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Celebrating the lives and contributions of colleagues, geologists, mineralogists and legends who shaped the diamond legacy

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Introduction

The first International Kimberlite Conference (IKC), held in Cape Town in 1973, heralded a major breakthrough in cooperation and collaboration between industry and academia, scientists old and young from across the world, helping to break down barriers, cultural and political. Subsequently, these unique, professionally planned and implemented scientific gatherings have taken place every 4-5 years.

Following the landmark initial IKC of 1973, with included field excursions in South Africa and Lesotho, ten subsequent IKC events have been held in all the major countries and continents where diamonds are either mined, manufactured, marketed and sold, except China.

Subsequent to the first Kimberlite Conference in Cape Town in 1973, IKC's have been held in Santa Fe, New Mexico, USA (1977); Clermont-Ferrand, France (1982); Perth, Western Australia (1986); Araxa, Brazil (1991); Novosibirsk, Russia (1995), Cape Town, South Africa (1998); Victoria, Canada (2003); Frankfurt, Germany (2008); Bangalore, India (2012); and Gaborone, Botswana (2017).

The 12th IKC in Yellowknife, Canada in July 2024 will also celebrate 30 Years of Diamonds in Canada as well as 50 Years of International Kimberlite Conferences.

Celebrating our Colleagues

Table 1 below presents a comprehensive, but no doubt incomplete, compilation of the many remarkable individuals no longer with us that helped advance and sustain our knowledge and understanding of diamonds, kimberlites and related subjects over the past 150 years, and particularly over the past 50 years. The key take aways from this list are the diversity of training and skills, the quality and volume of their discourse and publications, the laboratories and institutions they built and funded, and the diversity of the innovations, products and legacies they left.

There is also far more to the content and importance of short obituaries and wall or remembrance. Passion for science rarely exists in a vacuum and while some researchers stumble on a particular field almost by accident, many are inspired by others who came before them, and sometimes their inspiration isn't well known. This was especially true in the case of women who haven't always been recognised for their achievements. Fortunately, this is changing and somewhat ironically women discovered the first Russian kimberlite (Larisa Popugaeva) and the Argyle mine (Maureen Muggeridge), and have featured prominently in the discovery of kimberlites and development in Canada's diamond sector since 1991.

Set against the background of achievements reflected by the people and successes summarised in Table 1, are the new challenges and realities of the modern world. World-wide, schools and educational institutions

are seeing progressively fewer young people pursuing subjects such as geology, geography and the natural sciences, as the shift into a technological world and 24/7 virtual activities offer much shorter less expensive challenges, and instant solutions and gratification.

Diamonds and diamond geology are somewhat more specialized and narrow fields of scientific R&D, drawing on a somewhat limited and niche following in the bigger scheme of scientific endeavour. For many, diamonds stand for wealth and opulence; likewise the vast majority have no appreciation of the many benefits of diamond, including (but not limited to) medical uses, dentistry, cosmetics, numerous industrial applications, engraving, heat-sinks, computer chips, and nanodiamonds in high-tech applications, including super lasers, surgical tools, medical devices and next generation computing (spintronics). Then not to forget some 2,000 years of diamond use in adornment, retail diamond jewellery and investment opportunities.

Ironically, laboratory grown diamonds (LGD's) or synthetic gem diamonds, which have generated considerable debate since about 2017 between purist natural-diamond protagonists and younger trendy, brand conscious LGD supporters, may end up being advantageous to the industry in the longer term. Like the advent of inexpensive bling and pave diamond jewellery products created from the massive volume of low-quality Argyle mine production in the 1980's and 90's, LGD's will attract and expose a wider following and audience to the world of diamonds.

Although not the main objective of the IKC events, there is a need for broader education and marketing of this ancient and remarkable business to nurture a sense of curiosity and inspire the youth. We should all be paying attention to making our diamond science and activities accessible to a wider audience.

The science we pursue, its findings and benefits, should not solely live in often hard-to-understand peer-reviewed manuscripts. Consideration should be given to taking it into classrooms, informing laypersons, and highlighting how diamonds and related products and attributes are used and impact everyday life.

The Past Fifty Years - Key Achievements

Many significant, far-reaching benefits and findings have emerged from the past 50 years of diamond and related R& D. Some of those that we consider to be the most important are summarized in Table 1, though there are undoubtedly many more.

