

Offline mobile map apps

Take the worry out of navigating a pastoral lease

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The Australian outback is well known for its perilous nature and, people becoming lost on a pastoral lease pose significant risk to human health and safety. Search and rescue operations can be costly with regards to time, human resources, equipment, and lost productivity.

The information available to people navigating pastoral leases varies considerably from property to property; most leases have infrastructure maps with varying levels of detail and currency, while other leases have internal roads, tracks and water points marked with sign posts or objects such as tyres, drums and old jerry cans to indicate turn-offs.

Acclimatising to a new patch of country comes naturally to some, and not so much for others. Fortunately, advances in technology have paved the way for contemporary solutions to an age-old problem.

What is an offline mobile map app?

As the name suggests, offline mobile map apps work without WiFi or network connectivity. Some popular apps like Google Maps and Apple Maps allow you to download maps offline, but this is generally limited to only public roads and tracks, not infrastructure and internal roads on pastoral leases.

Can pastoral lease infrastructure maps be connected with offline mobile map apps?

Yes, pastoral lease infrastructure maps can be connected with offline mobile map apps through the process of georeferencing. Georeferencing is the term used for identifying a point on the earth's surface and matching it to its location on a map using international standard coordinates.

Digital pastoral maps are usually in PDF format. A georeferenced map will have the coordinates of the lease stored within the PDF. When accessed through specific software applications, the GPS locations of anything within the boundary of that map are available.

How does it work?

When using any sort of navigation system, a dot generally appears on the screen to indicate the user's current position (this is a blue dot in Google Maps). When a georeferenced pastoral map is accessed through the appropriate mobile software application, a dot will also appear to indicate the user's position. The difference is that the map being viewed is a pastoral map – which, if up to date, will show where the user is in relation to all marked infrastructure such as tracks, fences, water points and yards.

Do offline mobile map apps offer other features?

There are a number of different mobile map app products, and the features included depend on the individual product and subscription tier (some have free versions available). With certain products users can:

- plot and record information about locations
- import and export place marks
- measure distance and area
- georeference photos.

For example, this means that in addition to using the app for navigational purposes, it can be used to record the coordinates of broken infrastructure or where equipment was left behind (including a photo attached to that placemark on the map) so that another user can locate it on their own.

Each product provides different options, and users should consider their own needs and speak to the manufacturers before choosing a product.

Pastoralist experiences:

“I have been using PDF maps for around six years now and have found it a very valuable property management tool. We provide all our employees with a current map of the property, that includes all roads, fences and water points, and give them a rundown on how to use the app.

We have found it a very good safety feature for workers as no one can really get lost and with most station staff always having a mobile phone on them, they always have the ability to know where they are.

PDF maps save a lot of time; if someone sees an issue with stock or a broken fence or anything really, they can pinpoint the location so that we can get back there and fix the problem quickly without the need for the same staff member to go back to explain where it is.”

—Ash Elsum, Flying Fox Station, Northern Territory

“We have been using Avenza maps on our Kimberley properties for the past year. We use it as a digital mapping tool to plot waypoints, infrastructure developments, track roads and pipelines. We also find it very useful for new staff finding their way around the property as it uses the phone’s GPS to track their location, meaning it works while out of mobile range.”

—Rick Ford, Fossil Downs Station, Western Australia

Contact

For more information, please contact your local extension officer. To get a GeoPDF copy of your pastoral lease map please contact:

Western Australia: gis@dpird.wa.gov.au

Northern Territory: rangelands@nt.gov.au