Submission No 224

INQUIRY INTO COAL SEAM GAS

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Apex Additional Borehole Modification

Application MP 07-0103-MOD 1 January 2011

Comments by Dr Ann Young

Qualifications

I am a geoscientist with 40 years experience, and retired as Senior Lecturer from the University of Wollongong in 2002. I am the author of academic books on sandstone landforms, soils and environmental management. I have contributed as a member of the public to the inquiries into the Southern Coalfield and to major project assessments in the region. I am currently a member of the CCC for Illawarra Coal's Dendrobium mine.

Objection

I object to the approval of this proposal on several grounds:

- Apex NL has not demonstrated its ability to deliver acceptable environmental outcomes for the project 07-0103 already approved
- there is no provision for community scrutiny of the existing project and thus no community confidence that an environmentally valued area is being protected
- the environmental impacts, especially on swamps and under extreme rainfalls, may be significant
- approval further encourages the company to expect to develop resources in a highly sensitive area (as shown by its listing under SCA and National Parks & Wildlife Service) and indeed in an area from which another company has just withdrawn following public outcry.

Performance of already approved drilling operations

The Project 07-0103 approved in September 2009 envisaged a 3-year project, base on an 11 week period for each of 15 boreholes. The Approval for the Project required, among other matters, a water management plan, an erosion and sediment control plan, and a vegetation clearing and rehabilitation plan. Also, within one month of the approval, the environmental monitoring plans and a summary of monitoring results of the project were to be publicly available on the company's website. The website http://www.apexenergy.com.au/illawarra-region/ describes the assets in PEL 444 and 442 but has no information about any activities. I understand that the company submitted an AEMR in September 2010 stating that no fieldwork had taken place. Presumably this is still the case.

Necessary conditions on approval

In my submission on the previous Project, I asked for several safeguards, as repeated below.

> I ask that any approval of this project include conditions as follows:
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> - a detailed and workable rehabilitation plan be established for each site
> - **drilling at a site should not commence before the previous site has been cleaned up, re-shaped where necessary, mulched or otherwise protected from rainfall and wind erosion, and seeded or planted to begin re-vegetation.**
> - **extracted groundwater should be assessed for volume, quality and likely geological stratum source**

- **the proposed sites be re-assessed to prioritise them in order of likely significance so that if possible, fewer sites will be drilled**
- **a clear coordinated strategy for environmental monitoring by relevant authorities be imposed on the company, with approval for continuing operation dependent on satisfactory environmental management. Ideally, a community consultative committee to involve other stakeholders should be part of this strategy.**

To my mind, these were minimum and reasonable safeguards and I was disappointed that the Minister did not incorporate any of them into the previous Approval, other than that for a rehabilitation plan. But the reality is that at present, we have NO information about how well the company can protect what is a highly valued environment. Yet the proposed A119 is in a SCA Special Area, an area from which the general public is rightly excluded and subject to heavy fines if found trespassing. There is therefore no opportunity for the public to view the operation or to become aware if there are issues of concern.

Proximity to an upland swamp

The location of the proposed borehole A119 is constrained by the old workings and geological anomalies below the site, and its proximity to the upland swamp has been taken into account. However avoiding damage to the swamp depends on the runoff controls and especially any stored subsurface water being contained. The controls may well be in accordance with set standards but I reiterate and emphasise the concerns I expressed in respect to the original project and I quote:

> p 2. **Although the drill sites are mainly near or on existing tracks, and the total area to be cleared is not large, this does not mean that environmental impacts are negligible.** As the Google images on pp 20-26 show clearly, only A114, A116 and A118 are on wooded ridges. All other sites are beside upland swamps, and a 50-60m radius of disturbance as indicated on p31 would encroach into the swamps. This means that there would be a significant increase in the existing disturbance, and the additional impacts of compaction and channelled runoff across the surface. Also, **while many of the sites lie beside existing fire trails, these trails are not heavy duty access roads. To give the drill rigs and other large vehicles access along them is likely to cause significant widening and disturbance**, especially for the work-over rigs (p40). This project will NOT simply operate without any noticeable change in the local environment. Similarly, the comment that these corridors would be used for subsurface reticulation of any developed wells (p9) glosses over the impacts of the traffic needed to dig trenches, lay pipes etc. And as is shown by Figure 3.5 (p32) and the details of sumps etc on p 56, **there will be drains, bunds and levelled areas constructed, not just a small area 'cleared'.**
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> p32. There is too little detail here to judge the impacts of groundwater transfer to the surface. For example, there is no indication of how much groundwater make is expected. This is

not a small issue. **The groundwater is expected to be contaminated, as detailed on p52. If this is to be removed by tanker, where is it to be sent? If extreme rainfalls cause an overflow, what will the impacts on the nearby environment be?**

The sensitivity of the area

The proposed borehole is in an environmentally sensitive area. The location maps (figures 1 and 2 of the main document) give no indication of this. Yet in the Appendix dealing with flora and fauna (p 33), the location is - properly! - shown as very close to the Dharawal State Recreation Area and the major swamps of that protected area such as Iluka and Dahlia Swamps. Another company has just withdrawn application for longwall mining under these areas, and I appreciate that Apex envisages no significant subsidence if full-scale gas extraction were to occur in the future.

BUT the problem is that extraction of any gas reserves proven from the area would involve very significant surface disruption. How closely spaced would extraction boreholes be? How much surface disruption would there be also from connecting pipelines to transport the gas, and from access roads for maintenance vehicles and tankers to remove contaminated water from bunds? Even if the pipes are laid in trenches, the trenches need to be cut and then revegetated. Would there need to be power lines to each drillhole/ pumping point? Where would the material taken from multiple boreholes be disposed of? The approved exploration project will disturb 9 ha in total, of which about half is undisturbed native vegetation. And even the 'disturbed' areas are largely re-grown from previous disturbance. Obviously a full-scale development would require many holes in undisturbed native vegetation. **The bushland in much of the area is pristine because it has been set aside for water catchment. Are we now to undo this good by permitting extensive surface disruption?**

It is not good enough to simply argue that any such considerations can be left to the future when another major project application would be necessary. The reality is that companies, having received permission to explore and to prove up reserves, expect to be given permission to develop those resources. **The present application values this one borehole as having a capital investment value of $1 million, and the original project was valued at $7.4 million. The company must be carrying out the project in clear expectation of approval to develop.**

Conclusion

I did not object to the previous proposal. However after more time to learn about the process of coal seam gas mining, better appreciation of the environmental consequences of full-scale development and disappointment that the conditions in the approval given gave no community scrutiny, I certainly object to this application being approved.