- **Extraterrestrial**: Carbon is the 4th most abundant element in the universe and diamond is considered to have been the first mineral to crystallize after the Big Bang. Diamond is pervasive in interstellar dust, is present in the cores and mantles of C-rich exo-planets, is an essential constituent of ureilites, is abundant in pre-solar meteorites, and possibly falls as rain on Jupiter and Uranus.
- **Terrestrial**: Considerable advances have been made in deciphering the unique electrochemical and photochemical properties of diamond. From thermal conductivity as heat dissipators, vacancies in quantum computers, and nano-particle delivery of medicinal drugs, the research field is strengthening. The effects of N, B, H on electro-sensitive color centers progresses, HPHT treatments remain a challenge with instrument developments to distinguish Type Ia from Type Ib and lab-grown diamonds. Large, irregular Type II diamonds are now considered to originate in the lower mantle. Stable C-isotopes are similar to meteorites. Excessively light C infers subduction. Application of "Size-Frequency-Distribution" (SFD) to grade predictions was innovative, though SFD is a universal law,not diamond-specific. Improvements in "Chemical-Vapor-Deposition" (CVD) of "Laboratory grown diamonds" (LGD's) has attained gem-quality status. High P-T experimental equipment has evolved from piston-cylinder and heater to multi-anvil and heater, to diamond-anvils and lasers, representing a P-T range from crust to the core. Origin of carbonado-diamond remains uncertain with a swing to an ET origin.
- **Kimberlites and Olivine-Lamproites:** These and compositional variations are recognized as multiple intrusions with extreme variations in diamond grade. Refinements to Clifford's Rule (purely cratonic *vs* mobile belts). Garnet, ilmenite, spinel and diamond are used extensively in exploration, clinopyroxene and zircon less so. Models for the origin of kimberlite and olivine-lamproite, and the

role of carbonatites continues without consensus. Argyle (NW Australia) rewrote the standards for exploration – it lacked traditional kimberlite indicator minerals (KIMS), was discovered from micro-diamonds, was an olivine-lamproite, had a record grade of >100 cpht and contained deformed exotic pink and violet stones). Pipe and dike formation, intrusion mechanisms and rates of ascent have evolved with new discoveries.

- **Kimberlites and Indicator Minerals**: The contrast in radiometric dates on mineral inclusions in diamond, and of the ages of kimberlites, is a paradigm shift in deep Earth dynamics. Diamonds are overwhelmingly present in peridotites and eclogites with established stratigraphic origins from P-T mineral stabilities; these are crustal, subcontinental lithosphere, transition zone, and lower mantle. Fluid inclusions and OH-bearing minerals are indicative of recycling. Models propose mega-oceanshydration of significant regions of the mantle transition zone in particular. Specific minerals in KIMS (G10 Ca-Cr in peridotitic garnets and Na-Ti in eclogitic clinopyroxene) are reliable indicators of coexisting diamond. Calculated geotherms from single mineral compositions places new constraints on xenolith origins. Cryptic and modal mantle metasomatism, once considered isolated is widespread. New mineral discoveries have followed.
- **Geodynamics:** Theoretical and field advances continue to be made in plate tectonics, subduction (start, penetration, stagnation), sub-cratonic keels (origin, delamination and destruction of SCL diamonds, controversial re-lamination), large igneous provinces, plumes vs thermal blankets, large low seismic velocity provinces at the core-mantle boundary.
- **Leapfrogging Technology:** Technology development has impacted the entire spectrum of diamond activities, including facets highlighted above. SHRIMP and Laser-ablation Mass-spectrometry have driven single micro-grain age-dating, isotope and geochemical studies. Computing enhancements, mega-data capture and fast-processing have facilitated high-resolution airborne geophysical, radiometric & related land and underwater drone surveys. New comminution developments ensured less diamond breakage, hence the long-term exploitation of Argyle. Allied advancements in X-Ray and XRT final recovery have driven significant increases in large-stone (Type-II) recoveries, ensuring viability of low-grade kimberlites (e.g. Letseng), and improved revenues for the world's richest mine, Jwaneng. The Debmarine-Namibia sea-floor mining fleet and operations off the SW-Namibian seaboard have benefited immensely from technology progress, including GPS positioning, sea-floor caterpillar mining systems, robotics, and air-lift systems.

The Next Fifty Years – Reading the Crystal-Ball

The world is a very different place to the one that existed 50 years ago when the first IKC was held and in the next 50 years further, and perhaps greater changes will manifest.

We know and understand much more about Earth's mantle and lithosphere, diamond source rocks, indicator minerals and diamonds than we did then. Much of this came about as the result in improvements in geophysics, geochemical, analytical and computing technologies. When combined with the natural curiosity and dedication of thousands of scientists all over the world, the continually expanding pool of new information advanced our understanding of natural diamonds, their modes of formation, their mantle derivation and the different rock types which bring them to the earth's surface.

As important were the various voyages of discovery by hundreds of exploration geologists and their support teams that led to the identification of new productive diamond sources in parts of the world where these were previously unknown. Such discoveries created opportunities for detailed multi-dimensional study of many more diamond sources than were available in 1973 and helped confirm ideas on the periodicity of diamond bearing volcanic activity throughout 2 to 3 billion years of earth history.

From a diamond exploration perspective, the world is now a smaller and better-known place than in 1973 and a case can be made that the opportunity for new major primary natural diamond discoveries is much diminished. However, that refrain has played before, in many parts of the world and more than once.

