



CAPERTEE VALLEY ALLIANCE INCORPORATED.

The Manager
Coal & Petroleum Titles and Systems
PO Box 344
Hunter Regions Mail Centre NSW 2310

13th March 2014

Submission of Capertee Valley Alliance (“CVA”) in opposition to Petroleum Exploration Licence Application (“PELA 158”) by Ceemac Pty Ltd (“Ceemac”)

Dear Sir,

Background

Since white settlement of the Capertee Valley in the 1830s, pastoralism has been, and remains, the backbone of the region. The Capertee Valley has for more than 150 years produced food and fibre for domestic consumption, and export markets. For brief periods in the first half of the 20th century, mining and shale oil production was undertaken. Such activities were largely unsuccessful. The legacy of those industrial activities endures, in degraded landscapes and arid wastelands. Pastoralism on a viable commercial scale has also survived the economic, environmental and social challenges of hobby farm subdivision in the last quarter of the 20th century.

The few recorded histories which survive confirm that water has always been a scarce and precious resource in the valley. So problematic was water in the valley when the Glen Davis shale oil works were being developed in the 1930s that a pipeline from Oberon Dam to the town and works needed to be constructed.

Without pastoralism, there is no reason for people to live in the valley. Generations of farmers of the Capertee Valley have invested their lives, their labours, and everything they own or earn into their holdings. They have been, and remain, “in for the long haul”, but it is fanciful to suggest that, if pastoralism dies in the valley, the jobs, the investment, the contribution to national food security, not to mention a way of life, and the traditions of the region will not die with it.

The applicant for the PEL

Searches conducted on behalf of CVA suggest that the applicant has a paid up capital of \$2. CVA has been unable to obtain any information from any source establishing, or even suggesting that the applicant is a company of substance. Internet searches have not revealed anything to suggest that the shareholders in and directors of the company have experience or expertise in the coal seam gas (“CSG”) industry, although a “lobbying” association with the industry appears to be a possibility.

As the government should be acutely aware, acquiring exploration licences and on-selling them for massive sums is not unknown in New South Wales. If Ceemac is merely a “front” for an unknown and undisclosed applicant, many issues, all potentially sinister, arise.

CVA submits that the present application should be rejected without further consideration unless Ceemac publicly provides independent evidence satisfying the NSW Auditor-General that:

1. Ceemac is applying for the PEL on its own behalf;
2. the shares in the company are beneficially owned by their holders;
3. Ceemac has net assets of not less than \$50,000,000;
4. Ceemac has proven experience and expertise in coal seam gas (“CSG”) exploration, and particulars of such experience and expertise;
5. Ceemac has no contractual or other associations of any kind with any political party or CSG company, whether in domestic or foreign ownership;
6. neither Ceemac or any shareholder in or director of the company has been convicted of any offence, been fined pursuant to, or otherwise breached any state or Federal law in relation to pollution of, or damage to the environment;
7. Ceemac’s proposed performance guarantees, and security for such guarantees, with respect to future environmental, economic and social damage resulting from any activities undertaken by the company pursuant to any PEL issued to it.

CVA will refer any approval of Ceemac's PELA which does not satisfy the above minimum criteria to the Independent Commission Against Corruption for investigation. The criteria are submitted to provide the minimum safeguard for CVA landholders with respect to statutory and common law liability of Ceemac to them arising out of or in relation to any activities Ceemac may seek to undertake pursuant to any PEL granted to it.

Water and the Capertee Valley

Water is a valuable public resource. Mining companies use the public resource for private gain- more often than not for foreign private gain. The value of the resource is submitted to be out of all proportion to its cost to mining companies. It would no doubt be argued, and correctly, that farmers also use the public resource for private gain at a disproportionately low cost. There are however numerous very substantial differences between the two industries in social, economic and environmental terms. Without adequate and secure groundwater supplies, there can be no viable pastoral activity in the Capertee valley.

It is submitted to be beyond dispute that, without continuing availability of potable water from aquifers, pastoralism is not sustainable in the Capertee Valley. The Capertee River has not flowed for more than half of the past twelve years. The creeks which feed the river, principally Coco's and The Nile, flow only after the rare occurrences of heavy rain or storm activity, and then, only do so for days.

