

PLANS TO CLOSE THE OK TEDI MINE IN PAPUA NEW GUINEA

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Over the past 30 years, the Ok Tedi gold and copper mine has played a central role in Papua New Guinea's national economy and political landscape. With closure on the cards (whether in 2013 or 2022), all stakeholders are aware of the significance of the social and economic changes which closure will bring to the North Fly District and Western Province as a whole. These changes will be shaped by the ways in which Ok Tedi Mining Ltd and the other stakeholders plan for the event of closure. The social and economic aspects of mine closure plans are especially significant because of the pivotal place which the mine holds in the regional economy and the opportunities, benefits and services that it provides to local communities. This paper will explore the complex relationships that have developed between the primary stakeholders on the subject of mine closure planning during the life of the mine to date. It will also reflect on the way that plans for the sustainable development of the mine-affected area in the period approaching and following the closure of this particular mine have been related to the broader national policy process dealing with the issue of mine closure and the contribution of the mining industry to sustainable development outcomes for people living in such areas.

Introduction

One of the most important issues facing the mining industry globally today is mine closure and sustainability. The life cycle of mines was exploration, development, production, closure. In previous times, mine closure was not about sustaining communities or livelihoods in the area of resource development. The classic approach the mine closure centred on rehabilitation and decommissioning. Social aspects of mine closure have historically throughout the world been focussed on retraining workers and rehousing residents of mining towns. For many mines around the developed world this is still the general way which mines are closed (Laurence 2006).

In both the developing and developed world a large problem in mineral resource development is that much of the time it does not induce sustainable development. Mine communities often

face dissolution when mines close, but in developed diversified economies other major industries exist. In developing countries without diversified economies, mining is more akin to terminal development because the businesses and services which develop around the mining town or to service contracts of the mine are completely dependent on the resource development for work. In this context, mine closure is far more devastating to remote and regional communities because the mine is often the sole driver of the regional economy.

Sustainability as a concept has only come into the debates about mine closure in the last decade. It has been in response to the growing realisation that mine closure doesn't have to mean community closure. The lifecycle of resource developments now include a large focus on post-closure sustainability. Engaging local communities in mine closure and sustainability planning has become a central theme in Papua New Guinea. Understanding why sustainability has become such a large part of the closure planning in developing countries such as PNG can possibly uncover routes to sustainable futures for other resource communities throughout the Pacific.

Method

The way in which I have approached the question of "How is sustainability planning influenced by stakeholder engagement and the national policy agenda?" is through two methods.

1. Examination of key primary source documents
 - a. 2000 Sustainable development plan, 2002, 2004, 2006 draft mine closure plans and 2009 detailed mine closure plan (OTML)
 - b. Long Term Outline Economic Development Plan (National Gov)
 - c. Sustainable Development in Ok Tedi area (OTML consultancy report),
 - d. North Fly Regional Action Plan (OTFRDP)
 - e. FRPG development plans
2. Discussions with key stakeholders

Through these two methods I have been able to approach sustainability planning. I am examining this because it will contribute to the understanding of sustainability planning generally throughout the Pacific mining area.

Mine Closure in the Pacific

Mine closure is a pressing issue in the Pacific region, especially Papua New Guinea. There have been a number of mine closures in the Pacific islands, some planned and other forced. The Gold Ridge mine in Solomon Islands and the Panguna Mine in Papua New Guinea are the main examples of abandoned mines. Misima is the main example of planned closure in Papua New Guinea. There is a significant lack of literature about planned mine closure in the Pacific, owing to the dearth of planned closures. From the start of large scale mining in PNG specifically, there had been a reasonably “ad hoc” approach to closure. In the case of Panguna, it was not Bougainville Copper Limited’s first choice to close down. Misima’s closure, although planned, was not adequately sustainable, and the island is now suffering the consequences of that lack of foresight. The significance of planned closure comes to light when considering that two of the largest mines in Papua New Guinea are in the process of closure. Porgera mine in Enga Province and Ok Tedi in Western Province are scheduled to close within the next decade. From a public policy standpoint, these two mine closures will have a significant detrimental and lasting impact on the provinces which they now operate in.