It remains evident however, that what the future holds as we look forward, is as cloudy, obscure and uncertain as it looked to those that gathered together in 1973 to share their multidisciplinary knowledge in an attempt to advance into the unknown.

Hence, in the next 50 years, the challenge will be for the future explorers and scientists to reimagine the opportunities that changing scientific, technological, economic and political environments will bring and continue the step-by-step advance into the unknown.

Conclusions

In compiling this abstract and table, the most obvious theme forthcoming from our research, interactions with many colleagues, young and old, and our own individual experiences, is that, with few exceptions, the progress made in diamond and related R&D over the past-51 years has been about team work and collaboration. In the words of Sir Isaac Newton, this has allowed the many participants and beneficiaries to '*see further by standing on the shoulders of giants'*.

The past 11 International Kimberlite Conferences and findings, publications, scientific progress and far-reaching technological impacts of the sector reflect Newton's prediction and have far surpassed the goals and objectives set out in the 1st IKC event of 1973.

The Yellowknife 12IKC will undoubtedly result in introspection, revision of some previous models, significant new outputs and learnings, and perpetuate the successes of the past 50 years. For those active in diamond research 50 years hence, it will be fascinating to again reflect on the legacies, progress and developments of the forthcoming 50 years to 2074.

We wish everyone attending the 12IKC event, the organisers and hosts, a successful event, many inspiring presentations, fruitful and robust discussions, and new and far-reaching contributions to this timeless industry and field of endeavour.

Sources of Information

Much of the information compiled and included in this Abstract has been gathered from the internet, including published funeral announcements, obituaries in technical publications, journals, books and publications dedicated to the memory of leading scientists and technocrats. Likewise, from institutions at which the individuals served during their careers, as well as personal recollections and memories of work colleagues, friends, and family members.

Acknowledgements

Our thanks to our colleagues (active and retired), individuals, archivists, acquaintances, friends and family members who willingly provided information, files, insight, anecdotes and publications in respect of the many individuals we have set about acknowledging and remembering in this compilation and abstract.

We equally apologise for the inevitable omission's that may come to light on distribution of this Abstract and request that details of individuals we may have unfortunately overlooked, be sent to the senior author so that the compilation and table in this Abstract can be updated and redistributed at future IKC events.

Table 1: Summary of the individuals, their affiliations and contributions, who shaped the diamond legacy

Family Name	Given Name	Affiliation	Dates	Comments
AHRENS	Louis H	UCT Geochemistry Department	1918-1990	An outstanding intellectual, UCT Prof of Geochemistry, Lunar Science Principal Investigator, Concordia age-dating method leader, and the founder of UCT Geochemistry Department which became a world leader in kimberlite, diamond and mantle process (including metasomatism) studies, lunar rock investigations, and geochemical analytical technique developments.
ALLSOPP	Hugh	BPI Isotope Lab; Wits U	1929-1986	Hugh led the construction of first mass-spectrometer at BPI (Wits U) and establishment of the isochron dating method with LO Nicolaysen and GDL Schreiner. Pioneered techniques for dating kimberlites and lamproites, and recognition of cyclicity of intrusion.
ATKINSON	Warren	Rio Tinto	1935-2017	A life-long Rio Tinto exploration geologist and gentleman, with a PhD (Applied geochemistry) from Imperial College (1967). His early career involved exploration in the Pacific Islands and Australia, before moving to the Ashton JV to manage and drive Australian diamond exploration, culminating in the Argyle mine discovery, famous for its pink diamonds.
AYRES	Neil	De Beers	1956-2022	Exploration geologist in Zambia, veteran of the '*long walk*' as a Unita captive in Angola. Latterly at Debmarine and AARL and acknowledged expert in ArcGIS and mapping projections.
BARTON	Jay	BPI (Wits), COM, RAU/UJ	1945-2019	Worked extensively on the Precambrian geochronology of RSA, with emphasis on the enigmatic high-grade Limpopo Mobile Belt, and how it's compressional structure impacted diamond formation in underlying mantle lithosphere & diamondiferous kimberlite emplacement e.g. Venetia, The Oaks, River Ranch, and Murowa.
BAYLIS	Peter	De Beers		A committed and capable De Beers, exploration geologist, Zambia and Botswana, Peter had the misfortune of his field camp in SW Zambia being shot-up by the South African Airforce in their southern-Angola forays during apartheid years.
BLUCK	Brian	University of Glasgow	1935-2015	Exceptional sedimentologist and Namdeb Consultant, unlocked an understanding of the origin of world's largest diamond placers on the West-Coast of southern Africa (Namibia and RSA). His contributions, work and mentoring of young researchers and DB geologists had a lasting impact on the many careers.
BOYD	FR "Joe"	C I W	1927-2004	World-class Earth scientist who contributed immensely to mantle geochemistry and geophysics, as well as the geologic structure and evolution of the Earth's lithosphere. Developed the key concept of constraining paleo-geotherms from pyroxene thermobarometry.
CARSWELL	A "Tony"	Sheffield University	1941- 2006	Petrologist and geoscientist who unravelled eclogite-facies rocks and their implications for subduction processes and crust-mantle interactions in continental collision zones. He also identified microdiamonds in Norwegian peridotites

