

Nicholas Boutakoff: A geologist's life revisited

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When systematic oil exploration began in the decades after WWII, Dr Nicholas¹ Boutakoff was one of the most experienced oil geologists in Australia. Whilst his ideas led to important oil and gas discoveries for Australian interests, he died uncelebrated in 1977, and Rick Wilkinson gave him scant notice in *A Thirst for Burning*, his 1983 classic work on oil exploration in Australia.² However, by 1991 Boutakoff was receiving much fuller recognition from Wilkinson and in particular was celebrated by Robert Murray in his history of the North West Shelf Gas Project.³ As he came into focus, the myths and misunderstandings about him were explored and Peter Purcell's long interest in Boutakoff resulted in the delivery of a biographical paper to the American Association of Petroleum Geologists at Cartagena, Columbia, in 2013.⁴ Mike Butcher also delivered a paper on Boutakoff to the Australasian Mining History Association at its annual conference in Beechworth, Victoria, with the promise of a written paper.⁵ What follows is a closer look at Boutakoff, incorporating subsequent investigation and interpretations.

The impetus to correct the record came from the realisation by co-author Yolande Collins, Boutakoff's God-daughter, that little had been written about him, and some of what was written was inaccurate. Her father had assured her that Boutakoff's books, reports and papers had been removed to Russia after his death, and it was only after the belated discovery of his papers in the Manuscript Collection at the State Library of Victoria, and Peter Purcell's interest in Boutakoff that this collaboration was possible.⁶

Russian aristocracy

Nicholas Aleksandrovitch Boutakoff was born into an aristocratic Russian family in 1903 in Washington DC, where his father was the Naval Attaché. Nicholas later tried to claim American citizenship, but his nationality was Russian, because he was born in the Russian embassy. Attempts to find Russian sources of information about the Boutakoffs have proved frustratingly unsuccessful, but the American newspapers have left us with some glimpses of his father, Commander Alexandre Boutakoff:

...[few] had the benefit of such a combination of expert training and hereditary influence as this well-informed Russian. Commander Boutakoff's father, Admiral Gregory Boutakoff, is famous as the author of the first work on steam tactics. ... Commander Alexandre Boutakoff was born in Cronstadt in 1861. After graduating at the University of St Petersburg he entered the navy, and following a period of service in the Far East, he made his first visit to America in 1893, when serving as lieutenant on board the Russian cruiser Dimitri Donskoi, the flagship of the fleet which visited our shores at the time of the Chicago World's Fair ... Commander Boutakoff was married ten years ago to Olga Kazanakoff, niece of Admiral Kazanakoff, now president of the Red Cross in Russia.⁷

At the time of WWI, then Rear-Admiral Alexandre Boutakoff was back in St Petersburg as Chief-of-Staff at the Kronstadt Port. His family left in 1914 to obtain treatment for his sick daughter, Elizaveta (Elizabeth) Aleksandrovna in Switzerland.⁸ Rear-Admiral Boutakoff was killed by the revolutionaries on 1 March 1917; he died courageously, executed for refusing to recognise the Revolution. The first volley missed him, so he exhorted the firing squad to 'aim better,'⁹ and they did not disappoint him a second time. We know nothing of Rear-Admiral Boutakoff's relationship with his sons, but this example of high-minded courage may have inspired them as they faced their own trials through life. The family moved to Cannes in the South of France at about this time. Nicholas Boutakoff's Russian citizenship was revoked in 1922, so he became a stateless person, later receiving a Nansen passport for identification purposes.¹⁰

Boutakoff completed his secondary studies at the City College in Cannes and his final Bachelor of Secondary Education (Diplôme de Bachelier de l'Enseignement secondaire) in Nice in 1923. His sister and mother remained for the rest of their lives on the Côte d'Azur, where both died during the 1940s and are buried at Mougins in the Cimetière Fontvieille. His mother was in business as a mercer and corsetiere by the early 1930s and was part of the ex-patriate Russian community of Cannes.¹¹ Boutakoff's path to higher education was by means of an American scholarship to the Catholic University in Louvain, Belgium.

Boutakoff became a protégé of Fr Achille Salée at Louvain, where he gained a BA (Hons) in Forestry in 1927, followed by a BA in Geology, also with honours, in 1928. His 1929 doctorate concerned a section of the Maritime Alps near Cannes, in which he demonstrated his ability to draw beautiful block diagrams to explain the stratigraphy.¹² One aspect of his thesis of interest is the conservative views he already seemed to embrace by ignoring the work of the Swiss alpine geologist Emile Argand and others in understanding the role of 'continental drift' in the formation of alpine structures. In this connection, the geologist and historian Professor Albert Carrozi later suggested that Belgian geologists were generally slow to recognise the validity of Alfred Wegener's continental drift theory, and some of Boutakoff's own examiners were indeed noted 'fixists'.¹³ The only surviving letter to Boutakoff's sister is from Salée in this period, and includes the information that he is printing Boutakoff's thesis, which will 'bring honour to the university'.¹⁴

Africa

After graduation, he was given the opportunity of joining a geological expedition to Kivu in the Eastern Belgian Congo (now the Democratic Republic of the Congo) as Fr Salée's assistant: Salée had carried out fieldwork there earlier in the 1920s. The expedition is recorded in the very full official reports and informally through letters in Russian to his mother.¹⁵ How these were returned to Boutakoff's possession is not known, but Vladimir Michels (Michailov) took possession of them after his death and translated them into English for Peter Purcell. They read like *Boys's Own* stories of adventure and danger as Boutakoff traversed the mountainous terrain mapping the topography and geology of the district. His was an ambitious task—mapping two square degrees of inhospitable jungle, and in sole charge. His letters describe the variety of

challenges he faced, equal to those of any colonial officer, and the cheerful manner in which he met them. He seemed to thrive on hardship:

We toiled for over a month without a respite, from the shore of L. Kivu. There were absolutely no roads—we trudged along barely discernible paths of savages; or pathways of huge monkeys— more like bears. Or—this “pleasure” lasted 4 days—in breast-deep water, along the bed of forest rivers; or growths of lianas & trees of such denseness that there was no possibility of cutting through them! And all this for a distance of 350 km—like Marseilles to Nice, step by step, cutting a way thru lianas among gigantic trees. Overnight we stayed either just in the forest, or in the villages of cannibals Only those who themselves have undertaken such treks can imagine what difficulties/hardships it involves—certainly no European can!!!¹⁶

All the while he was collecting data and drawing maps of the terrain and geology. Towards the end of the three-year expedition, Fr Salée was killed in a motor accident in Rwanda, leaving Boutakoff in charge. He had demonstrated an ability to work hard and fast under adverse conditions—qualities that would later be recognised in Australia, but he also demonstrated a capacity to fall out with his colleague that had echoes throughout his life.