PNG derives the majority of its foreign exchange earnings from the resource sector. Mining in the Pacific Islands is dominated by the mineral resource wealth of Papua New Guinea. The scale of mineral resource development in PNG shown by the many large mines past, present and future in the area. From Misima, Kainantu, Panguna, Porgera, Lihir, Ok Tedi, and will see many more large scale and innovative mines in the next 2 decades, - Ramu NICO, Solwara 1, Frieda. Understanding the centrality of sustainability planning to the futures of all these mines is a key concern of the industry and academics alike.

The Ok Tedi Context

Ok Tedi holds a dominant, but waning, place within this sector is held by the Ok Tedi copper and gold mine in Western Province. The Ok Tedi mine has an remarkable history, much of which is steeped in controversy (Jackson 1982, Pintz 1984, Ballard and Banks 1997). Most known for being an internationally recognized case of environmental damage, in the last decade Ok Tedi has faded from the glare of international environmental NGOs because of the withdrawal of BHP Billiton in 2002. The mine has been in production for almost 28 years. It took only sixteen years from the discovery of the ore-body (1968) to production (1984). Comparatively, the Frieda/Nena ore-body was discovered in the same exploration era as Ok Tedi, and is a far larger deposit, but it still has not been developed. An OTML manager said that from discovery to production for any other company in the Star Mountains area would

take over 40 years. OTML has changed its corporate slogan from “More than a Mine” to “Building Our Future – More Than One Mine”, OTML has also signaled that they are diversifying away from their eponymous mine. With the current orebodies almost exhausted, the current detailed mine closure plan (DMCP) of 2009 has the mine closing scheduled for 2013, however the current mine life extension (MLE) negotiations (which may take the form of a 10th Supplemental agreement) would see new ore bodies, but only at 60% of current production, with closure in 2022. This mine is the most significant mine to close by planned means in the region.

Over this time the global mining industry has faced many changes which have influenced the way in which Ok Tedi Mining Limited has approached mine closure planning. The closure planning process involves not just decommissioning, rehabilitation and relinquishment plans, but also a central theme is the socio-economic and cultural impacts and effects of closure on the impacted communities. From 2002 – 2006 OTML provided 3 Draft Mine Closure plans to the National Government (Specifically the relevant mineral resources department and the DEC). In 2009 the submitted the Detailed Mine Closure Plan (DMCP), which was the culmination of a decade of “back and forth” with the government. This plan is the most comprehensive to date, comprising 4 volumes. The DMCP has not been approved by the DEC or MRA yet, despite an “in principle” approval from the government. Sustainability is a key concern for the mining company and the associated stakeholders in the mine. Ok Tedi’s experience of mine closure planning serves as an informative tale for any involved in closing largescale mines in Melanesia.

The Ok Tedi mine closure is the most complex and large currently being undertaken/planned in the world. The mine’s impact area is the largest of any mine in the world, with the area of mine area and riverine tailings impact roughly a third of Western Province’s 99,300 square kilometers. This area contains a population of compensated landowners at 83,000 (OTML 2007). The wider population impacted by the mine in more indirect ways includes the Preferred Areas of Telefomin and North Fly District, which comprise many people involves the majority of the population of Western province and a third of Sandaun province.

The issues of sustainability at Ok Tedi are numerous, and require a re-thinking of traditional mine closure planning practices. Where before mining development there was nothing but scattered hamlets of subsistence gardeners, there is now the province’s largest population centre, including associated settlements of over 23,000 people (OTML 2009). Located in a

closed road system, in the high mountains of NW North Fly, the mine is located at the headwaters of the Ok-Fly river system the mine is serviced by the mine town Tabubil and the government town and port Kiunga. Since it is not connected by road to any other province, the North Fly's economy is almost wholly dependent on Ok Tedi and its associated infrastructure. With the closure looming in the not too distant future with 'staged closure of Mine Life Extension until 2022, the mine closure plans have become more focused on a post-closure future. The planning for a future without the Ok Tedi mine means planning for a whole regional economy to be transformed, and its focus to be shifted onto other industries. How has Ok Tedi's mine closure planning become focused on sustainability?

Stakeholders and sustainability planning

Sustainability Planning

Sustainability has not always been a core tenet of mine closure planning, least not in PNG. Where sustainability planning came from as opposed to just the idea of mine closure is hard to pinpoint, as there is a wealth of grey matter reports which have been generated over the decades, but not many of which are attainable.