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COLLINS	Sammy Vernon	Oil Refinery Worker	1913-1978	A world authority on laying of submarine pipelines, owner of oil producing companies in Texas and Louisiana, he was the pioneer of Namibian marine diamond mining and development. His work and early technical endeavours became the platform on which the De Beers Marine exploration and mining operations grew. "*I reckon they'll be mining diamonds off this coastline long after I'm not around anymore*".
COX	Keith	Oxford University	1933-1998	Igneous petrologist initially focussed on the origin of basaltic provinces; attendance at the 1st IKC in South Africa (1973) stimulated interest in the mantle and kimberlites, carriers of samples from the Earth's mantle, to provide evidence on the source regions of basalts.
DANCHIN	Bobby	De Beers	1942-2023	A committed kimberlite and diamond researcher, explorer and executive with De Beers and Anglo American Bobby initially established the kimberlite and diamond research unit at the AARL in Johannesburg (SA), Subsequently moving to take over Stockdale Prospecting (DeBeers) in Australia and Asia.
DANCHIN	Peter	AAC/Trans Hex	1946-2013	Brother of Bobby, Peter was a diligent and successful base metals minerals explorer, turned diamond geologist, who moved to become the MD of Trans Hex, and grew the company's alluvial diamond mining operations on the lower Orange River.
DAWSON	J Barry	St Andrews U	1932-2013	Expert on kimberlites and their xenoliths, carbonatites and rift magmatism who improved understanding of mantle melting and metasomatism. He obtained a PhD on the kimberlites of Basutoland (Lesotho) and documented the MARID suite of mantle xenoliths.
DEINES	Peter	Penn State U	1936-2009	An authority on stable isotopic geochemistry, well known for his research on origins of diamonds and contributions to the Geochemical Society.
DU TOIT	Alex (AL)	UCT; RTC (Glasgow); RCS (London), De Beers	1878-1948	In the words of RA Daly, the “world’s greatest field geologist". With his versatility of mind, observation skills and ability to synthesize information, he left an indelible imprint on every facet of southern African and international geology. He was consulting geologist to DBCM from 1927 - 1941 documenting alluvial deposits (e.g. Lichtenburg) and many of South Africa's kimberlites. He wrote on numerous geological and related topics, publishing his famous book Our Wandering Continents in 1937.
DU TOIT	Demay	De Beers		Long-time De Beers exploration geologist in South Africa and Brazil; designed the Du Toit Jig which became a familiar sight in De Beers field operations in southern Africa.
DUMMETT	Hugo	BHP	1940-2002	South African exploration geologist best known for his role in the Ekati Diamond Mine in the Barren Lands of Canada's Northwest Territories, which led to the creation of a new Canadian diamond-mining industry.
EDWARDS	CB "Gus"	De Beers	Died 1991	De Beers Consulting geologist. Worked in the early period of his career at the Williamson (Mwadui) diamond mine in Tanzania, and was subsequently involved in the discovery and development of Orapa and Jwaneng mines.

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ERLANK	Tony	UCT Geochemistry Department	1938-1993	With his higher education exclusively at UCT, a protégé of the brilliant Louis Ahrens, Tony rapidly rose to HOD of UCT Geochemistry Department. A driving force for funding, scientific leadership and stimulating student research, his work included Karoo and Etendeka volcanics, kimberlites, diamonds, and mantle xenoliths. He discovered K-richterite, now recognized as the hallmark of advanced mantle metasomatism and heterogeneity.
FERGUSON	John	GeoScience Australia	1933-2020	A University of Witwatersrand PhD graduate initially involved in the research of kimberlites, diamonds and formation of volcanic craters. He travelled widely in his career pursuing world-wide geological exploration, finally settling in Australia.
FESQ	Harro	University Witwatersrand		Helped pioneer diamond physics research in the 1970's at the Wits School of Physics (WSOP), headed by Friedel Schellschop, perfecting techniques of preparing diamonds for experimental work and applications with colleagues. Through close ties with the DRL, the WSOP Diamond Unit had unique access to diamond samples, resulting in much international collaboration to the benefit of DBCM and WSOP.
GREEN	Hugh	University California, Riverside	1940-2017	Outstanding petrologist and experimentalist, who made key contributions to mantle petrology & rheology, ultra-high P-T subduction metamorphism, the 'watermelon-seed exhumation process' of recycling and transportation of crustal carbon as diamonds to the earth's surface, and nanodiamond formation. Wonderful mentor to young scientists, students & postdocs, and man of profound integrity with a wry sense of humour.
GURNEY	John J	UCT	1940-2019	Highly respected UCT Professor of geochemistry, famous for his pioneering work in mantle petrology & geochemistry, kimberlite & diamond studies and exploration insights. His approach to mineral chemistry in diamond exploration was integral to the discovery of the diamondiferous kimberlites in NW-Canada (Slave Craton) with Chuck Fipke (DiaMet) in the early 1990's, prior to which he was active with Chris Jennings in Botswana diamond exploration
HALLAM	C Daryll	CDM/Namdeb		A key stalwart in the initial development of CDM (De Beers) that led the early exploration and delineation (1950 - 60's) of the exceptional land-based placer diamond deposits of the Namibian SW-coast, north of Oranjemund into the Sperrgebiet. The other stalwart being Dr Charles Stocken, with the third key contributor being colourful geologist Hugh Jenner Clarke, both honoured in this compilation.
HANNWEG	Hans	De Beers	1965-2024	Hans started his De Beers diamond exploration career in South West Africa (later Namibia). He was joined the Venetia feasibility study team in 1998, became resident geologist at the start of mine production, and responsible for the evaluation-project that took the open-pit to 400m depth. He later moved to De Beers evaluation services and was involved in kimberlite projects in southern Africa, DRC and elsewhere.
HAWTHORNE	J Barry	De Beers	1934-2018	A wonderful people's person whose foresight and commitment drove modern-day research into mantle processes, diamond formation, kimberlite petrology, age dating, and related facets. Notably, he encouraged the use and application of these studies in modern diamond and mineral exploration. A consequence of this foresight, was the mutual benefit that accrued to De Beers and many academics and university students.