I haven't had any trouble with my porters, whereas Jean de la Vallée doesn't know how to handle them and drives them constantly with an air of superiority, which irritates people and engenders their hatred. As a result, they never sing, but my porters sing merrily like birds ... so, my system is more successful. Besides, he drives—but I tend to their ailments.¹⁷

Boutakoff's disputes over de la Vallée took on dimensions that appear extreme and are a portent of his later difficulties with colleagues in Australia. M. de la Vallée Poussin came from a titled family with all the advantages Boutakoff had lost through the Revolution and later was a successful family man, geologist and mine owner in Tanganyika.¹⁸

The Kivu expedition reports were compiled for publication by Professor Etienne Asselberghs, whose letters to Boutakoff express his exasperation with the slow progress, and it took until 1939 before the reports were finally printed. Only these printed reports have survived WW11, because the Louvain Library was bombed and the original expedition records lost. In a later overview of Boutakoff's work at Louvain University, Lucien Cahen wrote, 'Boutakoff's best work in Africa is undoubtedly his masterly description of the Permian glacials of Walikale (Kivu).'¹⁹

Meanwhile, Boutakoff returned to Europe in 1932 and married Irene Sergueieff at the Russian Orthodox church in Cannes. Irene was a White Russian who had been born in Sevastopol in the Crimea, but escaped with her family during the 1917 Revolution.²⁰ They had presumably met in Louvain, where she was studying chemical engineering.²¹ Initially they lived with Boutakoff's mother, which was a problem for Irene, as she had 'no say in the household.'²² Boutakoff returned to Africa with his wife in 1935-6, where she systematically excavated the Ruhimangyargya Cave in Rwanda for the Museum of the Belgian Congo.²³ It remained a bone of contention between them that Irene only

published a preliminary note, while the final report with sections and plans to accompany the six thousand artifacts shipped back to the museum at Tervuren did not eventuate.²⁴ It is not clear which of them was responsible for this. Most of the correspondence is from Irene, but a letter from March 1936 shows the venture to have been shared with her husband: 'Ma Femme et moi avons à vous annoncer un nouveau succès dans les recherches entreprises: La grande grotte RUIMANGIARGIA...'²⁵

Figure 1: Irene Seregieff in Trinidad.



Source: Courtesy Ingrid Koehler

Their results were taken to Trinidad with the intention of completing the work, but years later, after both had remarried, Irene sent Nicholas her field notes inviting him to finish the writing up. They were found amongst his papers and scanned and sent to the Royal Museum of Middle Africa at Tervuren in 2016 in appreciation of the assistance received from the museum.²⁶

Trinidad, West Indies

In 1937, after a period of lecturing in stratigraphic geology and palaeontology at Louvain, Boutakoff was required to look elsewhere for work, because, as an Orthodox Russian, he could not hold a tenured post at the Catholic university. He then obtained a position as a geologist with the Kern Trinidad Oilfields Ltd (KTOL). Boutakoff was responsible for mapping the geology of the island of Trinidad at scales from 1:2,500 to 1:25,000, and claimed to have 'covered most of the geology of the island which, although relatively small in area (around 1800 square miles) is, both structurally and stratigraphically speaking, one of the most complicated sectors of the globe.'²⁷ Clearly he was not daunted by large undertakings. He mapped the Central Range and North Basin during his first three years then the Naparima Basin South and finally the surface and underground geology of the KTOL oilfields. Dr Hans Kugler, the Swiss 'Father of Trinidad Geology', knew Boutakoff from the time he arrived in Trinidad and they often discussed the geology of the areas of interest to KTOL.²⁸ He gave a short written reference in support of Boutakoff's job application shortly before he left for Australia: 'During these many years I have learned to value Dr. Boutakoff not only for profound knowledge of the principles of geology and his experience in exploration work, but also as a highly educated thinker and energetic worker.'²⁹ Disappointingly, no correspondence between them has been found in Kugler's papers in Basel, but there is a mention of the fossil collection sent by Boutakoff from Trinidad to Dr R. Rutsch in Basel and to the British Museum.³⁰ He has a fossil named after him: *Turritella boutakoffi* Rutsch.

Boutakoff's twelve years in Trinidad made him a very experienced and capable petroleum geologist. He not only refined his field mapping skills, but also supervised the company's drilling operations and worked closely with the pioneering seismic surveying teams working for KTOL. A lasting and unwelcome legacy from this work in Trinidad was a fungal infection that recurred during summer for the rest of his life.³¹

Those long field trips might have contributed to the breakup of his marriage: Irene left Boutakoff for Dutch chemical engineer Leonard van Dongen, and in 1942 Nicholas and Irene were divorced.³² Boutakoff was bereft: no details of their divorce have been located, but a comment on the affair was provided by Leonard's son, still living in the Netherlands at the time, who wrote, '... a very tumultuous situation developed between my father and Mr Boutakoff.'³³ The police may have been involved.³⁴ It was a difficult time for Boutakoff, because his mother died in 1943 and his sister two years later, at a time when the restrictions imposed by the war prevented him from assisting them.³⁵

Figure 2: *Nicholas Boutakoff in Trinidad during 1944.*



Source: Photo courtesy Yolande Collins.

By the late 1940s, Boutakoff was tired of the climate of Trinidad, and the fact that he could not publish his findings in the geological journals, because they were the confidential, intellectual, and commercial property of KTOL. Boutakoff's copies of the reports he compiled of the extensive exploratory work he had undertaken are with his papers.

Geological Survey of Victoria

Having obtained British citizenship in August 1948, he sailed that year from New York for Liverpool, United Kingdom, aboard the *Brittanic*. His citizenship allowed him to look to the Dominions for employment and while a Boutakoff relative, Theodore Koulomzine, had joined the Canadian Geological Survey, Boutakoff was advised that he could not follow in that direction because employment was limited to Canadian citizens. No such barrier existed for Australia so he approached Curt Teichert of the Geological Survey of Victoria (GSV) in Melbourne. Boutakoff had met Teichert in England and wrote to see if any jobs were available. Teichert was himself leaving at that time, but his vacancy had already been filled, although the GSV was looking for a field geologist, apparently to focus mainly on the development of mineral resources.³⁶ Boutakoff was the successful applicant and he travelled out first class, for which he was bonded to the Public Service for three years.

Boutakoff arrived in Melbourne on 30 January 1949 aboard the *Orontes* and commenced work at the GSV under Dr David Evan Thomas.³⁷ For reasons not fully understood, Boutakoff seemed to have been almost immediately unhappy with his position: he had hardly joined the service before he was negotiating with Harold Raggatt to join the Bureau of Mineral Resources (BMR) in Canberra, where his experience as an oil geologist would have been valued. It had the effect of Thomas offering incentives to keep him at the GSV. Boutakoff vacillated and would not give up his job unless Raggatt could guarantee him employment, and negotiations eventually petered out. It would appear that his unhappiness was not general, because he wrote to Sir Edmund Teale (whom he had met in England) that

I came here on the advice of Dr. C. Teichert, who is lecturing at the university and I do not regret one moment that I have done so. Australian geology is very interesting and work is greatly expanding. After 20 years in the tropics I hope to devote the best part of 20 more in Australia...³⁸

However, things must have still been in flux, because the next month when writing to seek work with the Gulf Oil Corporation, when he wrote:

...Australian salaries are not attractive, especially now that the cost of living has steeply increased. For this reason, and despite the fact that my present position is stable, I have made up my mind to return to oil as soon as possible.³⁹

A possible problem for Boutakoff was Thomas's beliefs about oil, as reflected in the experience of Eric Webb, a young geologist from Queensland. When Webb arrived in Melbourne in 1959 to take up the position of Exploration Geologist for Woodside (Lakes Entrance), he was laughed at by Thomas and told there was no oil in Victoria. Such a belief had been voiced by the previous Director, Dr Baragwanath and this view would not have endeared Boutakoff to Thomas when he arrived a decade earlier. It is probable both were referring to on-shore oil, but it would have hardly been supportive. Boutakoff clashed almost immediately with Thomas, who was an equally strong-minded and dominating personality. A Welshman who had started his life in the coal mines of South Wales, Thomas was a world authority on graptolites and expert map-maker, but no theoretician. He was also a heavy drinker accustomed to long lunches, whereas Boutakoff was not. Whatever the reasons, the conflict was to prove long and bitter, and what might have begun as professional differences turned progressively personal.⁴⁰ Someone who knew Thomas very well was John Talent, who wrote Thomas's obituary.⁴¹ To account for another aspect of their differences, he suggested that Thomas was more of a team player than Boutakoff. Thomas had collaborated for decades with Professor E.S. Hills over higher education for his staff, but they had a falling-out towards the end, but even so, Hills collected Thomas's papers after his death. Junior colleagues described all the senior staff as gifted men, but deplored the antagonisms.