In 2006 the annual rainfall at Glen Alice was approximately 16 inches, in 2009, approximately 18 inches. The same figure was recorded for 2013. Though well drained, the sandy loam soils of the valley hold water poorly. The unreliability of rainfall in recent years has been exacerbated by its contraction to the summer months, when evaporative and transpirational losses are greatest. Today, 75% or more of the annual rainfall occurs over the period from December to February. In response to the current rainfall regime, establishing and maintaining temperate pasture species is increasingly problematic, and reliance upon summer dominant sub-tropical species increasingly necessary. It is submitted that the evidence, at the very least, suggests that reliable surface water resources are becoming scarce, and that unprecedented care should be taken of the valley's aquifers.

Farming communities accept, however reluctantly, that mining companies can lawfully acquire what lies under the land. However, mining companies have no legal or social licence to destroy what was being done on the land long before their advent, and would be done long after their demise, by destroying the water upon which those communities depend. Mining companies come, take, and then go, having made only transient contributions to the communities upon which they impose themselves. Expectations of employment, and prices, are raised, only to be dashed the minute the price of the resource, or the cost of its extraction render that in the mining company's best interests. Centennial Coal did precisely that at the mine it had opened only months before at Airly, near Capertee.

Mining uses vastly greater quantities of water than does pastoralism in the valley. The two industries use water in very different ways, which reflect the absence of the true cost of the resource to mining companies, and reality that, long before critical water issues materialise, the mining companies will have moved on, leaving under resourced rural communities to bear the cost, and pain, of attempting to rebuild their lives and livelihoods. Probably because the constant fear of drought is in the DNA of Australian farmers, water is treated as the rare and precious resource it is. Water conservation, more efficient storage and utilisation, and initiatives to squeeze more productivity out of available water are key objectives of most farmers.

Mining companies by comparison are submitted to be profligate with water. A good example of such profligacy is Centennial's Airly mine, and the proposed extension of it, with the potential to draw more than 600,000 litres, 365 days per annum. Centennial Coal almost doubled its entitlement to take water for its Airly extension proposal in 2013. At a time when farmers can only increase their entitlements by paying for them on the market, it is extraordinary that this could happen. The IESC guidelines comprehensively outline the modelling, testing and monitoring procedures appropriate to be undertaken before an increase in entitlement of the magnitude acquired by Centennial should be contemplated. Those protocols appear not to have applied to Centennial Coal's Airly Extension.

CVA submits that, prior to consideration of the granting of PELA 158, Ceemac should submit its water management proposals for the PEL to the Independent Expert Scientific Committee (the "IESC") established by the Commonwealth, New South Wales and other state governments for assessment pursuant to the 2013 "guidelines" issued by the IESC, and that PELA 158 only be further considered if the IESC certifies that Ceemac's water management proposals and monitoring of such proposals satisfy the IESC guidelines.

Although almost all other large scale users are required to recycle water, mining companies are not. If something approaching the real cost of water was payable, mining companies would swiftly introduce recycling and other initiatives to reduce the profligacy of their usage of it.

Particular concerns relating to the impact of CSG extraction on water resources

CVA submits that there is an increasing body of peer reviewed scientific literature highlighting the need for caution in relation to the impact of CSG extraction, particularly on aquifers, but also on surface water resources. A significant proportion of the literature urging adherence to the precautionary principle has been commissioned by NSW government agencies, or adopted by them.

CVA submits that the literature unanimously acknowledges that, by comparison with other features of the environment, little is really known about aquifers. What is known is that CSG extraction can result in aquifers being contaminated, or fractured, resulting in the water in them being lost, or, when draw-downs exceed re-charge rates, flow rates being insufficient to meet the needs of other users- typically agricultural enterprises.

The techniques currently used for CSG extraction are submitted to have been widely acknowledged as posing significant risks to the environment and human health. Concerns articulated in the literature include the volumes of water the processes use, disclosure of fracture fluid chemical additives used, surface and groundwater contamination from vertical fracture propagation, the treatment, recycling and disposal of produced water, on site storage and handling of chemicals and wastes, and impact of CSG infrastructure on the environment and agricultural productivity.