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HEARN	Carter	USGS	Died 2022	Field geologist and volcanologist with a long career in the USGS. Worked on US kimberlites and alkalic intrusions and their xenoliths including Michigan and Montana, upper mantle xenoliths from eastern China.
HELLINGER	Chris	Independent (Angola)	Died 2021	A multifaceted entrepreneur who often courted controversy, Angolan diamond project developer, latterly owner and developer of the award-winning wine estate Chamonix in the Franschhoek Valley (W Cape, RSA)
HOFFMAN	Francois "Hoffie"	Trans Hex	1931-2012	Chief geologist to Sammy Collins marine diamond ventures along the Namibian SW-coast. Hoffie subsequently moved on to successfully grow mid-tier diamond miner Trans Hex Group, initially pursuing high-quality gemstones from Lower Orange River alluvials, then kimberlite operations at Dokolwayo (Swaziland), and tailings retreatment at the Sover Fissure mines north of Kimberley.
HORNER	John	De Beers	Born 1946	Committed exploration and field geologist with De Beers in Botswana and South Africa, with a strong commitment to getting the job done in the hot sun and remote areas of these countries.
JAGO	Bruce	Laurentian U	1956-2023	Respected exploration geologist with Inco and other Canadian companies, including diamond projects. Later a founding executive director of Laurentian University's Scholl of Mines.
JENNER CLARKE	Hugh	De Beers; Independent Consultant	1929-2016	A distinguished and successful diamond geologist, initially at CDM he subsequently became a knowledgeable and successful consultant for southern African alluvial diamond deposits, including the West Coast of RSA, southern Namibia, and the lower Orange River. He was also a long-time associate of the legendary Robin Baxter Brown.
KABLE	Edwin	WITS, SGS Laboratories	1941-2022	With a PhD in geochemistry from UCT, he became a highly respected analytical scientist. Dedicated to the advancement of geochemistry, analytical chemistry and micro-diamond analysis. He undertook early work on KIMS, and used his natural curiosity to tackle problems pursuing an organised, stepwise methodology typical of his approach.
KLEINGELD	Wynand J	De Beers	1946-2020	Pioneer in the application of geostatistical and operations research techniques to the evaluation of diamond and other mineral deposits, and linkages between micro- and macro-diamonds.
KRAMER	Wim	EXMIN	1938-2016	Diamond exploration geologist whose career spanned forty years, twenty in seven southern African countries, and twenty in the USA.
LAIN	Mike	Anglogold and De Beers	1947-2024	After a successful career in exploration and mining geology at Anglogold, Mike moved to De Beers (1991) as Chief Geologist of Namdeb mining operations where he facilitated R&D that led to a better understanding of the West Coast and Orange River diamond deposits. He moved to Kimberley (1979) as GM of De Beers Exploration Services, spent his last years at De Beers H/O (Johannesburg), retiring in 2004.

