BESWICK STATION

Report on Water Resources

Party: P. Augustine (T/O)
G. Hensen (Chairman)

Vehicle: Landrover Station Wagon C.85036

Left Darwin at 9.30 a.m. on 22/10/58 and arrived at Katherine 1015 on 22/10/58.

Stayed at Katherine overnight.

Left Katherine for Beswick on 23/10/58 at 0930.

Arrived Beswick Settlement 1200 on 23/10/58.

Left Beswick Settlement at 1430, arrived at Beswick Station homestead at 1540.

BULLOCK PADDOCK.

On Friday, 24/10/58, inspected the soaks in the bullock paddock. These are the soaks which are reputed to be drying up. These soaks are the only water supply in this paddock, and at the moment they are dangerously low. I believe that up to the present manager's time, this paddock was carrying quite a few hundred head of cattle and about two hundred head of horses. If this is so, this is the obvious reason why these soaks are so low, as this paddock would have been overstocked as regards water supply.

To fully utilise this paddock, a further supply of water will have to be found. The paddock has an abundance of feed, but the stock, at this time of the year, will not feed more than about 3 miles radius from water.

The largest of the soaks is approximately 200 feet long, 50 feet wide, and at its deepest, at present, is well over 6 feet deep. At its fullest, it would be much longer, but no wider and at least 17 feet or 18 feet deep. The stock have made this hole very dirty, and it is recommended to fence the hole off, and pump into troughs.

Along this series of water holes there are two more retaining water, but have been so dirtied that stock will not drink the water. These holes should be fenced and troughing supplied.

Earth samples, up to a depth of 8' 6" were taken in other dry water holes on this watercourse. One hole was sunk approximately 10 feet from a hole containing water, and extended at least 6 feet below the water level, but the test hole remained dry. Thus it should be possible to deepen and extend these water holes into small dams. Ground seepage should be a minimum, but if this did occur, there is an abundance of Gil-Gia country with large quantity of clay which could be used as a seal to prevent any water seepage.
These water holes are part of a watercourse which flows into the Waterhouse River, but at the stage where it reaches these soaks, there is no defined bed or banks.

The soaks are almost halfway along, and quite close to, the eastern boundary of the bullock paddock, and so only serve a small proportion of the 25 square miles within the paddock.

The Waterhouse River flows along the eastern boundary (but within) this paddock, but it would be impossible to dam this river, owing to the unstable banks and the bull-dust sand that is in the area.

In the south-western portion of this paddock there is quite a large range of hills, and it is in this area where the water is needed. This area could be investigated for bore potentiality.

Other than the water holes previously mentioned, there are no possible dam sites in this paddock.

BULL PADDOCK.

This paddock has only one water hole with water at present, which is located in a well defined creek which flows through the paddock. The Homestead is not over worried about this paddock as the feed is usually eaten out before the water runs out. There is no hope of damming this creek, but the waterholes could be deepened similarly to those in the bullock paddock. There is a very high range of hills just outside the eastern boundary of this paddock.

Proposed Paddock South of Bullock Paddock.

This area was covered very extensively and if no further water is located, it would be unwise going ahead with the plans for the paddock.

It took two days of reconnaissance to locate the two bores which were sunk in the area west of the Alligator Water Hole. The one which we located first, must have been the first put down, as there was no sign of any camp in the area. This bore had caved in up to within six feet of the ground surface.

At the second bore there were numerous signs of a camp, together with 18 lengths of 4" diameter galvanised bore casing and seven lengths of 16" diameter bore rods. This bore was approximately 50 feet deep and had evidently fallen in.

One of these bores was sunk on the highest point of the surrounding country. This ridge, from the bore site, actually slopes to the east. Ground level here is about 20 feet lower than at the first bore. The area surrounding both bores shows that the country is very porous as there are thousands of holes in the ground, which permit surface water to seep into the ground.

With my limited knowledge of bores, I would not like to give an opinion of underground water storage in this area, but this area does not seem to be suitable for bores.

Also, for miles around this area, the ground is very porous and dotted with holes up to 12" diameter. I would say that most of the surface water enters these holes as there is only one small creek to serve a very large area.

As you come gradually to Alligator Water Hole, the other bore is ¼ mile to the east.
The Alligator Waterhole, although well filled at present, could not stand the strain of a large number of stock using it at this stage. It is about 180 yards long by about 33 yards wide and only about 4 feet deep at the deepest part. The bottom is of very black mud, and stock would soon make it so dirty that they would not drink it.

Area East and North-East of Homestead.

The area north-east of Beswick Homestead has numerous springs and only in a very severe drought would water ever become scarce.

At the moment there is practically no stock in the feed is non-existent.

The area east of the Homestead is fed mainly from Sugar Bag Creek, which has a good supply of water holes along it at the moment.

If the area is ever restocked, water could become a problem. This problem could be overcome in part by erecting small weirs across the water holes, so as to increase their holding capacity.

Area North of Homestead.

The area in the extreme north has numerous springs and also two large water holes situated in a gorge.

Also in this vicinity is a large area covered with water and known locally as "The Lakes", but is actually only a swamp. In times of drought and semi-drought these are of little use as cattle tend to become bogged, and usually have to be destroyed.

It would be possible to reticulate the water from the first large water holes, which is known as "The Falls", thus giving a better water supply to the area between the Falls and the Homestead.

Homestead Bore.

Two tests were carried out on this bore, using a 4-gallon bucket, and the results are as follows:

1st Test:

Start of Test 15 sec/bucket = 16 g.p.m. = 960 gph

After 1 hr. of pumping 18 " 3/5 " = 800 "

After 6 hrs. of pumping 25 " 9-3/5 " = 576 "

2nd Test:

On the following day further tests were carried out after six hours and eight hours of pumping, and the supply was found to be stable at 25 seconds per bucket (576 gallons per hour).

I have found out since my return to Darwin that the equipment on the bore at present is exactly the same as when the original test of 600 gallons per hour was carried out. Thus the bore has not deteriorated appreciably, if at all.

(Note: bore is equipped with a 32" plunger pump having an 18" stroke and operating at 36 strokes per minute: the pump is capable of supplying 1,100 gallons per hour).
I believe that a week before I arrived at the Homestead, a Department of Works officer overhauled the pump and cleaned out the bore. It is possible, that prior to this overhaul, the supply had dropped.

COMMENTS.

If bush fires could be controlled on this property, water would never become a serious problem. This may appear a curious statement, but if the feed were preserved, the stock could be moved on as each area is eaten out, and so only use each supply of water for shorter periods. Also if these main waterholes were fenced off and supplied with troughing, the water would remain usable for longer periods than at present.

At the moment the position is such that where there is ample water, there is no feed, and vice versa.

This has been mainly brought about this year by the whole of the northern area being burnt out completely. This is the area of good water supplies. The southern area, where there is good feed, has practically no water.

RECOMMENDATIONS.

1. Control burning-off in areas of good water supplies.
2. Fence main water supplies and install troughing.
3. Be prepared to move stock before each water hole is completely finished.
4. Rehabilitate and extend selected waterholes by excavation and lining with impervious soil if necessary.

Signed: P. Augustine, Technical Officer.