One of Boutakoff's early projects with the GSV was mapping the Portland district, because it was potentially an oil-bearing sedimentary basin. This major piece of work was mostly completed between 1950 and 1953, with additions up until 1958, but it was not printed until 1964, two years after Boutakoff had left the Service.⁴² It was said to be something of a benchmark in terms of quality and presentation, but lack of resources had delayed publication. It is notable that the publishing standards Boutakoff had learned in Europe were continued in Victoria and with this project. Colleague Peter Kenley had some resentments mixed with admiration for Boutakoff and his work, and as a young geologist, he noted the rapidity with which Boutakoff wrote, having the text fully composed in his head before picking up the pen. He also wrote clearly and readably,⁴³ and others noted the speed with which he was able to analyse the geology of an area. On the debit side was the way Boutakoff took the best available accommodation, his failure to mix socially with his colleagues when in Portland, and their feeling that they never felt treated as equals. Kenley later had the job of

completing the maps of the area and found that Boutakoff's maps got progressively rougher towards the margins, requiring additional work on Kenley's part.

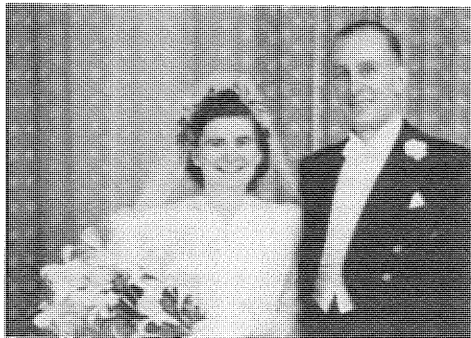
John Neilson remembered an occasion when he, Tony Bartlett and Boutakoff, were mapping near Woodside in Gippsland, during which Boutakoff demonstrated his skills with mapping large areas quickly, but with some questions about its accuracy:

My colleague [Tony Bartlett] and I returned to the Hotel at Woodside rather pleased with our progress which included mapping new geology along Merriman's Creek and the discovery of Tertiary limestone hidden beneath later gravels on the divide between Merriman's Creek and the La Trobe River, to find that Dr Boutakoff was pleased to have geologically mapped an entire 1:63,360 map sheet. In general, I later found that his mapping was correct, though I frankly was not convinced that some fault lines shown actually existed and were not the product of his thinking. I still credit him with extraordinary speed in his work, which was in part due to the richness of his experience.⁴⁴

Boutakoff's personal life at this time was far happier. Soon after his arrival in Melbourne he met Irena (Irene) Tilts, a newly-arrived Latvian whom he married in January 1950⁴⁵. Because the Australian authorities did not recognize her Latvian qualifications as a dentist, she had to re-train in Australia. This second marriage was happy and lasted until Irene's death in 1976.⁴⁶

Sporadic attempts had been made to find oil in Gippsland since the 1920s and every oily slick was seized upon as evidence of the coming bonanza. Boutakoff

Figure 3: *Wedding Boutakoff & Irina Tilts 1950.*



Source: Photo courtesy Igor Oleinikov.

prepared several papers on oil in Victoria, between 1951 and 1953,⁴⁷ and presented a summary at the International Geological Congress in Mexico in 1956.⁴⁸ He also collaborated with South Australian Reg Sprigg, a famous pioneering petroleum geologist, on the petroleum potential of the Otway basin.⁴⁹ No correspondence between Boutakoff and Sprigg has survived, but there was reportedly tension between them, with Boutakoff insistent that he got adequate recognition.⁵⁰

Boutakoff has not claimed any responsibility for the discovery of the Gippsland offshore basin, but Ken Richards, later chairman of APEA, remembered that Boutakoff was 'one of the first to suggest the small amount of oil and gas found along the Gippsland coastal fringe was being generated in the deeper parts of the basin offshore.'⁵¹

Boutakoff acted as a consultant to some of the companies interested in exploration at that time, several years before he had the permission of the Public Service Board in 1957. Thomas noted this 'with concern' as well he might. From 1955 Boutakoff was offering his services to P.D. McKenzie at Woodside, outlining how the overlap in his

official duties could be used to their mutual benefit, although he had yet to gain approval for these activities.⁵² Professor E.S. Hills had been appointed Consulting Geologist to Woodside in November 1954, so this might have put a strain on their relationship. At that time Woodside comprised both a chairman and a managing director, but it was not until 1959 that their first exploration geologist was appointed.

The relationship between Boutakoff and Thomas worsened through the 1950s. Colleagues recall the open expressions of hostility, and described it as a poisonous atmosphere. Dr A.D.N. Bain, the other senior member of the GSV staff at that time, tried vainly to be the peacemaker between them. One can only wonder why the situation was tolerated for so long. Boutakoff was clearly unhappy and applied unsuccessfully for a position at the Bureau of Mineral Resources (BMR) in 1952, and a teaching position at Melbourne University in 1958. According to John Talent, 'this would have been the position awarded to Frank Beavis who, at that time, did not have a higher degree—it took Frank many years to complete one. Hills always appointed 'yes-men' who would be beholden to him—to the detriment of his department.'⁵³ So a man with lesser academic qualifications got the job. Following the retirement of Bain from the position of Deputy-Director, John Knight was recommended to the position. Although a skilled coal geologist, he was two grades of promotion below Boutakoff, was less qualified and had lesser experience. Boutakoff gained the position on appeal in December 1959, but the question remains whether Thomas recommended Knight on merit or to spite Boutakoff. More than a decade later, John Knight became the Director of the restructured department. He retained a keen interest in Boutakoff, as we shall see, and appears not to have held any grudge.

Tectonics

Tectonics had been an interest of Boutakoff's from the days of his doctorate concerning a section of the French Alps, while his subsequent experiences in the Rift Valley of East Africa and later in Trinidad, increased his fascination. Colleagues remarked on his willingness to embrace the 'big pictures' of geology and how his tectonic theories became something of an obsession. After leaving Trinidad in 1948 he delivered a paper in London on the *Great Circle Stress Patterns of the Earth*, and he also gave a paper on the same subject to a seminar on 'Geophysics and the Earth's Structure' in Canberra in 1950.⁵⁴ This was the occasion of a seminar series conducted by John Tuzo Wilson from Toronto, then on a world lecture tour.⁵⁵ Wilson had been invited by Sir Mark Oliphant, who was interested in forming a department of geophysics in the newly established Australian National University.⁵⁶ Wilson was at that stage a confirmed 'fixist' and his conversion to the concept of continental drift (mobilism) would take a number of years and the arrival of new geophysical data.⁵⁷ What opportunity Boutakoff had to present his paper or its reception is not known, but he did publish a note, which was to be followed by a major paper.⁵⁸

His 1948 London paper explains his belief that the world was transected by a system of lineaments, which he called a 'stress pattern'. The fixed position of these lineaments precluded the possibility of continental drift, as proposed by Wegener. By plotting these lines/lineaments/trends on gnomonic world charts, Boutakoff claimed to

have discovered that all lines in the pattern represent portions of arcs of great circles, which appear as straight lines on gnomonic projections.

Boutakoff undertook experiments to create stress patterns using spheres of differing malleability with different coatings to simulate the Earth's crust.⁵⁹ He used the hydraulic presses at the Country Roads Board for this work, but it was his use of departmental time that created something of a scandal in the GSV and must have contributed to the arguments with Thomas. Boutakoff regularly regaled the younger graduates with his latest development, which it would appear was something that gave his life and ambition meaning, and he could not let go of it. He submitted a large paper outlining his tectonic concepts to the Geological Society of America, which was returned with 'severe criticisms,' which he was prepared to take on the chin because he believed the referee was Professor Bucher, 'a scientist for whom he had the greatest regard and respect and it is indeed an honour that my work should receive his attention and criticism.'⁶⁰ He never re-submitted the manuscript and his attention was soon taken up with oil exploration. Four draft manuscripts describing his theory survive in his papers, but none is complete and all lack the accompanying sets of illustrations. The work languished until near the end of his life when he rewrote it, whilst having no intention to publish. By that time the concept of Plate Tectonics had swept the geological field and this exercise was of historic interest only.