Family Name	Given Name	Affiliation	Dates	Comments
LAMONT	Gavin "Doc"	De Beers	1920-2008	Renowned and known only as 'Doc', Lamont's leadership tenacity and deep knowledge of geology and nature contributed to the discovery of the Orapa and Letlhakane diamond mines in 1967, and world's richest mine, Jwaneng, in 1973. His ppioneering exploration activities as a field geologist in Bechuanaland (now Botswana) and discoveries of the world-class Orapa and Jwaneng diamond mines, were transformational for the economy of that country, and De Beers.
LONSDALE	Kathleen	University College London	1903-1971	Exceptional British crystallographer who developed X-ray techniques for the study of crystal structures and definitively determined the crystal spacing of carbon in diamond. Born in Ireland, the 10th and youngest child of an English postmaster, achieved honours in physics at Bedford College for Women, University of London (1922), and invited by famous crystallographer WH Bragg to join his research team.
MALEMA	Kemang "Brot"	De Beers (Botswana)	1935-2012	Dedicated and innovative field-assistant who become Dr Lamont's right-hand man in the successful discovery of the Orapa diamond mine through extensive regional soil sampling for KIM's in remote NE Botswana.
MANSON	Vincent	GIA	1936-1999	Leading gemmologist and geochemist of his time, with a passion for detail; created a database detailed of the key characteristics and properties of natural, treated and synthetic diamonds.
MANSKER	William "Bill"	Cominco American Inc.	1944-2019	Experienced exploration geologist actively involved in diamond exploration across the central and eastern US for Cominco in the 1980's. Excellent knowledge of the known US diamond deposits, kimberlites and lamproites, including Prairie Creek, a diamondiferous lamproite protected by a State Park in Arkansas.
MASON	Brian	Smithsonian Institution	1917-2009	A geochemist and meteorite specialist, Brian became the Curator of the Smithsonian Institutes Geology collection, and highly knowledgeable about diamonds.
Mc MILLAN	Ian	De Beers Marine	1951-2023	Micro-palaeontologist who made a major contribution to the understanding of the geological history of South Africa's offshore marine sediments. His work laid the foundation for the lithostratigraphic framework underpinning the geological model for diamonds offshore of southern Africa.
MEYER	Henry OA	C I W	1937-1995	Produced the first compositional data on silicate and sulphide incisions in diamonds using microprobe analysis and ongoing contributor to research into the petrology of diamond deposits and upper mantle xenoliths. In his retirement he developed an interest in high quality alluvial diamonds and began sourcing select goods from the Middle Orange River for various New York diamantaires.
MILLEDGE	Judith	London	1927-2021	Born 1927 in Kokstad (RSA), Judith attended Rhodes University (Eastern Cape), was a technician in the early De Beers Diamond Research Laboratory (Johannesburg), and completed a PhD at University College London. After a post-doc at MIT, she became a world expert in crystallography, focussing on diamonds, their isotopic compositions, micro and macro inclusions, and defects. Judith was Jeff Harris's PhD advisor, mentor of Henry Meyer, and shaped the careers of many young petrologist's, Barbara Scott-Smith included.

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MUGGERIDGE	Maureen	Ashton Mining	1948-2010	Best known for discovering the Argyle diamond deposit in northern WA. Maureen completed a BSc (Geology & Computer Science) at St Andrews University (Scotland) before becoming the second woman to discover a world class diamond mine in WA in 1981, the first being Larisa Popugaeva who discovered the Zarnitsa pipe in Siberian (Russia) in 1954.
MURRAY	Louis G	Anglo American and De Beers	Died 1984	A passionate and driven company executive, strongly committed to AAC and De Beers local and international exploration initiatives. Sadly, his enthusiasm for adventure and exploration in remote areas likely led to his untimely death in a helicopter accident in the Andes mountains of Chile.
NICOLAYSEN	Louis	University Witwatersrand	1928-2005	As the third Director of BPI Geophysics (1963), Professor Nicolaysen built an internationally recognised geophysics, geochronology and isotope centre. Dating and isotopes of kimberlites & lamproites, Kaapvaal craton geophysical studies and structural interpretation, and Gondwana map compilation, figured prominently under his leadership.
O'HARA	Mike	University of Cardiff	1933-2014	One of the leading petrologists of his generation whose theoretical petrology work in multi-dimensional space, hands on experimentalist with an insightful flare for geochemistry. His prescient treatment of mantle models, presented at the 1st Kimberlite Conference in Cape Town in 1973, remain as relevant today as then.
PELL	Jennifer	Independent	Died 2023	A committed diamond explorer and Chief geoscientist for Peregrine Diamonds. Jennifer was a key player in the discovery of the Chidliak diamond district on Baffin Island in the Canadian Arctic.
POPUGAEVA	Larisa	Leningrad Mining Institute	1923 - 1977	The geologist who, as a member of the Amakinsk expedition in 1954 following up pyrope garnets in gravel samples in the Daldyn River, discovered the Zarnitsa kimberlite pipe in Siberia that led directly to the establishment of the Russian diamond mining industry.
PRINZ	Marty	Tufts, NMU-IM, AMNH	1931 - 2000	With a PhD in geology and geochemistry from Columbia University, Marty was a passionate researcher on mantle and ultramafic xenoliths, lunar samples from the Apollo Space Missions, and subsequently stood watch over the outstanding collection of meteorites at the American Museum of Natural History (NYC).
REDDIE	Scotch	De Beers		A senior diamond valuator at the DTC, Scotch had an interest and insight into diamonds that he regularly shared with those looking to understand the finer points of diamond quality and value, not always immediately clear to geologists and technocrats.
RINGWOOD	AE “Ted”	Research School of Earth Sciences, ANU	1930-1993	Australian experimental petrologist & geochemist. He pioneered high-pressure experimental studies of phase transitions in Earth’s mantle (spinel, post-spinel and majorite transitions) and established the first accurate estimate of the composition of the upper mantle (pyrolite model). He led efforts to create the Research School of Earth Sciences at ANU and became its second director.
ROBINSON	Derek	De Beers	1942-2020	Derek was passionate about his diamond studies and golf, becoming a leading internationally recognised expert in the field of diamond surface textures and breakage during a long and distinguished career at the AARL and De Beers (Johannesburg, RSA).

