study is based on a discount rate of 8%. The base case analysis achieves a positive NPV value. The project has a payback period of 2.7 years (Table 1.7).

Table 1.7 IRR & NPV Results @ 8% Discount Rate for Different Cases

Case	Molybdenum Price (\$US/lb)	Tungsten Price (\$US/mtu)		NPV (\$CDN)	IRR (%)
	Mo in MoO ₃	F lotation Concentrate W O ₃	G ravity Concentrate W O ₃	000's	
Base Case	21.6	117.6	164.8	692,688	29.8
Three Year Average	27.0	146.9	205.6	1,118,238	40.6
Current Price	32.3	150.9	211.3	1,000,828	37.7
70% of Base Case	15.1	82.3	115.4	186,494	15.0

1.19.4 SENSITIVITY ANALYSIS

Sensitivities of the project IRR to initial capital cost, operating cost, exchange rate and the metal prices are considered (Table 1.8 and Table 1.9).

Base case parameters are listed in Table 1.8

Table 1.8 Base Case Parameters

Base Case Parameters	
Molybdenum price (US \$/lb)	21.6
Tungsten price	
F lotation concentrate (US \$/mtu)	117.6
G ravity concentrate (US \$/mtu)	164.8
Initial capital cost (Million CDN \$)	353
Operating costs	
Processing cost (CDN \$/t milled)	5.33
Mining cost (CDN \$/t mined)	1.30
G & A (CDN \$1.09/t milled)	1.09
E xchange rate (US /C)	1.17

Table 1.9 IRR by Percent Change of Base Case

IRR Value					
Percent of base case	-30%	-20%	0%	+20%	+30%
Metal price	15%	20%	30%	38%	43%
US /C E xch	15%	20%	30%	38%	42%
O p Cost	34%	33%	30%	27%	25%
Initial Capex	41%	37%	30%	25%	23%

An initial capital cost increase of \$70 million dollars (20% of base case) decreases the IRR by 5%. An operating cost increase of 30% decreases the IRR by 5%. A metal price decrease of 30% decreases the IRR by 15%. An exchange rate decrease of 20% created a 10% decrease in the IRR results.

Sound project management practices can control capital cost and other items. Proper mining methods can in part control the grade and dilution of the grade, once the insitu grade is known, although this requires further study for confirmation. The estimates for this study reflect typical scoping study accuracy.