The struggle to fit in

Boutakoff has been described as an introvert, but it remains surprising that he did not find a wider audience for his intellect and concepts among the geological fraternity in Melbourne, as well as among his younger colleagues at work. He was a member of the Royal Society of Victoria and the Geological Society of Australia but did not attend meetings of either. Boutakoff was said to have been 'cold-shouldered' by academic geologists,⁶¹ but he initially claimed assistance from the eminent geologist Professor Edwin Sherbon Hills at Melbourne University, whom he said helped him with his structural experiments and shared his interest in lineaments.⁶² Hills and Thomas encouraged interaction between the GSV and the University, and Boutakoff ought to have been in his element in this group.⁶³

Hills was a man who had favourites, but Boutakoff was not one of them, or at least not for long. Curt Teichert was a senior lecturer on Hills' staff from 1949 until 1952 but there were tensions for Hills in having such an eminent person on his staff, as some assumed Teichert to be the professor. When Teichert asked for leave to visit America, Hills declined, but despite this, Teichert went anyway, terminating his employment. There might have been other factors, but John Talent saw it as indicative of Hills' jealousy of other geologists.⁶⁴ No correspondence with Boutakoff or Thomas has survived in Hills' papers.

Royden Bull worked with editor Norman Campbell in the publications section of the GSV, at a time when Boutakoff visited them frequently. His keen observations reveal Boutakoff's personality and duality when it came to people inside and outside geology:

He was such a gentleman and proper and always seemed very light on his feet for a big man. He was always on good terms with people who were not geologists. If a geologist came into the room he would sit stony faced and look straight ahead. He just withdrew into another world. He was reluctant to engage in conversation with anyone who came in. He unburdened himself on us about any of the intrigues that were going on with Thomas and John Knight and the degrees of dislike that he had for them all.

In most professions there are professional jealousies and I never tried to assess it. He always appeared to be aloof with people from his profession, but not with anybody I can think of outside his profession. He was on good terms with the stenographers—polite—not on fresh terms—but polite—always a gentleman, but he'd clam up when geologists came in.

He was a secretive sort of a person—intrigue was part of his life: Norman Campbell used to say Russians love intrigue! He was a bit paranoid, as though people were ready to stab him in the back. We got this over our morning and afternoon teas. He came down twice a day or more and for long periods. It was as though he had not much to do, as though they'd sidelined him. That would have been in the very early sixties. I joined in 1960, so we had a couple of years before he left.⁶⁵

Boutakoff has generally been described as aloof by his professional colleagues and to have kept the personal side of his life to himself. Deputy Director Bain was much more cryptic: his sole recorded observation of Boutakoff being: 'He was a queer fish from the word go.'⁶⁶ A former colleague wondered if this reflected his upbringing in Russia and was quite surprised to hear that Boutakoff had friends at all. In fact, to his friends, many of whom were also migrants, he was the soul of warmth and consideration. Micropalaeontologist Dr Gerard Terpstra (father of Yolande Collins) was a lifelong friend after he met Boutakoff in Trinidad and they remained close over the years. Given Boutakoff's aristocratic and multi-cultural background, including fluency in several languages, he may have been, to some extent, a victim of nationalism in the postwar years, and his attitude and manner did not help him in his professional relationships. Shortly after he arrived he wrote that 'whilst Australia is an ideal country to live in' it was not a place to work in 'unless you happen to be an unskilled labourer and belong to some union'.⁶⁷ Such views would not have endeared him to his colleagues, and if he had any intention to return to Europe it might have been difficult, as his only citizenship was British.

Oil is found in Western Australia

Boutakoff's career changed when oil was found in December 1953 at Rough Range, Western Australia, by the West Australian Petroleum Pty Ltd (WAPET). In the excitement that followed, Boutakoff was sent to the well site by the Minister for Mines to see what could be gleaned for the benefit of Victoria. He visited Rough Range, Cape Range and Learmonth, where the claim was later made that 'He stood on Rough Range and from there ... he could visualize the onshore geological contours of the land stretching out to sea.'⁶⁸ He obtained the Admiralty chart of North-Western Australia and speculatively contoured the bathymetric values to make a map of the seafloor.

Boutakoff interpreted those ridges as large geanticlinal folds, in keeping with tectonic concepts from the era before plate tectonics. He proposed that these structures, located between the complex alpine-like structures of Timor, where oil seeps were known, and the gently warped sediments onshore Australia, were ideally 'suitable for considerable accumulation of petroleum.'⁶⁹ He also spent time in the State Library of Victoria 'searching up the legal marine boundaries of Western Australia.'⁷⁰

Figure 4: *Boutakoff with group at Rough Range WA 1954.*



Source: Photo, courtesy State Library of Victoria.

GSV.⁷¹ Also involved were Thomas E. Ward (a friend and business associate from Trinidad days), C.P. Tomlinson from New York, and Percival Donald McKenzie,⁷² the former chairman of Woodside (Lakes Entrance). The lease application was said to have been lodged in Perth in May 1955, but no evidence can be found of it. From here things become murky: Boutakoff claimed to have been given verbal assurances that the application had been made, but he appears to have been lax in obtaining written confirmation. Why the application was not pursued is a matter for conjecture, but they had no money to develop the lease and could not identify the company principals because it would have revealed Boutakoff's involvement. Northern Holdings was wound up in 1958 without ever achieving its objective, but it will be argued that four years later, this work made possible the successful lease application from Woodside.

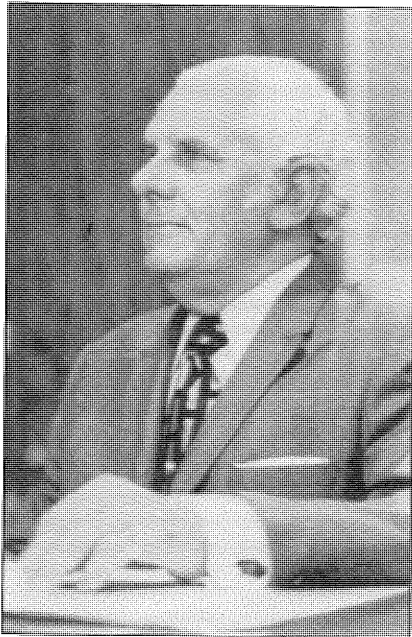
After that scheme fell through, Boutakoff worked assiduously from 1959 until 1962 to make money so he could leave the GSV. This time he settled on the lesser formality of a syndicate to hold the leases to a large brown coalfield at Gelliondale near Port Albert in Gippsland, Victoria. The plan was to promote the proximity to deep sea harbour facilities at Welshpool and to the limestone quarries nearby. His American partner, Alan Ruthven-Murray, an old friend and former KTOL general manager, had the role of selling the project to the major energy and industrial companies, while Boutakoff again kept his head down because of the conflict of interest with his position as a government officer. There are many letters in Boutakoff's papers to attest to his efforts, but again it came to nothing and the coalfield remains undeveloped to this day, although CRA and International Oil Proprietary carried out further drilling in the late 1970s and 80s.⁷³

On 1 March 1955, in what was a bold step for the times, because of the size and nature of the lease, Boutakoff formed a company called Northern Holdings Pty Ltd, for the express purpose of taking out a lease covering the whole area of the North-West Shelf (NWS) from Scott Reef in the north to Barrow Island in the south, where a large lease was held by WAPET. The company was set up using a Melbourne firm of accountants as directors, so as to obscure Boutakoff's involvement because he was employed at the

Woodside breakthrough

In July 1962 Boutakoff gave up his position as Deputy Director of the GSV and became the Chief Geologist at Woodside (Lakes Entrance) Oil Company. Woodside was keen to extend its exploration leases and set Boutakoff to finding likely areas for off-shore exploration. Woodside was looking at the Gulf of Carpentaria and the NWS, among other areas, but Boutakoff told them of his own ideas about the potential of the North West Shelf and that became the Woodside focus area. An application for a lease over the same NWS area Boutakoff had applied for in 1955 was made at his recommendation, and using the same lease plan that he had used for Northern Holdings. (This chart was crucial to his later claim for financial compensation). The size of the lease was large (367,000 square kilometres) and was obtained relatively cheaply, with only £20,000 to be spent on exploration if the permit was granted. As Charles Court, said when he was Premier, 'there was no-one else interested at the time!'⁷⁴

Figure 5: Woodside General Manager, Rees Withers.