The area covered by PELA 158 falls within the Hawkesbury Nepean catchment, and is managed by the Hawkesbury Nepean Catchment Management Authority ("HNCMA"). CVA submits that additional statutory and common law duties of care are thereby imposed on those who seek to extract CSG in the HNCMA, and those who determine whether or not to permit them to do so. The current PELA potentially impacts not just the Capertee Valley, but also the water supply for Sydney. The State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 provides as an overarching aim, the maintenance of healthy water catchments which deliver high quality water.

In support of its contentions, CVA relies significantly on the University of Wollongong "Bioregional Assessment Report" 2011, and particularly those parts of the report which review the "direct impacts of mining on water" (pp. 33-44). The terms in which the report articulates the authors' concerns, and the credibility of the authors are submitted to preclude serious consideration of PELA 158 unless and until the concerns agitated in this submission are satisfactorily addressed in accordance with the hazard and impact protocols identified in the report as assessed by the IESC.

Conditions attaching to approvals relating to water resources

CVA submits that PELA 158 should be refused, or, if it is to be further considered, that the following matters inform such consideration :

1. aquifer interference licences not be granted to Ceemac by the NSW Office of Water ("NOW") unless such applications are demonstrated, to the satisfaction the IESC, to involve no significant risk to aquifers, in terms of water draw-down, re-charge or structural integrity, and the impact of the return of processed water on the environment in general and the surface water and groundwater systems in particular;
2. NOW assess any application for aquifer interference licences by Ceemac be determined by reference to the guidelines for proposed projects which are likely to have a significant impact on water resources published by the IESC;
3. all applications made Ceemac pursuant to the Water Management Act ("the WMA") be supported by an aquifer interference study, or studies, by independent accredited water experts which establish in accordance with the IESC guidelines and modelling prescribed by the guidelines, that, subject to compliance with such conditions as such experts advise, the proposed activity will not represent a significant adverse impact on groundwater quantity and quality and aquifer integrity;
4. the potential impact of proposed CSG project (whether or not such proposed projects are State Significant Developments) be referred to the Commonwealth Minister for the Environment pursuant to the "water trigger" provisions of the Environment Protection and Biodiversity Conservation Act (the "EPBC Act") for assessment;
5. it be a condition of any aquifer interference licence issued by the Office of Water that the grantee of such licence establish and maintain monitoring procedures in accordance with the IESC guidelines, and at regular intervals publish reports fully complying with the IESC guidelines, and, at the grantee's expense, facilitate regular auditing of all aspects of the water activities undertaken by the grantee by an independent accredited water expert whose reports will be published on the website of the Office of Water;
6. all conditions necessary and appropriate to cause Ceemac or any entity on its behalf granted of any licence issued under the WMA to immediately rectify to the satisfaction of the NSW Office of Water ("NOW"), any breach of any condition of the grantee's licence, or other matter which, in the opinion of NOW, represents a threat to any water resource be imposed, the whole of the costs of such investigation and rectification as NOW requires being payable by the grantee of the relevant licence;

CAPERTEE VALLEY ALLIANCE INC.

Address mail to The Secretary PO Box 83 RYLSTONE NSW 2849

PHONE: (02) 6379 7767. EMAIL: caperteevalleyallinc@ipstarmail.com.au

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7. details of all breaches of the legislation governing water extraction and use referred to in 7 above be regularly on the website of NOW;
8. as a condition of the granting of any licence issued by NOW, the grantee of such licence lodge with NOW such sum, in cash, as NOW determines to be appropriate by way of performance bond ("the bond"), which sum NOW may, at any time, by notice in writing require the grantee to increase to the sum required by NOW to be lodged;
9. affected rural landholders be recompensed from the bond referred to in 8 above, as liquidated damages, the costs or losses incurred by the landholder consequent upon interruption to the supply of water, or its quality, in aquifers under the landholder's land, or in rivers, creeks or streams passing over the landholder's land, or in springs located on the landholder's land, resulting from the activities of the grantee, provided that the onus of proving that the interruption to the supply or quality of water to the landholder's land was not the result of anything done, or omitted to be done by the grantee of the licence shall be the responsibility of the grantee;
10. a condition of the granting of any licence issued by the Office of Water, or the Minister for Planning, or the Minister for Resources, be that the grantee of such licence(s) provide security in such sum, and in such manner, as the grantor of the relevant licence considers, in reliance upon independent expert advice, to be a sum reasonably sufficient in all the circumstances to remediate land and water resources, including aquifers, likely to be impacted by the activities to be undertaken by the grantee of the licence(s) sought by it.