Planning for a sustainable future for Ok Tedi's impact area involves more than a sustainable future for most other mines would. The sheer scale of Ok Tedi's impact area, coupled with the lack of government engagement in the province, means that the problem is twofold. OTML has over the years provided many services, both for the Tabubil community, and for the province as a whole through the Tax Credit Scheme. Through the MOA, LOTA, FRDT, and now CMCA, the company, and its development partners, give services to almost 83,000 people from Atemkit all the way to the Fly Delta islands. Saying that Ok Tedi is the primary economic driver of the province is not an exaggeration, as without it, the province would not have much in the way of significant economic

Dependency of local economic systems on mine development exists at the Ok Tedi mine, as there is currently no large-scale industry in Western Province which can fill OTML's place when the Ok Tedi mine closes. The only significant other regional money earner is the rubber industry, which relies heavily on the subsidies logistics from OTML. The forestry sector is not a huge sector in Western Province yet, although this could change significantly with the 2.1 million hectare Special Agricultural and Business Leases in a swathe from Drimgas to Balimo, which are alleged to be part of a stealth logging operation by Malaysian loggers under the guise of building a road.

Not only are local businesses dependent on the mine for income, but the local populations are too. Specifically this is referred to as project dependency, whereby the communities are more dependent on the pseudo-administration of the mining company than they are on the actual government administration. This is the case in Ok Tedi. The mine is the primary employer in the province, provides services to the North Fly District, such as schools, hospitals and aid centres, roads and utilities. In this context, the stakeholders of the mine have been collaborating the various degrees of success to formulate plans and policies to enable a sustainable future for the North Fly District and Western province more generally.

The problems that have arisen in relation to the Ok Tedi mine are extensive and complex. From the downstream impacts of tailings on fish biomass to the increasing migrant population in the northern part of the province drawn by false hopes of employment, the problems all affect sustainability planning for the post-closure era.

In early 1999 a sustainable development workshop was held by OTML to discuss the sustainable future of the area. Ten sustainability principles were agreed to by in this workshop. They are as follows:

- providing a sustainable economic base
- maintaining infrastructure (road network, bridges, radio station, hospital, Kiunga - Tabubil highway, airstrips and communication systems)
- providing effective governance for the future
- mitigating environmental impacts
- ensuring a skilled labour force
- continued access to health and education services
- gender equity
- providing food security
- having an integrated development and mine closure plan. (Newton et al 2000)

In July 1999, OTML convened a workshop to discuss how these principles of sustainable development could be applied to OTML's environmental and community programs. This workshop was attended by stakeholder representatives from OTML, BHP, National Government Departments of Mineral Resources, Environment & Conservation, Treasury and Planning, Attorney General and Western Province, as well as independent participants (OTML 2000)

Importantly, the group defined sustainable development as it applies to the North Fly and the rest of the Western Province after the Ok Tedi Mine is exhausted.

For OTML, sustainability:

- includes a relationship between *current* and *future* generations;
- requires an *institutional framework* for governance so that facilities and programs can persist, and
- assumes both *socioeconomic* and *environmental* improvements, on-going after mine life.

This workshop identified sustainability objectives that need to be achieved by the time the mine closes in order to have satisfied the elements of sustainable development as the group defined. Subsequent to these workshops, OTML produced the 2000 ‘Social and Sustainable Development Issues in Relation to Mine Closure’ report which details OTML’s position on sustainability in for the impacted communities. This focus on sustainability with specific reference to mine closure shows that OTML’s consideration of sustainability predates the World Bank’s influence on the national sustainability planning agenda.

Until the 9th Supplemental agreement there was no code for closing and decommissioning Ok Tedi. Since Ok Tedi is governed by its own act the Mining (Ok Tedi) Act 1976 and the associated 9 supplemental agreements, it is not governed by the Mining Act 1992. This gives Ok Tedi a special place within the PNG mining sector, and allows it flexibility that other mines do not have in negotiating. It also, sometimes, presents conflict of interest accusations from some commentators, considering the State of Papua New Guinea is regulator, tax beneficiary and shareholder of the mine (this was of particular salience when the 8th supplemental agreement was put forward).