Source: Photo, courtesy Craig Sadler

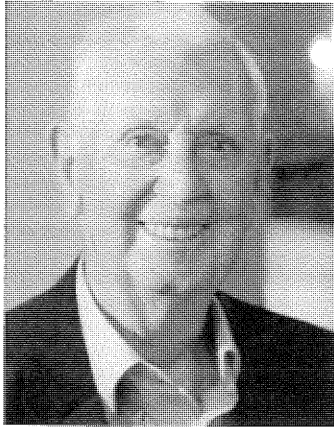
Woodside was a very small company, lacking both the funds and expertise to explore the offshore area. A large international company, or several, had to be enticed to buy into the project and assume operatorship. Boutakoff made a presentation to the Brisbane conference of the Australian Petroleum Exploration Association on 19 March 1963, setting out his geological concepts of the NWS and proposing its major hydrocarbon potential. In the audience were representatives of Burmah Oil and Shell. The keynote speaker at that conference was the prominent oil geologist Lewis Weeks, who was at that time steering BHP into an exploration venture with Esso in the Bass Strait, offshore Victoria, in return for a substantial royalty.⁷⁵ Unlike Boutakoff, Weeks had the royalty agreed to in writing before giving the crucial information about where to explore.

General Manager Rees Withers and Boutakoff travelled to London and spoke to Burmah Oil, who signed an agreement with Woodside in late September 1963. Boutakoff then went to The Hague to present Woodside's proposal to the Royal Dutch Shell Group. He spoke at length with the Exploration Manager, J.J. Dozy, and eight days later Shell informed Woodside that they wished to join the partnership. An outline of the subsequent steps in the discovery and development of the vast NWS gas and oil fields is given by Robert Murray in *From the Edge of a Timeless Land*.⁷⁶

Quest for recognition

Boutakoff's involvement in the chain of events is beyond dispute. However his claim that he had been promised one-million Woodside shares by General Manager Rees Withers was later denied by Woodside. Boutakoff always maintained that the shares were promised in recognition of his past work and his role in a successful farm-out. A later application to Burmah Oil for an ex gratia payment of \$200,000 was referred to Geoff Donaldson, as Chairman of Woodside-Burmah Oil NL. After consultation with Rees Withers, Donaldson advised Boutakoff that 'there is no basis for your claims',

Figure 6: Woodside Chairman
Geoff Donaldson.



Source: Photo credit *news.com.au*

which were rejected.⁷⁷ Disillusioned and angered by this 'betrayal', Boutakoff severed his connection with Woodside by the mid 1960s and in 1966 was living in Dili, East Timor, as resident geologist for Timor Oil. He did consulting for them and International Oil Exploration between 1966 and 1972, and published several papers on Timor geology and oil potential.

Ingrid Campbell was a junior geologist when she met Boutakoff in about 1970, then working for Timor Oil. They worked in the same building and Ingrid recalls, 'I went to speak with him at times just because he was such an icon in the industry. I revered him.'⁷⁸ Ingrid's family was Latvian, so she understood the formal relationships of Europeans.

[Boutakoff] 'was used to a chain of command that is strictly kept in Europe. He was of the generation that held that strongly. The servant/master, not mates. That dictated his professional life, but with me, I wasn't working for him ... I just had conversations with him about geology—about how I should conduct my mapping and so on.'

In spite of the informality of their discussions, Ingrid was later surprised when told that Boutakoff's wife was Latvian, because he had never mentioned it.

Boutakoff must have wondered what went wrong with his attempts to get ahead with his various money-making schemes when he had expectations of success. Certainly he relied too much on verbal assurances. It is perhaps worth quoting here Eric Webb's observations from around this time concerning Boutakoff's lack of business acumen.

Nick was a very insular sort of chap and he didn't fit at all. It was obvious when he arrived ... Nick was very much a babe in the woods. On business I found him very naïve. He seemed to be away by himself. He wouldn't talk about other companies and what they were doing, but I never spent much time with him.⁷⁹

Coal and oil geologist Guy Holdgate did not meet Boutakoff, but gained a high opinion of him from talking to others and from Boutakoff's own explorations, and understands how the industry works for a geologist.

The difficulty is not so much selling your story, but doing the deal. The deal was all important, and that's where I think Boutakoff fell down. The deal he had with Donaldson fell apart.⁸⁰ He should have had it all sewn up legally. If you have an idea and you go to an oil company, you don't tell them anything until you've got a confidentiality contract signed ... He should have been cut in for something, but he fell out with them. If he hadn't fallen out with them he would probably have ended up like Donaldson with a whole lot of shares. If Boutakoff had played his cards right, he could have been a director and entitled to free shares. From what people say, he was a difficult person to get on with—secretive. Being Russian didn't help. Australians don't like foreigners!⁸¹

The major gas discoveries by Woodside made all the more consuming his sense of betrayal by Woodside, and Withers in particular. Boutakoff seems to have drawn everyone he could think of into his quest for justice. For example, his long-standing friend Gerard Terpstra was asked to use his friendships in Shell to exert influence. It was all to no avail. This disconsolate letter from 1974 captures the gratitude and resignation as well as the outrage Boutakoff still felt after more than ten years:

I wish to thank you so very much for having written on my behalf to Dr. Dozy. ... Dr. Dozy's reply was quite negative. ... I have seen my documents extensively used and copied in the Shell Office in Melbourne and in the Burmah (London) Office in Sydney. So that Shell, as much as Burmah, have been using my stolen work and are morally involved to the same extent.⁸²

Boutakoff might have had moral grounds for financial compensation, but any legal ones were untested. His appeals to those involved to provide proof could only prove his involvement, not his entitlement to reward. He was an employee doing his duty for the company—the view taken by Woodside management.

Boutakoff left a detailed résumé of his claim for compensation and copies of the whole dossier addressed to the Burmah Oil Company are with his papers at the State Library and in the possession of Rick Wilkinson and Peter Purcell, but unfortunately the hand-drawn lease plan that Boutakoff said was evidence of his prior claim cannot be found.⁸³ Rees Withers later said that he feared a legal challenge to Woodside might come from the Boutakoff family, possibly indicating a concern that the company was vulnerable to any such challenge. Boutakoff was not a poor man when he died, but he said he was unwilling to risk everything on a court case; had he done so, there was a chance of success. Woodside (Lakes Entrance) Pty Ltd had already appeared in the Supreme Court of Victoria in 1967 when challenged by Harlowes Nominees Pty Ltd over a share issue to Burmah Oil (Australia) Ltd. The details of the court case are less relevant here than the scathing comments from Mr Justice Gillard about Withers' character as a witness. He described Withers as 'a single-minded opportunist who was not handicapped by any scruple or feelings of loyalty to either so-called friends and colleagues.' And 'I do not believe he possessed any deep feelings of loyalty to anyone who would place reliance on his word...truthfulness and accuracy were not his virtues.'⁸⁴

There is no doubt that Withers was an astute and determined manager, who had brought the fledgling company from obscurity to world stature and may have little time for Boutakoff once the NWS lease had been obtained and the farm-ins signed up. He was a skilled and tough negotiator equal to the best and whilst Geoff Donaldson was the more public figure as chairman, Withers was the heart of Woodside, especially in the early days. Boutakoff is not mentioned in Withers' memoirs,⁸⁵ however, in 'The Woodside Story', which Withers also wrote, Boutakoff's role is acknowledged to some extent.⁸⁶

Robert Murray wrote a 'nostalgic' article about Woodside for the *Australian Financial Review* in 1972, based on an interview with Withers, in which Eric Webb was credited with 'recommending the northwest shelf areas to Woodside'.⁸⁷ A letter to the editor from John Stevens, former oil and coal adviser to the Victorian government, pointed out this error, giving Boutakoff the credit.⁸⁸ Webb also wrote to the editor correcting this on 31 May, and this was published on 8 June, two days after Withers' own reply had been published, in which he admitted Boutakoff 'influenced us in acquiring the offshore areas of Western Australia ...'.⁸⁹ Murray might have misunderstood Withers in the original interview, but in 1991, he gave Boutakoff comprehensive credit for his contribution.⁹⁰ Webb was a personal friend of Withers and there remains just a suspicion that Murray had been misled to negate Boutakoff's initiative.