Family Name	Given Name	Affiliation	Dates	Comments
ROWELL	Unni	EXMIN	1935-2022	A colourful character born in Oslo, she witnessed the WW2 German occupation, completed a geology degree at University of Oslo, worked in Uganda, then as a Librarian for the Hawaiian Institute of Geophysics. Finally settling in Bloomington, Indiana, Unni spent 13 years at Exmin Corporation, focussed on diamond exploration, target selection, assessing data and results, and compiling reports.
SAXBY	Peter	De Beers	Died 1994	De Beers exploration manager, wonderful character and optimist. Peter added experience, fortitude and persistence to the early years of diamond exploration projects in difficult and challenging environments, including Central Africa and Zaire (now DRC). He moved to Botswana, worked at Orapa mine for a short period, and then the Jwaneng-based Kalahari exploration project, before leaving De Beers.
SMITH	Joe	University of Chicago	1928-2007	Said to be one of the greatest mineralogists of our time and his extensive achievements and honours include the identification of the mineral joesmithite. His overarching study of feldspars extended to important collaboration with Barry Dawson and others on mantle minerals and mantle metasomatism.
SOBOLEV	Nikolai V	Russian Academy of Sciences (Novosibirsk)	1935-2022	Outstanding Russian geoscientist, author & co-author of +350 scientific papers and monographs in petrology and mineralogy of the mantle and lithosphere, ultrahigh-pressure metamorphism, and geology of diamond deposits. His leadership of Russian and international diamond and mantle studies was far reaching, as was his role in the IKC activities.
SCHELLSCHOP	Jacques PF "Friedel"	Schonland Institute, Wits U	1930-2002	With a Cambridge PhD in physics, Friedel became Director of the Wits Nuclear Physics Research Group in 1958 (at 28), rapidly establishing this (and subsequently the Wits School of Physics) into a leading international R&D centre. Diamond physics was prominent in his early research, leading to the development of synthetic diamond production with illustrious Basil Schonland and Dr Henry Dyer at DRL.
SOBOLEV	Vladimir S	Novosibirsk	1908-1982	Russian geologist (& father of Nick Sobolev), who recognised the similarities between the Kaapvaal Craton and Siberian Platform, providing the basis and motivation for diamond exploration in the Siberian Tundra. This led to the discovery of the first diamondiferous kimberlite (Zarnitsa) in NE Russia by a women led exploration team comprising geologist Larisa Popugaeva and laboratory mineralogist Natalya Sarsadskikh.
STOCKEN	Charles	CDM/Namdeb	1923-2009	A UCT graduate, colleague of famous marine geologist Eric Simpson, and stalwart alongside Daryll Hallam in the early mapping and delineation of the SW-Namibian coastal alluvial deposits, representing extensive raised-beaches. The commitment, work and sampling done by Stocken and team (1950 - 60's) was conducted in challenging desert ('Namib Sand Sea') and wind conditions, that tested the resolve of these early pioneering diamond geologists.
SVISERO	Darcy	University Sao Paolo	1951- 2021	Graduate and subsequently Professor of Mineralogy at the University of Sao Paulo, Darcy was a meticulous geologist and researcher, who became a leading expert on the kimberlites, related-rocks and diamond deposits of Brazil. His commitment and enthusiasm for Brazilian diamonds was exemplary.