Stakeholders

Social and economic aspects of mine closure are now at the forefront of mine closure planning in Papua New Guinea. In the case of Ok Tedi there is a moral obligation to leave benefit to the communities after the mine closes because of the significant environmental impacts and the associated social effects that the mine has wrought. The money which will fund these projects comes from 2 sources generally – the CMCA trusts set up as a result of the 9th supplemental agreement and the PNGSDP funds. The PNGSDP funds are also for the Western province more generally, as well as being for the benefit of the nation. Royalty funds

also are important for funding the development of the province and these come in the form of the WPDF for CMCA and Non CMCA communities.

The stakeholders in the Ok Tedi mine closure are numerous, but all of them contribute in some way to the shaping of sustainability policy. From the very start of the project in 1976 it was known that Ok Tedi was going to be a special mine. The sheer fact that it exists today is testament to how unique the mine is. The challenges to building the mine led now challenges to sustaining the livelihoods of the communities that live in the shadow of the mine.

Shareholders

In the initial phase of the mine, there were 4 shareholders in Ok Tedi Mining Limited, BHP, AMOCO, Kupferexplorationgesellschaft and the state of Papua New Guinea. This shareholder structure changed in the early 1990s when AMOCO and the German consortium withdrew due to unwanted pressures from environmentalists. Inmet Mining of Canada came and BHP took a larger shareholding and so did the State of PNG. In 2002 BHP transferred its majority shareholding to a Singaporean incorporated development company PNG Sustainable Development Program Limited (PNGSDP). In 2011 Inmet Mining withdrew completely from OTML after previously in 2010 swapping its 18% shareholding for a 5% Net Smelter return, as it did not want to be involved in Mine Life Extension. The 18% shares were cancelled making PNGSDP (64%) and the State of PNG (36%) the only shareholders. The post-multinational mining company involvement era has been dubbed the “New Era”. The focus of OTML’s production is to reap shareholder value, which by extension, is value for the people of Papua New Guinea, as they are the recipients of the benefits of dividends, taxes and royalties. With wads of cash at the ready to deploy on various projects, the stakeholders have no excuse not to attempt sustainable development in the impact regions and the whole province more widely.

OTML

OTML in and of itself is a diverse and large organisation. The department most involved in sustainability planning is the Community Relations department, headed by Yaru Pohei. The CR department is involved in payments and surveying work throughout the CMCA area. The Mine Closure Planning Department co-ordinated the mine closure planning committees which were the way in which the various parts of the DMCP 2009. From 2002 – 2006 OTML provided 3 Draft Mine Closure plans to the National Government (Specifically the relevant mineral resources department and the DEC). In 2009 the submitted the Detailed Mine

Closure Plan (DMCP), which was the culmination of a decade of “back and forth” with the government. This plan is the most comprehensive to date, comprising 4 volumes. The DMCP has not been approved by the DEC or MRA yet, despite an “in principle” approval from the government. Ani Topurua is mine closure co-ordinator, and Shannon Mackenzie was mine closure manager until late 2009. The internal politics of OTML are an interesting topic which there is not enough scope in this paper to address beyond saying that OTML functions like a bureaucracy, due to its size and role in regional development.

Since OTML is not planning the closure alone, how does the relationship between the other stakeholders affect sustainability planning at Ok Tedi? How do the various stakeholders of the mine manage sustainability planning in their own right? How do the stakeholders come together with sustainable planning?

National Level

Ok Tedi is governed by its own Act, which is supplemented and amended where necessary by the national legislature. The current agreement is the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001. This agreement has as its third schedule the Mine Closure and Decommissioning Code 2001, which sets out the obligations of OTML for closure planning. The mining act 1992 has no provisions for closure, and the national government has not yet finalised a mine closure act or supplemental schedule to the mining act to address this. This is despite a draft mine closure policy being developed to 2005 by the Department of Mining. In any event, any mine closure policy would only act in Ok Tedi's case to “fill the gaps” in the MCDC 2001, as Ok Tedi is not subject to legislation that is inconsistent with its own act and supplemental agreements (Allens, Arthur, Robinson 2006). This legal situation also means that the Environment Act 2000 is not applicable to Ok Tedi, as Ok Tedi has its own environmental regime built into the principle and supplementary agreements.