Boutakoff's role in using the border between Australia and Timor-Leste in the NWS permit application was included in a recent book about Australia's callous exploitation of the now fledgling nation's interests.⁹¹ There is no reason to suggest that Boutakoff did so to define the border, but to conform to the existing boundaries he found in the State Library.⁹²

More evidence of Boutakoff's capacity to become engrossed in projects comes from a retirement interest: he was a devout member of the Russian Orthodox Church and devoted five of his last years to a study of the Shroud of Turin, driven by 'a sacred fire that enlightened him'.⁹³ He proposed the study should be published to inform members of the Russian Orthodox Church about this Shrine for under Soviet rule the church was heavily oppressed and religious books were at a premium. A forty-page précis of the lengthy document he produced was said to have been published by the Orthodox Holy Trinity Monastery in Jordanville, New York, but enquiries at the Monastery have failed to find any evidence of their involvement in the publication.⁹⁴ The full manuscript was sent to Fr Alexander Men, in Russia but Fr Michel Evdokimov, author of *Fr Alexander Men: Martyr of Atheists*, did not come across the manuscript amongst Father Men's papers and had not heard of Boutakoff.⁹⁵

Post script

Irene Boutakoff died in 1976, not long after their 25th wedding anniversary. The loss was devastating for Boutakoff who died a year later. He was buried beside his wife in the Templestowe Cemetery with the rites of the Russian Orthodox Church, and his

funeral service in South Yarra was attended by many of his ex-colleagues from the Geological Survey.⁹⁶

Although he had left the GSV 15 years previously, John Knight was concerned that there was nobody to look after Boutakoff's papers and library, so he collected them and prepared an inventory for the beneficiaries.⁹⁷ The Boutakoff's had no children, and his estate was assigned by the Public Trustee to his brother, Grigorii, in St Petersburg. Grigorii was clearly too ill to travel, so his daughter Aleksandra Boutakova came to Australia to help settle the estate.⁹⁸ On 22 March 1978, she took possession of thirty-one cartons containing Boutakoff's personal library from John Knight and left them in Boutakoff's Doncaster house, where they were collected by Tom Darragh from the Museum of Victoria.⁹⁹ Tom put the books into the museum library and Boutakoff's papers were forwarded to the Australian Manuscripts Collection at the La Trobe Library.¹⁰⁰ Aleksandra returned to St Petersburg, where her father passed away a week later, on 30 March 1978. Fortunately, Grigorii had left a will because the permission of the Soviet Union was required for Aleksandra to inherit from Australia.¹⁰¹

Figure 6: *The graves of Irene and Nicholas Boutakoff in Templestowe, Victoria*



Source: Photo, courtesy Mike Butcher.

Boutakoff's personality—secretive and distrustful of others in business matters, yet religious, loyal, and the soul of compassion and consideration of others in his private life had its origin in his aristocratic upbringing and may have left him with a sense of stolen entitlement after fleeing Russia. He needed to leave his mark on the world and was prepared to take risks to get ahead. His resourcefulness and ability are most evident from his first foray into Africa in 1929, from which he emerged as a skilled field geologist. His conservatism found expression in his geological theories and an understandable, but almost paranoid fear of Bolshevism. He evidently thrived under the patronage of Fr Salée, and possibly looked for this security of a father figure again under Kugler in Trinidad. He experienced a level of isolation at the GSV, where the culture was one of inclusion and teamwork. His ability was noted by his colleagues, but few saw both sides of his personality. Perhaps Roy Bull was the one exception. To his God-children, the only non-colleagues still alive who knew him, he was the epitome of kindness and was always interested in what they had to say, even as children. The illegal projects he undertook while at the GSV prevent us from reducing Boutakoff to a

paragon of virtue and helps to explain what his colleagues describe as aloofness and an unwillingness to fit in. His enthusiasm or obsession, for instance with his Great Circle theories, could be re-labeled as 'bug-eyed' excitability as one colleague expressed it.¹⁰² Fr Evdokimov similarly referred to Boutakoff's five-year work on the Shroud of Turin as an evidence of his 'ever-searching mind'.¹⁰³ His background and experience set him apart, but Ingrid Campbell recognised the source of Boutakoff's formality from her own European background that was foreign to most of his colleagues.

Since the 1980s freelance journalist Janis Embury has championed Boutakoff's cause and sought recognition for his contributions to the Bass Strait, the NWS and Timor. Her quest for greater recognition for Boutakoff has taken some unusual routes, including the 'Inquiry into potential reforms of the National Security Legislation'.¹⁰⁴ However, it is not surprising that Boutakoff's name is not associated in the public mind with the discovery of the NWS oil and gas fields: few oilmen are well known outside their industry, despite the great wealth their discoveries often create for both company and host country. In Boutakoff's case, he is generally accepted as having a pivotal role in Woodside's success, although it did not bring him the financial reward he sought. His belief in rich oil deposits on the NWS was later seen to be based on invalid geological concepts, but the fact remains that it was his foresight that gave Woodside the edge, ahead of rapidly arriving competitors, in obtaining the lease where their fortune would be founded. There are no monuments or medal¹⁰⁵ to commemorate Nicholas Boutakoff's life: only his publications and papers remain as his legacy.

Endnotes

¹ Nikolai, Nicolas and Nicolas were also used during his lifetime.

² Rick Wilkinson, *A Thirst for Burning: The Story of Australia's Oil Industry*, Sydney, David Ell Press, 1983, p. 412.

³ Rick Wilkinson, *Where God Never Trod: Australia's oil explorers across two centuries*, Windsor, Queensland, Christopher Beck Books, 2000 (1991), pp. 254, 274-7. Robert Murray, *From the Edge of a Timeless Land: A history of the North West Shelf Gas Project*, North Sydney, Allen & Unwin, 1991, pp. 8-14.

⁴ P. Purcell, Y. Collins and M. Butcher, Nicholas Boutakoff and Australia's North West Shelf, AAPG International Conference & Exhibition, Cartagena, Colombia, 9 September 2013. The abstract for this is published on line as: AAPG Search and Discovery Article #70152.

⁵ Mike Butcher, Yolande Collins and Peter Purcell, 'Nicholas Boutakoff: a pioneer petroleum geologist remembered', Australasian Mining History Conference, Beechworth, 1 October 2013.

⁶ PAC 343 Nicholas Boutakoff: Manuscript Section, State Library of Victoria (hereafter Boutakoff papers).

⁷ 'The Delicate Position of the Military Attache', *The Washington Times*, Magazine Features, 1 May 1904, p. 7.

⁸ Eulogy (In Russian) 1977: compiled by Boutakoff's mother-in-law (Anatolia Tilts) and his colleagues at the Geological Survey of Victoria. Kindly provided by Igor Oleinikov and translated by Grigorii Kabanov (St Petersburg).