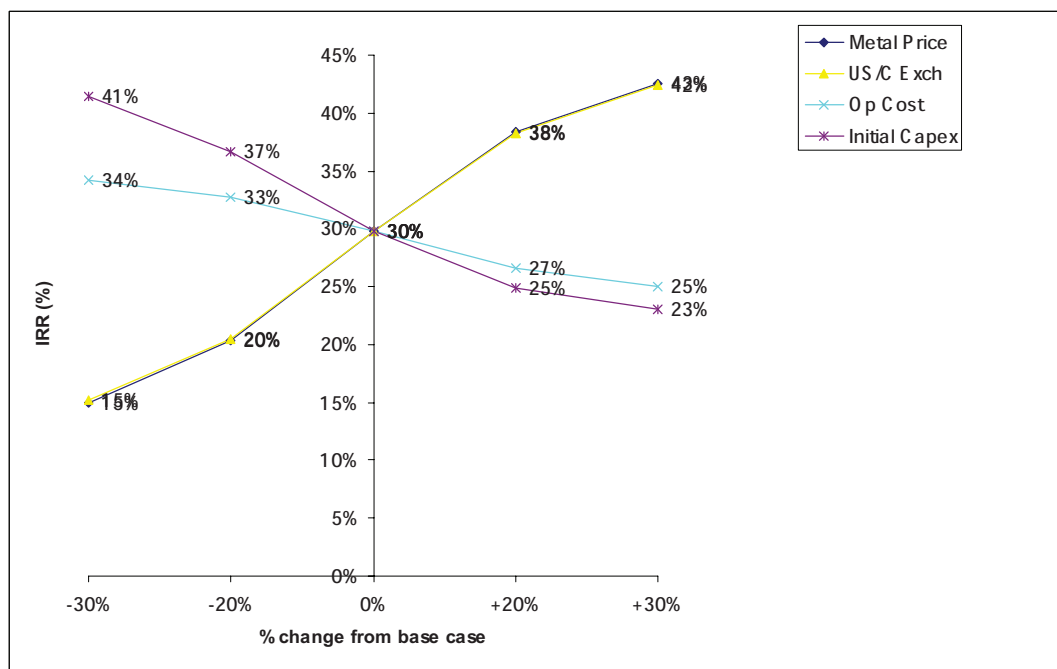
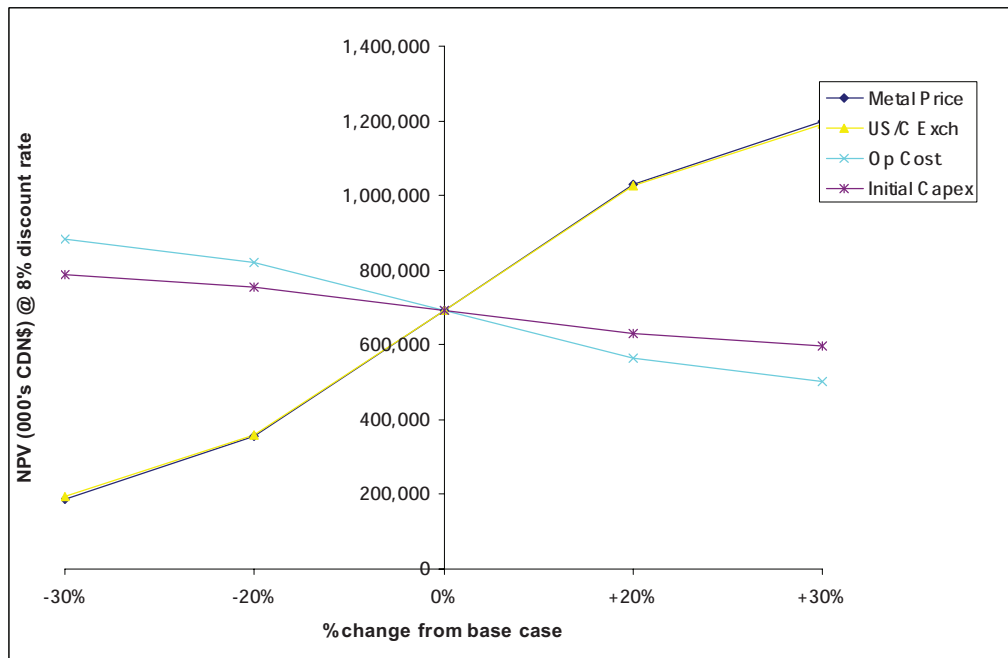
Figure 1.1 IRR Percent Change from Base Case

Table 1.10 NPV by Percent Change of Base Case

NPV Value (000 CDN\$) @ 8% discount rate					
Percent of base case	-30%	-20%	0%	+20%	+30%
Metal price	186,494	355,225	692,688	1,030,150	1,198,881
US /C E xch	192,661	359,337	692,688	1,026,039	1,192,714
O p Cost	883,631	819,983	692,688	565,392	501,744
Initial Capex	787,556	755,933	692,688	629,442	597,819

Figure 1.2 NPV Percent Change from Base Case

1.20 FINANCIAL RESULTS

Assuming base case prices for molybdenum and tungsten, analysis indicates that a 20,000 tonnes per day (t/d) production over a 31-year mine life means the project will have an IRR of 30% and an NPV of CDN\$692 million. The project will have operating cost of CDN\$9.3/t milled ore, and it has a payback period of 2.7 years.

The sensitivity of the financial indicators (IRR and NPV) to metal prices is clearly demonstrated in the sensitivity analysis.

Reducing infrastructure, mining and plant costs can have a significant positive impact on the overall profitability of the project

1.21 INTERPRETATION AND CONCLUSIONS

This scoping level or preliminary economic assessment of the Sisson Brook Project indicates that based on the parameters assumed, an open pit mine operating at 20,000 t/d would be profitable and a viable financial investment.

The results are significantly robust to justify proceeding with studies at the preliminary feasibility level i.e. the next step of development.

Main areas of study would be:

- drilling and resource modelling to advance the status of the resources above the inferred level
- metallurgical testing to determine ore recovery, concentrate characteristics and other metallurgical parameters
- geotechnical studies to enable pit design and infrastructure layout
- capital and operating cost studies
- mine design and production scheduling
- environmental studies including base line sampling
- all other work required to enable a decision to be made to proceed (or not) to the feasibility study level.