Rather than the National Government being an amorphous singular voice, the various departments and offices of the government have very different views and relationships with the mine. The department of treasury sits on the OTML board, but is not involved with regulation. The Mining Department and the Environment Department (depending on their name) are most involved in regulation of the mine.

The relationships between the various stakeholders is somewhat guided by regulations. In 2009 then Department of Mines was split into the MRA and the Department of Mineral

Policy and Geohazard Management, which is responsible for developing government policy on mines, including the national mine closure guidelines. The Mineral Resources Authority (MRA) is recipient of mine closure plans, which includes the Social and Economic Report, with the Department of Environment and Conservation (DEC) responsible for the Mine Area Rehabilitation Plan. The Social and Economic Report is required by Schedule 1 of the Code to accompany the Mine Closure Plan. This report details the social and economic impacts of the mine and what the various stakeholders in the mine are currently doing in order to ameliorate the negative effects. The responsibility for social and economic matters was originally under the Office of Environment and Conservation when the initial planning for the mine took place. Social planning for the mine was initially the responsibility of the Department of Environment and Conservation (as is seen in the consultancy report titled Social Planning Strategy 1977 vols 1 and 2) . During the 1980s and early 90s the onus for social monitoring was on the mining company as the national government lacked capacity and budget to monitor mines without assistance from the mine. The various social impact reports from Barth and Wikan's "Cultural Impact of the Ok Tedi Project" to the Ok Fly Social Monitoring Project reports (Burton et al). Sustainable development was examined by Jackson (1995) in the OTML consultancy report "Sustainable development in the Ok Tedi area", which was produced at a time which many people were calling for the immediate closure of the mine due to environmental concerns.

After the Ok Tedi development forum agreements were conducted in the early 1990s, there was a commitment undertaken to examine the long term development of the Ok Tedi area. At this time the Office of National Planning and Implementation and Department of Mineral Resources of were responsible for funding the study, rather than Office of Environment and Conservation. From the MOA in 1991, it took until 1999 to be produced by Ok Tedi consultant Richard Jackson. After 1995 the Organic Law meant that the Provinces and LLGs would be responsible for drawing up their own development plans, however the commitment to the LTDS pre-dated the new law.

Provincial government

Many difficulties exist in the Provincial and LLG planning for development. The Western Province Capacity Building Project was designed to overcome some of these difficulties, but with a history of weak governance, corrupt administration and absentee government, it was not effective in ensuring relations between the stakeholders in planning was any more smooth.

These complex problems are not aided by specific and directed difficulties in stakeholder relations with the provincial government. Overtly hostile is the only way to describe the FRPG's stance towards OTML and PNGSDP. The governor of Western Province, Dr Bob Danaya used threats annexation of PNGSDP on behalf of the people of western province as a constant destabilising thing. PNGSDP's chairman retorts to this by saying that "the (Western) province has no history of a fully functioning government and fully functioning infrastructure to deliver goods and services to the people." (Namorong 2011). The thorn in all other stakeholders' sides is the grandstanding and posturing of the provincial government at the expense of the very people they claim to represent. The North Fly has been left to be administrated by OTML since the early 1980s. In this climate, effective provincial planning is impossible. The plans that the provincial government and administration have in the past developed are not in line with the reality of Western Province. The decades of neglect from the Provincial Government has meant that health, education, infrastructure and transport are not at the level yet to be able to start implementing any of the plans, let alone have them be successful. For example, there has never been a passenger ship that travels between Daru and Kiunga, despite this being the easiest route. The division between the bureaucracy of the Western Provincial Administration and the elected members of the FRPG is the only thing that enables any form of dialogue between the Administration and OTML, PNGSDP, OTFRDP. Even this budding relationship comes under fire from the Governor, who attempted to sack the provincial administrator William Goinau despite having no such powers. This antagonistic relationship harms the province.

PNGSDP

The Mining (Ok Tedi Mine Continuation [Ninth Supplemental] Agreement) Act of 2001 made provision for BHP Billiton to 'gift' its 52% shareholding in OTML to an entity called the 'PNG Sustainable Development Program Company' in return for a government guarantee that indemnified it against 'environmental claims' in respect of the damage caused by the mine. PNGSDP is incorporated in Singapore. PNGSDP's basic mandate is to invest two thirds of its mining profits in a 'Long Term Fund' which will be deployed when the Ok Tedi mine closes, and to spend the balance of its income, including the interest on this long-term investment, on the implementation of 'sustainable development projects' in both Western Province and the rest of PNG, throughout and beyond the remaining life of the mine (PNGSDP 2002). These projects have ranged from forestry, health to buying a plane for Air Niugini. PNGSDP is unique in that it is a civil society organisation which has the

responsibility of a provincial government. It funds other organisations, such as church groups, in order to facilitate better outcomes, rather than setting up wholly new organisations.