⁹ Israel Getzler, *Kronstadt 1917-1921: The fate of a Soviet Democracy*, Cambridge University Press, Cambridge, 1983, p. 24.

¹⁰ The Nansen International Office for Refugees was awarded the 1938 Nobel Peace Prize for its efforts to establish the Nansen passports.

¹¹ The assistance of the Archives de Cannes is gratefully acknowledged for information about Mme Boutakoff. For an overview of the Russians in Cannes see: Amine Laggoune, 'Les Russes de Cannes (1879-1939)', Master 2 Recherche Histoire de la Méditerranée Moderne et Contemporaine, Département Histoire, Université de Nice Sophia Antipolis, 2013-14.

- ¹² N. Boutakoff, *Étude Stratigraphique et Tectonique sur la Région Frontale de la Nappe Provençale du Cheiron*, *Memoir de l'Institut Géologique de l'Université de Louvain*, v.6, 1931.
- ¹³ Albert V. Carrozi, 'The Reaction in Continental Europe to Wegener's Theory of Continental Drift', *Earth Sciences History*, v.4, n.2, 1985, p. 131.
- ¹⁴ Fr Salée to Mlle Boutakoff, 4 September 1930. The letter principally concerned information about certain compasses she was sending to Nicholas in Africa. Boutakoff papers.
- ¹⁵ A. Salée, N. Boutakoff, et J. de la Vallée Poussin, *Resultats Scientifiques de la Mission Géologique du Comité National du Kivu*, Fascicules 1&2, Mem. Inst. Geol. Univers. Louvain, Tome 9, 1939. Translations from the Russian of his letters to his mother (Olga Kasnakoff) were made by Boutakoff's friend Vladimir Michels (Mihailov) for Peter Purcell.
- ¹⁶ Letter Boutakoff to his mother, 20 January 1930. Boutakoff papers.
- ¹⁷ Letter Boutakoff to his mother, 1 November 1929. Boutakoff papers.
- ¹⁸ Baron Jean de la Vallée Poussin died on 2 August 2000, aged 96 years. His biography was contributed by Dr Pierre J Goossens to the newsletter of the Association of geology graduates from the University of Louvain in 1997. Translation kindly provided by his son, Gerard de la Vallée Poussin.
- ¹⁹ Letter from Lucien Cahen, the Honorary Director of the Royal Museum of Middle Africa, to John Knight, 21 June 1977. High praise from an Africa specialist.
- ²⁰ Irene graduated as a chemical engineer at Louvain, the only woman in her class.
- ²¹ Photographs of Irene from this time are in the possession of her daughter, Ingrid Koehler. They show her as a serious, unsmiling young woman.
- ²² Email: Ingrid Koehler to Yolande Collins, 4 January 2013.
- ²³ Pierre de Maret (1990), 'Phases and facies in the Archaeology of Central Africa', in P. Robertshaw (ed.), *A history of African Archaeology*, London: James Currey, 1990, 122; F. van Noten and J. Hiernaux, 'The Late Stone Age Industry of Mukinanira, Rwanda', *South African Archaeological Bulletin*, vol. 22, no. 88, December 1967, p. 151.
- ²⁴ Mme. I. Boutakoff, *Premières explorations méthodique des gisements de l'âge de la pierre au Ruanda-Urundi. Abris sous roche, ateliers et stations en plein air*, *Bull. Inst. Royal Col. Belge*, January to March 1937, pp. 179-201.
- ²⁵ 'My wife and I advise you of a new success in our researches: the grand grotto at Ruimangiargia.' Boutakoff to Royal Museum, 23 March 1930. Dossier 131, Royal Museum of Middle Africa, Tervuren.
- ²⁶ Els Cornelissen, Section Head for Prehistory and Archaeology at the Museum, was most helpful with the written records for Irene Boutakoff.
- ²⁷ Letter: Boutakoff to C. Teichert, 10 July 1947. Boutakoff papers.
- ²⁸ Hans Gottfried Kugler (1893-1986). His papers are in the Naturhistorisches Museum in Basel, Switzerland. Dr Michael Knuppertsbusch, Curator of Micropalaeontology, had not come across Boutakoff's name in Kugler's correspondence files in February 2018, but the collection is only partly indexed.
- ²⁹ References attached to Boutakoff's application for employment at Melbourne University: J.L. Knight collection, 29 June 1958.
- ³⁰ Also mentioned in the Boutakoff papers: Correspondence with Dr. H. Dighton Thomas, British Museum, May-June 1948.
- ³¹ Peter Kenley interview 8 January 2013.
- ³² Decree Nisi awarded 10 July 1942: News cutting of 11 July 1942 supplied by Ingrid Koehler, possibly from the *Trinidad Guardian*. Irene married Leonard Charles van Dongen and had one child, Ingrid Victoria. Irene worked at several universities in the United States before securing the foundation chair in Earth Sciences at California College, Pennsylvania. She died in 1973.
- ³³ Email from Nic van Dongen to Yolande Collins, 14 January 2013.
- ³⁴ Recollection of Yolande Collins, but no newspaper report or other supporting evidence has been located.
- ³⁵ Olga née Kasnakoff died 28 February 1943 and Elizabeth Boutakoff died on 12 March 1945. Both are buried at Mougins.
- ³⁶ 'Experts from Abroad for Mines Department', *Argus*, 3 February 1949.
- ³⁷ *RMS Orontes* passenger embarkation list. National Archives, London. Accessed on-line.
- ³⁸ Letter Boutakoff to Sir Edmond Teale, 26 April 1949. Boutakoff papers.
- ³⁹ Letter from Boutakoff to Dr H.D. Hedberg, 7 June 1949. Boutakoff papers.
- ⁴⁰ Peter Kenley interview 8 January 2013.
- ⁴¹ John A. Talent, 'David Evan Thomas (1902-1978)', *Australian Dictionary of Biography*, Melbourne University Press, 2002, vol. 16.