1.22 RECOMMENDATIONS

1.22.1 DETAILED MINE DESIGN AND SCHEDULING

The pit shells resulting from pit optimization do not consider operational constraints such as berms and ramps; therefore, the numbers provided in this report do not yet represent a practical mine design but approximate to the mineable reserve. Detailed mine design and scheduling incorporating the additional drilling results are required.

1.22.2 GEOTECHNICAL DESIGN

Arbitrary geotechnical assumptions were made for the purposes of this scoping study. Geotechnical assessment work needs to be performed to determine the mining geotechnical parameters to ensure that those assumptions are valid. In addition, hydrological studies must be undertaken to determine the pumping requirements in the pit, and what surface drainage would be required. Golder is carrying out further geotechnical analysis.

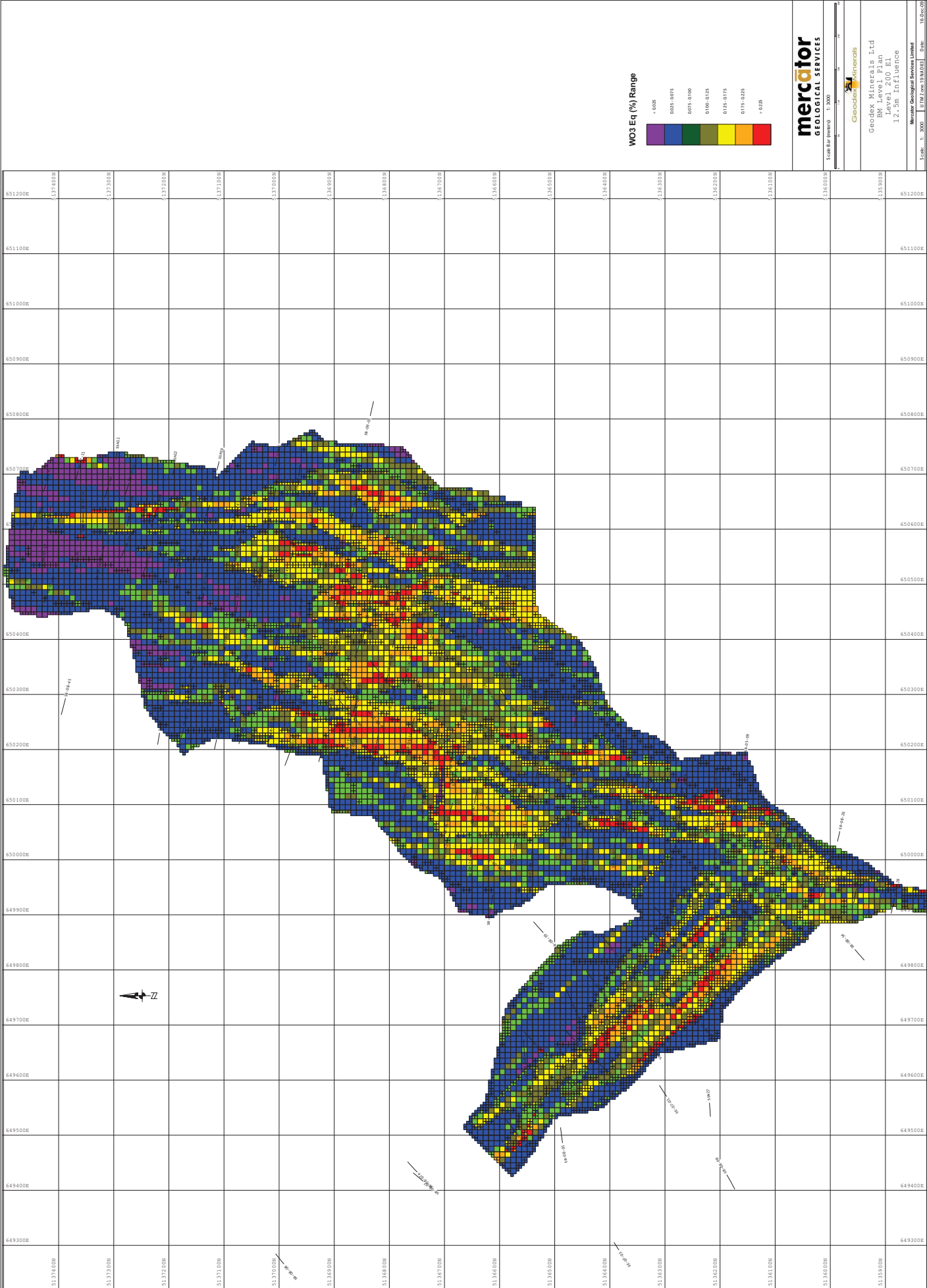
1.22.3 *ENVIRONMENTAL STUDIES*

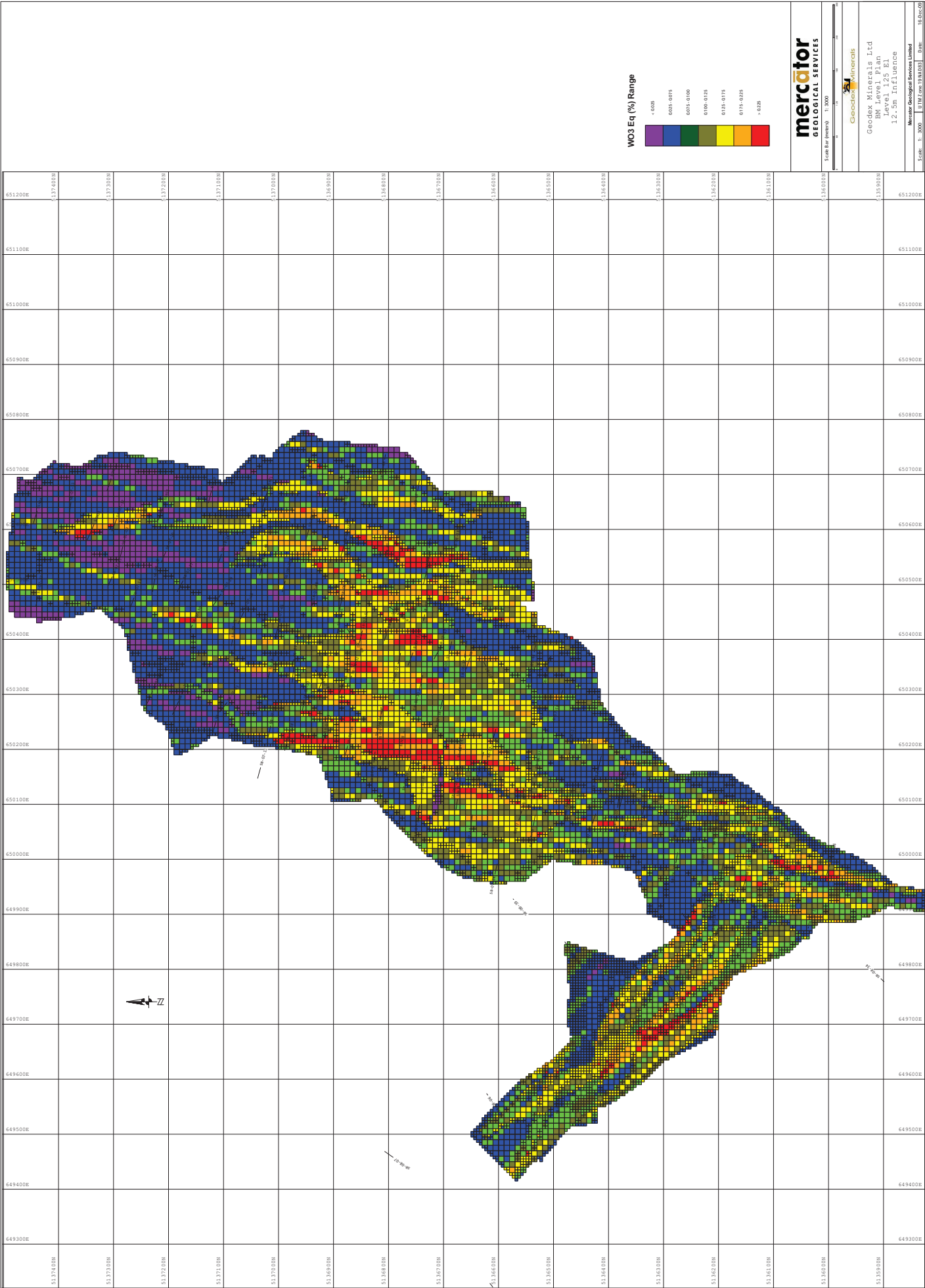
It is assumed that all necessary operating and reclamation permits will be obtained. Rescan is working on the development of environmental studies.