Family Name	Given Name	Affiliation	Dates	Comments
TAYLOR	Larry	University of Tennessee (UT)	1937-2017	Founder and director of UT's Planetary Geosciences Institute, his research focused on the study of rocks and the conditions under which they form on the earth and moon.
TOLANSKI	Samuel	Durham University	1906- 1973	Highly decorated physicist nominated for a Nobel Prize; his wide-ranging interests included the optical properties of lunar dust and diamonds with the first application and demonstration of ultra violet light in distinguishing Type I from Type II microdiamonds.
TOLKOWSKY	Sir Gabi	Master Craftsman Diamond Cutter	1939-2023	Legendary diamond craftsman whose skill at cutting and polishing diamonds was matched only by his passion extolling them.
ULMER	Gene	Temple University	1936-2015	Emeritus Professor of geology at Temple University whose specialisation in oxygen fugacity studies of mantle conditions and diamond formation contributed widely to modern petrology and the understanding of diamond formation processes.
VLADYKIN	Nikolai	Russian	Died 2021	A quiet and committed Russian mineralogist who specialised in the geology of kimberlites, carbonatites and alkaline rocks, and their petrogenesis.
WAGNER	Percy A	Pioneering South African geologist	1885-1929	Exceptional geologist whose work & publications on RSA geology and mineral deposits remain sought after texts. He compiled and wrote the first Guidebooks on the Lichtenburg diamond fields and the Premier diamond mine, and which till today remain highly informative reference sources.
WATKINS	Jeff	De Beers	1948-2014	De Beers exploration geologist who worked in Angola, then managed Sopemi (De Beers) operations in Brazil & South America for many years.
WHITELOCK	T Keith	De Beers	1933-2023	Geologist and tenacious diamond miner who straddled marine & land based alluvials and kimberlite mining operations. His passion and focus inspired confidence and success for many around him, and he lived for Lesotho, its development and mountains.
WILLIAMS	Alpheus F	De Beers	1874-1953	Son of Gardiner F. Williams, also a Mining engineer and GM of DBCM from 1905 to 1931. Author of various reports, scientific papers and two exceptional books on kimberlites, diamonds, and diamond mining in southern Africa. Followed in his fathers footsteps leading mining development of the Kimberely mines.
WILLIAMS	Gardner F	De Beers	1842-1922	American mining engineer and author, and first professionally trained mining engineer to be appointed in South Africa as GM of DBCM from 1887 to 1905. Introduced wide ranging changes to mining methods in Kimberley resulting in improved efficiencies and worker safety. Cecil John Rhodes met Gardner Williams on a visit to the Barberton Gold Mines (eastern RSA) and persuaded him to move and work for De Beers.

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WILLIAMSON	John Thorburn	McGill University	1907 - 1958	Born in Quebec, he entered McGill (1925) to study law. An expedition to Labrador led him to switch to geology, completing an MSc, then PhD (1933). A trip to RSA and Wits saw him join *Loangwa Concessions*, a DB Tanganyika subsidiary. A classic explorer and loner, he moved to TG&DDC and with persistence and support of loyal local assistants, Issa and James, discovered Mwadui (Williamson) mine in 1942, source of impressive pink & Type-2 diamonds. In 2011 he was inducted into the Canadian *Mining Hall of Fame.*
YODER	Hatten S	C I W	1921- 2003	Experimental petrologist, geophysicist and Director of the Geophysical Laboratory at CIW, he conducted pioneering work on minerals under high pressure and temperature to simulate mantle conditions, and became highly respected for his applied experimental studies of silicates and igneous rocks.
ZHANG	Andi	CAGS	1933-2012	Pioneering geologist who systematically documented the kimberlites of China, their distribution, mineralogy, and diamond potential. This and other work by her colleagues showed known Chinese kimberlites to be deeply eroded small dykes and pipes, ages range from about 450 - 500 Ma, with only 2 mined on a small-scale, Pipe #50 in Fuxian and Shenglie #1 in Mengyin.

Abbreviations

AAC	Anglo American Corporation of South Africa
AARL	Anglo American Research Laboratories (Johannesburg)
ANU	Australian National University
BHP	Broken Hill Proprietary Company Limited
BPI	Bernard Price Institute of Geophysics & Isotope Studies, WITS
CAGS	Chinese Academy of Geological Sciences
C I W	Carnegie Institution of Washington Geophysical Laboratory
COM	Chamber of Mines, South Africa (now the Minerals Council)
CSO	De Beers Central Selling Organisation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DBCM	De Beers Consolidated Mines Ltd.
DRL	De Beers Diamond Research Laboratories, Johannesburg, RSA
DTC	Diamond Trading Company (De Beers)
GIA	Gemmological Institute of America

GM	General Manager
IKC	International Kimberlite Conference
KIMs	Kimberlite Indicator minerals
MIT	Massachusetts Institute of Technology
NAMDEB	50:50 JV of the Namibian Government & Beers Group for land-based prospecting, mining and rehabilitation.
NCP	Northern Cape Province (RSA)
NWP	North West Province (RSA)
RSA	Republic of South Africa
RCOS (London)	Royal College of Science
RTC (Glasgow)	Royal Technical College
SUNY	State University of New York
TG&DDC	Tanganyika Gold and Diamond Development Company (Tanganyika is now Tanzania)
UCT	University of Cape Town
UJ	University of Johannesburg (previously Rand Afrikaans University)
USGS	United States Geological Survey
WITS, WITS U	University of the Witwatersrand
WSOP	University of the Witwatersrand School of Physics