- ⁴² N. Boutakoff, *The Geology and Geomorphology of the Portland Area*. Memoir n. 22, Geological Survey of Victoria, 1963.
- ⁴³ Peter Kenley interview 8 January 2013. Some of Boutakoff's later writing does not show the same clarity of expression.
- ⁴⁴ John Nielson to Mike Butcher, 18 August 2014.
- ⁴⁵ Excerpt from autobiography by Vladimir Michels, given by him to Peter Purcell in 1991.
- ⁴⁶ Irina Tilts, 1921-1976: known in Australia as Irene.
- ⁴⁷ N. Boutakoff, 'Oil in Victoria', *Mining and Geological Journal*, vol. 4, no. 4, September 1951; 'The Structural Patterns of South-West Victoria', *Mining and Geological Journal*, vol. 4, no. 6, September 1952; (with R.C. Sprigg), 'Summary Report on the Petroleum Possibilities of the Mount Gambier Sunklands', *Mining and Geological Journal*, vol. 5, no. 2, September 1953; 'A New Approach to Petroleum Geology and Oil Possibilities in Gippsland', *Mining and Geological Journal*, vol. 5, nos. 4-5, September 1954 to March 1955.
- ⁴⁸ N. Boutakoff, 'Oil Search in Victoria, Australia', *Symposium Sobre Yacimientos de Petroleo y Gas*, Mexico, 1956.
- ⁴⁹ A biography of Sprigg's long and diverse career and interests has been written by his daughter-in-law: Kirstin Weidenbach, *Rock Star: The story of Reg Sprigg—an outback legend*. Hindmarsh, South Australia, East Street Publications, 2008.
- ⁵⁰ Kenley interview, 8 January 2013.
- ⁵¹ Rick Wilkinson, *Knights, Knaves and Dragons: 50 Years Inside APPEA and Australia's Oil and Gas Politics*, Media Dynamics, Windsor, Queensland, 2010, p. 218.
- ⁵² Boutakoff to P.D. McKenzie, 9 March 1955. Boutakoff papers. The letter outlines Boutakoff's experience as an oil geologist.
- ⁵³ John Talent interview, Parramatta, 26 May 2014.
- ⁵⁴ N. Boutakoff, 'The Great Circle Stress Pattern of the Earth', *Seminar on Geophysics & the Earth's Structure*, Canberra, 25 & 26 September 1950.
- ⁵⁵ Henry R. Frankel, *The Continental Drift Controversy: Evolution into Plate Tectonics*, Cambridge, Cambridge University press, 2012, p. 4.
- ⁵⁶ Paterson, MS, John Conrad Jaeger 1907-1979, Australian Academy of Science: biographical memoirs of deceased fellows, originally published in *Historical Records of Australian Science*, vol. 5, no. 3, Canberra 1982.
- ⁵⁷ 'Paul F. Hoffman, 'Tuzo Wilson and the acceptance of pre-Mesozoic continental drift', *Canadian Journal of Earth Science*, vol. 51, pp. 197-207.
- ⁵⁸ N. Boutakoff, 'The Great Circle Stress Pattern of the Earth', *Australian Journal of Science*, vol. 14, no. 4, 1952, pp. 108-111.
- ⁵⁹ Some of these spheres were collected by Tom Darragh with Boutakoff's papers, but their present location is unknown.
- ⁶⁰ Boutakoff to Dr H.R. Aldrich, Secretary, Geological Society of America, 31 August 1953.
- ⁶¹ Peter Kenley interview 8 January 2013.
- ⁶² Australian Academy of Science, Biographical Memoir, Edwin Sherbon Hills, <http://science.org.au/fellows/memoirs/hills.html#victoria>
- ⁶³ Don Spencer-Jones interview, 4 February 2013.
- ⁶⁴ Interview with John Talent and Ruth Mawson, 25 June 2014 at Parramatta.
- ⁶⁵ Royden Bull interview, Bairnsdale, 5 August 2014.
- ⁶⁶ Letter from A.D.N. Bain to John Knight, 13 July 1978.
- ⁶⁷ Boutakoff to Dr H.D. Hedberg, Boutakoff papers, 7 June 1949. Boutakoff was trying to find work back in the oil industry. His understandable fear of Communism extended to trade unions of any kind.
- ⁶⁸ Robert Murray, *From the Edge of a Timeless Land: A History of the North-West Shelf Gas Project*, Allen and Unwin, North Sydney, 1991, p. 9.
- ⁶⁹ N. Boutakoff, Geology of the off-shore areas of North-Western Australia, *APEA Journal*, 1963, vol. 3, pp. 10-18.
- ⁷⁰ N. Boutakoff, The Eighteenth Anniversary of Permit to Explore 213H. Boutakoff papers.
- ⁷¹ The nominal directors were J.J.W. and B.I. Gandy and Cyril J. Skate. Arthur Phillips and Just were the Perth solicitors instructed to deal with the Department of Mines concerning the lease application. Defunct Companies Register, VPRS 932/P0/1685; and Boutakoff papers.
- ⁷² Engineer, surveyor, mine manager and investor. McKenzie died 12 June 1985 in Melbourne.
- ⁷³ I.R. Greer and G.C. Smith, 'Geology of the Gelliondale Coalfield' in C.W. Mallet (ed.), *Proceedings Geological Society of Australia, Coal Group Symposium, Coal Resources: Origin, Exploration and Utilization in Australia*, Melbourne 15-19 November 1982, p. 73.

- ⁷⁴ Sir Charles Court, Notes for an Energy Presentation to a Celebratory Dinner of the Australian Institute of Energy—Perth Branch, 18 February 2004, p. 6. Copy held by the Australian Institute of Energy—Perth Branch.
- ⁷⁵ P. Lloyd, *The Weeks Royalty: An historical and analytical account of the world's premier petroleum royalty granted for personal services*, Sydney, Fortis, 1993.
- ⁷⁶ Murray, *From the Edge of a Timeless Land*.
- ⁷⁷ Letter, J.G. Donaldson to Boutakoff, 7 May 1973. Boutakoff papers.
- ⁷⁸ Ingrid Campbell interview with Peter Purcell, 19 June 2013.
- ⁷⁹ Eric Webb interview at Airey's Inlet, 5 February 2013.
- ⁸⁰ The deal was done with Withers, not Donaldson.
- ⁸¹ Guy Holdgate interview, 12 December 2014.
- ⁸² Letter, Boutakoff to Dr G.R.J. Terpstra, 30 Sept 1974.
- ⁸³ Rick Wilkinson was given this dossier by the late Robin Glenie who had been a friend of Boutakoff.
- ⁸⁴ Harlowe Nominees Pty Ltd v. Woodside (Lakes Entrance) Oil Co. Ltd and Burmah Oil Australia Limited; judgement 25 August 1967, p. 28a.
- ⁸⁵ 'The Memoirs of Rees Bedford Withers', 5 January 1995, MS copy in the possession of the family.
- ⁸⁶ 'The Woodside Story', MS copy in the possession of the family.
- ⁸⁷ *The Australian Financial Review*, 18 May 1972. Letter from E.A. Webb to the editor, 31 May 1972. It is perhaps surprising that a copy of this letter is among the Boutakoff papers.
- ⁸⁸ Background to Woodside', *The Australian Financial Review*, 25 May 1972.
- ⁸⁹ Letter: Rees B. Withers, 'Off-shore oil areas', *The Australian Financial Review*, 6 June 1972, p. 3.
- ⁹⁰ Robert Murray, *From the Edge of a Timeless Land*, p. 8, *passim*.
- ⁹¹ Kim McGrath, *Crossing the Line: Australia's Secret History in the Timor Sea*, Carlton, Victoria, Redback Quarterly, 2017, pp. 15-17.
- ⁹² Boutakoff, The Eighteenth Anniversary of Permit to Explore 213H: autograph list of key steps surrounding the acquisition of Permit to Explore 213H, 1954-1972. Boutakoff papers.
- ⁹³ Eulogy (1977).
- ⁹⁴ Published as *The Holy Shroud*. Fr Men was himself under intense scrutiny as a dissident by the Soviet authorities and it is probable the manuscript never reached him. What he was expected to do with it is unclear, as he had the greatest difficulty at the time in getting his own work published outside Russia and smuggled back into the country.
- ⁹⁵ Michel Evdokimov, *Fr Alexander Men: Martyr of Atheists*, Leominster, Gracewing, 2011.
- ⁹⁶ Don Spencer-Jones interview, 4 February 2013.
- ⁹⁷ Copy deposited with the Boutakoff papers. His collection of minerals was never located and presumably had been given to a friend.
- ⁹⁸ Probate papers: Nicholas Boutakoff VPRS 28/P8/132; Grigorii Aleksandrovich Boutakoff VPRS 28/P9/300.
- ⁹⁹ Receipt dated 22 March 1978.
- ¹⁰⁰ Letter of acknowledgment from Kathleen Young, Acting La Trobe Librarian. 28 November 1979.
- ¹⁰¹ VPRS 7591/P5/57.
- ¹⁰² American geologist Ed Durkee described Boutakoff in this way, see Wilkinson, *Where God Never Trod*, p. 275.
- ¹⁰³ Email from Fr Michael Evdokimov to Mike Butcher, 22 January 2015.
- ¹⁰⁴ Janis Embury, Submission No. 105, Inquiry into potential reforms of National Security Legislation, Parliamentary Joint Committee on Intelligence and Security, 16 August 2012.
- ¹⁰⁵ Part of the fortune Lewis Weeks earned from the Bass Strait royalty was used to endow a gold medal to be awarded annually from 1982 for 'distinguished personal achievement in the Australian petroleum exploration industry.' The 2010 recipients were Peter and Robyn Purcell.