Where, as in the case of the Capertee Valley, contributions to national food security, eco-tourism (about which others are more able to make submissions), and the sustainability of a unique eco-system (about which others are again more able to make submissions) are potentially threatened, the case for precautionary measures is submitted to be irresistible. As is readily apparent, the cost of the suggested protections is sought to be cast upon the entities which wish to undertake the activities which give rise to the need for the protections. It is to be remembered that these entities, which, like Centennial Coal, are in the main foreign owned, access public resources, particularly coal and water, for, at most, a fraction of their real worth until it is not considered to continue to do so. In a society where ordinary taxpayers are expected to pay for every commodity they use, requiring the mining companies to pay for the privilege of using community resources is submitted to be entirely reasonable.

Identified concerns with respect to Capertee Valley water resources

Centennial Coal's own hydrology report dated 26 September 2009 by Larry Cook and Associates, obtained pursuant to an FOI request, is submitted to provide further support for requiring more stringent standards to be satisfied before aquifer interference licences are granted in the Capertee Valley. Although it was conceded that no testing or other investigative steps had been undertaken, the report "assumed" that Centennial's proposed drawdowns on aquifer would have no significant impact on agriculture in the Capertee Valley. Concerningly, despite the clear and sensible caveats the report expressed in relation to the sustainability of the aquifer from which Centennial sought to draw 250ML annually, albeit in two stages (130ML initially, and 120ML subsequently), it was granted licences to do so. It is submitted that the Office of Water's determination of Centennial Coal's application, and subsequent application to almost double its entitlement entitle landholders of the Capertee Valley to have little confidence in the capacity of the statutory authority charged with protecting this precious public resource to do so.

The report detailed the flow rates and recovery curves recorded at a number of Centennial's test bores, and acknowledged that "although near-bore aquifer permeability can be directly measured by way of formal pump testing, the storage volume of the aquifer system and the long-term sustainable yield are very difficult to determine". That caveat was reiterated elsewhere in the report. After referring to issues emerging from the data, the report suggested that "in order to quantify the impact of long-term pumping on the aquifer system, in particular the impact on storage (primary aquifer), long-term monitoring of water levels in observation bores is required. In this way the aerial extent of the cone of depression can be determined and a better assessment made of the long-term sustainability of the aquifer system in this area. Long-term monitoring of rainfall is also recommended in order to assess possible recharge mechanisms and borefield sustainability".

Larry Cook and Associates were sufficiently unsure of the sustainability of the bores tested to suggest that it would be "prudent to explore and develop a backup groundwater resource elsewhere in the project area in order to safeguard the industrial water supply for the project operations". The report made a recommendation in those precise terms. In reliance upon the "chemistry of the groundwater" being suggestive of "long residence times", the report noted that "borefield unsustainability" was not "necessarily" implied, but "again demonstrates the importance of long-term water level (and water quality) monitoring". The "caveat" of "long-term water level monitoring and progressive assessment" to determine aquifer sustainability was reiterated on several occasions.

In its recommendations, the report recorded that "long-term monitoring of the bore is strongly recommended to accurately determine the long-term sustainable yield and establish a suitable pumping management program. This is considered particularly important given the existence of many "low flow" bores in the district and the uncertainty of the sustainability

of the aquifer system”.

The report found the groundwater to be “slightly acidic, very hard with high salinity levels, elevated iron, manganese and sulphate, and moderate to high potential for corrosion. The concentrations of iron and manganese indicate the likely presence of iron and manganese bacteria”. As is readily apparent, and the report acknowledged, treatment of extracted water to deal with “iron and manganese problems” was predicted to be an ongoing issue for the mining company, and, in turn, the environment.

Conclusion

CVA submits that PELA 158 should be refused.

Without in any way abandoning its primary position, CVA submits that, for the reasons urged above, before further consideration could responsibly be given to PELA 158, each of the concerns identified above should first be addressed by the proponent of the PELA to the satisfaction of the relevant agencies, by independent evidence pursuant to the protocols referred to in this submission.

Yours sincerely

Donna Upton
Secretary

(via email to webcoal.titles@industry.nsw.gov.au)