The relationship between OTML and PNGSDP has grown over the past decade, from a shaky start. By coming together as partners in sustainability planning, the two organisations have been able to slowly understand the role of the other. The Tabubil Futures project of PNGSDP seeks to find a sustainable purpose for Tabubil post closure, rather than just letting the town go to ruin with the provincial government (Clewett et al 2011).

OTDF/OTFRDP

The relationship between OTFRDP and OTML has developed over the last 10 years significantly. OTDF was created as part of the Mining (Ok Tedi Mine Continuation (Ninth Supplemental) Agreement) Act 2001, the same agreement which created PNGSDP and the Mine Closure and Decommissioning Code. Initially, OTDF was created as an independent entity but in reality acted as part of OTML's regional development department. It was responsible for running programs in the CMCA villages from the Mine Area to Kiwai in the Fly Delta. It was intended to be an independent organisation that acted on the behest of the CMCA communities not OTML. However, In the 2006/7 CMCA review, many landowners complained that OTDF and OTML were the same and that they saw no point in calling OTDF separate when it was not. This is mirrored by other stakeholders saying that historically OTDF was more like an arm of the OTML public relations department that a foundation for genuine development.. Subsequently, steps were made to clearly delineate between OTML and OTDF.

Many of the projects OTDF engaged in were unsuccessful, especially those in agriculture/livestock. The difficulty of implementing rural development schemes at Ok Tedi reflects the wider difficulty throughout the country of successful sustainable development. In mid 2010 OTFRDP was completely spun out of OTML, becoming a "new entity" and a new, separate stakeholder in sustainability planning. It is the trading name of OTDF, but has different responsibilities to its parent. It is responsible for community projects, including the three commercial ships which will ply the Fly River trade route as passenger, cargo and research vessels. OTFRDP is at the coal face of sustainable livelihood policy implementation. Whatever plans are made by other stakeholders are directly actionable by this entity. Community members come to OTFRDP and float ideas which have to be approved through

village planning committees, and can be funded through a range of options from 10% Women and Childrens' fund to PNGSDP project funding (OTFRDP 2010).

The struggle for OTFRDP is identifying what is sustainable and what is not. Sustainable development's largest challenge in the Ok Tedi impact corridor is attitude and behaviour of the residents. There is no lack of funding for well thought out and planned projects, but mismanagement of funds, loss of interest, lack of upkeep of machinery or equipment all hamper sustainability projects. Examples include the Finalbin Integrated Farm project, which was one of the main model farms in the north fly. The death of the significant project landowner meant that the driving force behind what had been a moderately successful food security project faltered, and within a year the site was in disrepair. This shows the challenge to sustainability in the area is contributed to by culture and attitude of local people.

Conclusion

Mine Closure is a challenge in any context. The development of mines in remote regions can lead to a concentration of activity around the mine rather than a diverse regional economy. This has been the case at Ok Tedi, with the community dependent on the mine for everything, including services that are the responsibility of the provincial government.

Many of the sustainability plans are being made unilaterally. With regard PNGSDP's Tabubil Futures project, the comment was that the consultants were just taking OTML information and repackaging it rather than making their own discoveries. Some of the projects taking place in North Fly are duplications – such as PNGSDP's health initiatives and OTML-JTAI North Fly Health initiative. There is always going to be a problem with turf wars over whose responsibility certain services are, especially with the Provincial Government. The importance of sustainability policy to the people of the North Fly cannot be overstated. Although this is a fairly short paper, some of the complexities of the stakeholder relations have been shown. The difficulties of disentangling the history of sustainability planning in PNG are because it has a complicated history, which requires much more analysis than has currently been offered. This analysis will be undertaken in my doctoral thesis.

Acknowledgements

Thank you to Ok Tedi Mining Limited for supporting and assisting this research.

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