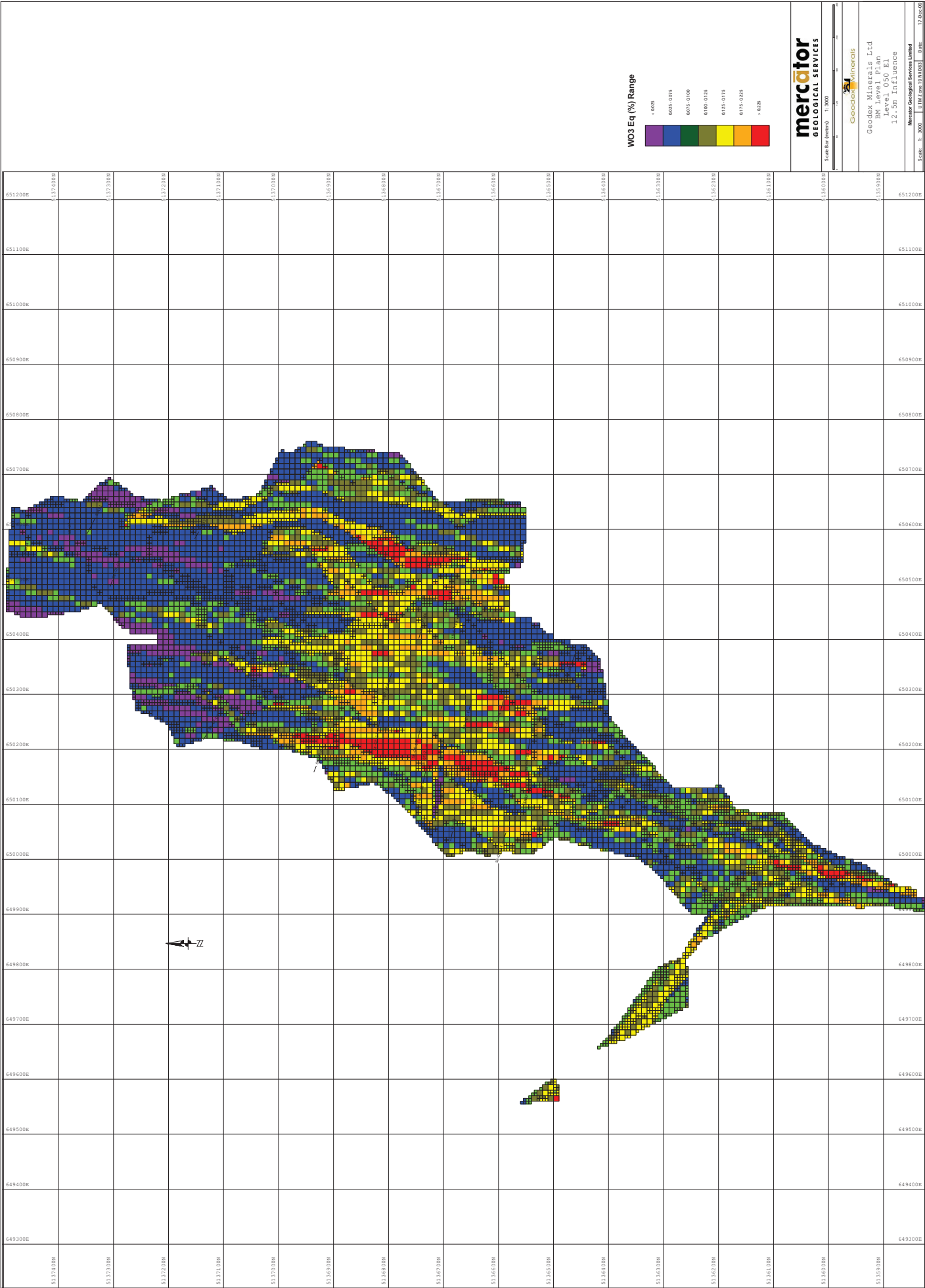
1.22.4 *PROCESS AND METAL RECOVERIES*

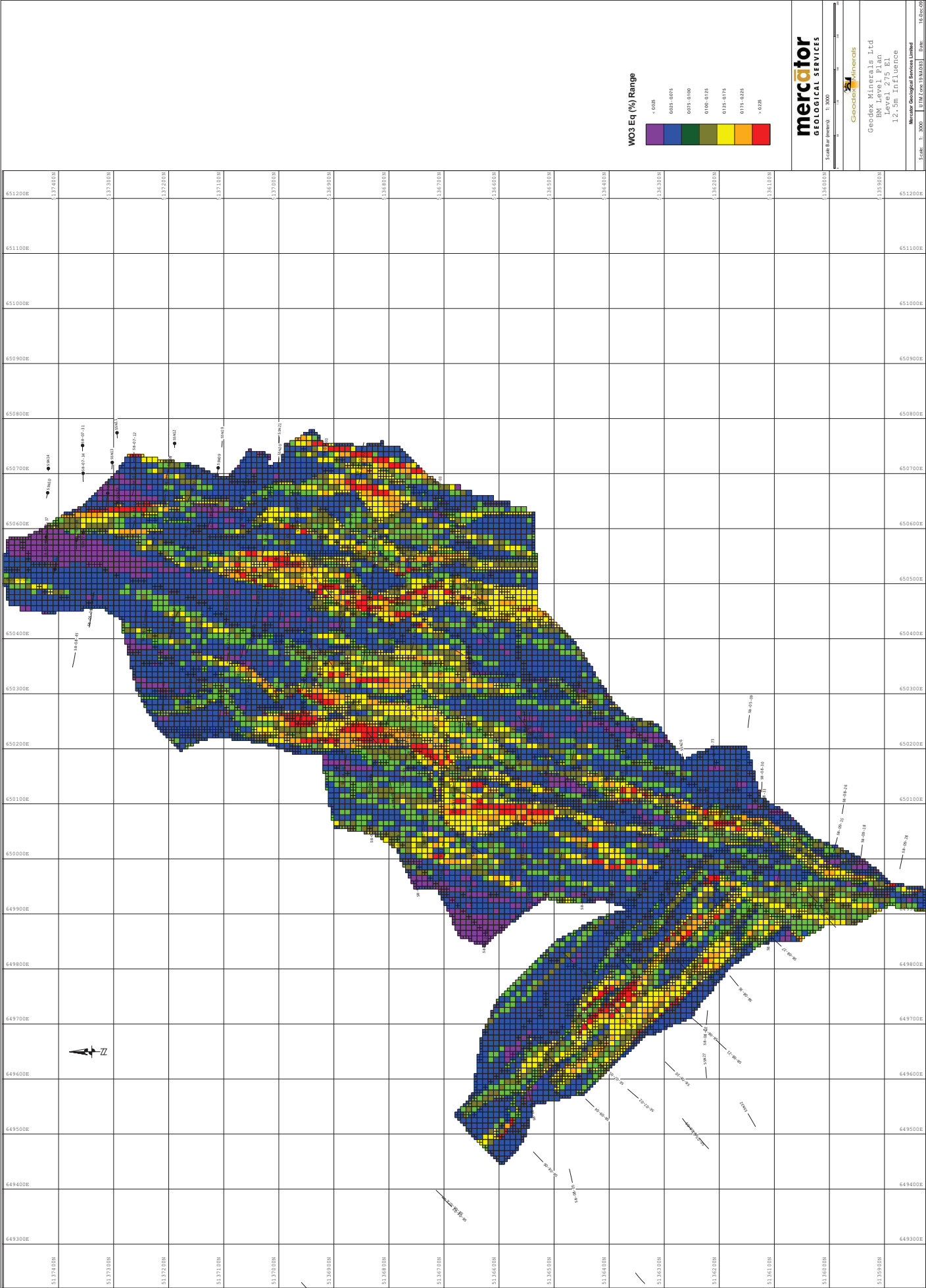
Knelson Research and Technology Centre (**Knelson**) and SGS Canada Inc (**SGS**) have collaboratively developed a test program in order to assist with the definition of the process design. The testwork program has been scheduled for late 2007, when the metallurgical test sample will be drilled and be made available for testing by Knelson and SGS.

Appendix 4: Resource Estimate Plans and Sections









mercator
GEOLOGICAL SERVICES

Scale Bar (meters) 1:3000
Geodex Minerals Ltd
Geodex Minerals Ltd
BW Level Plan
Level 2/75 EL
12.5m Influence
Mercator Geological Services Limited
Scale: 1:3000 DTM (Low 1983/85) Date: 16 Dec 09