DEPARTMENT OF MINES. RB 36/81

SOUTH AUSTRALIA.

UNDERGROUND WATER INSPECTION - SEC. 219 HD. MYPONGA

PROPERTY OF E.S.U. MANLEY - MOUNT COMPASS

The property which adjoins the Main Victor Harbour Road west of Mount Compass, was inspected on 22nd September, 1953, with the owner.

Water is required for pasture irrigation of that part of the section adjoining the Main Road. The existing dam in the centre of the property is to be used for storage. A supply of the order of 2000 g.p.h. is desirable, though smaller supplies could be utilised.

TOPOGRAPHY & GEOLOGY:

A steep ridge of Pre-Cambrian Schists and Phyllites heavily injected with quartz veins borders the property on the south while the remainder of the property slopes gently northwards and is underlain by sands, clays and gravels of unknown thickness.

HYDROLOGY:

Springs occur on the ridge slopes on the southern boundary of the property but in view of the limited catchment involved and the nature of the rocks concerned, only small supplies may be anticipated from a bore located on the ridge slopes. Good supplies have been obtained from sands and gravels in the property to the north of Section 219 where a 63' bore in the bottom of a 54' well was tested at 480 g.p.h. with no noticeable drawdown (Static level 52').

PROSPECTS & RECOMMENDATIONS:

The unconsolidated sediments overlying the basement schists appear to offer the best prospects of underground supplies, though these must be of sufficient thickness to ensure penetration of the water table within these sediments at the selected site.

The most promising bore site on the property is one adjacent to the dam in the northern corner of the property. The thickness of unconsolidated sediments on the property is probably at a maximum at this point diminishing towards the basement outcrops on the southern margin of the property. The prospects of obtaining adequate supplies within these sediments is dependent largely on their overall thickness so that bore sites located south of the above mentioned site appear to offer poorer prospects, though in the absence of bore records in the area it is impossible to delineate areas in which supplies will be available.

Because of the location and elevation of the storage dam in relation to the area to be irrigated, it is desirable to locate the bore as near as possible to the dam. A bore located beside the dam (selected site) does not have the prospects of one located in the northern corner of the property, but would permit direct pumping to the storage dam.

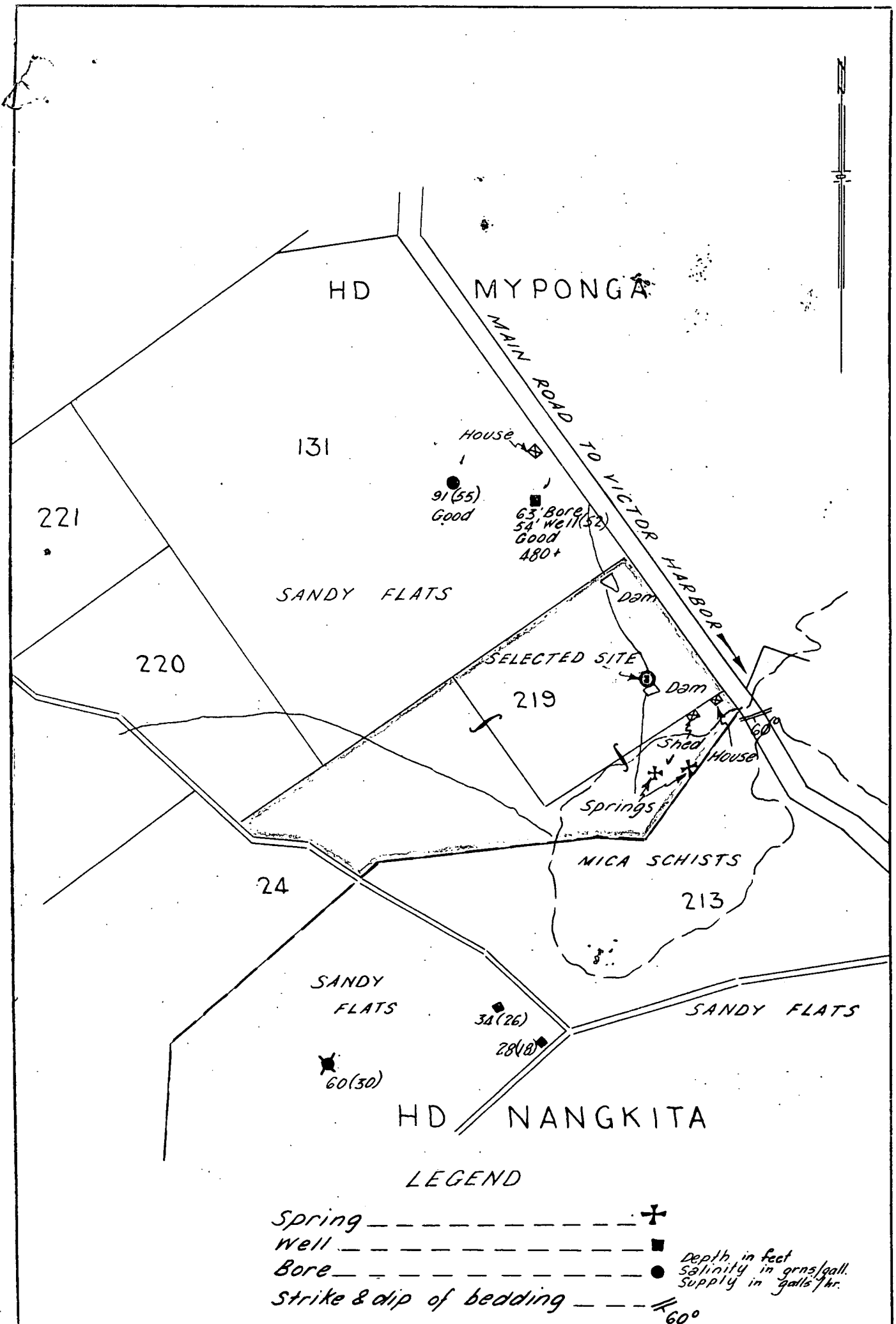
The property owner expressed a preference for this site and in view of the prospect of rapid drilling it is recommended that this site (selected site on map) be drilled first. Depending on results obtained, further drilling at the site in the northern corner may be considered.

DRILLING:

Drilling should be continued till full penetration of the unconsolidated sediments is effected (unless suitable supplies are obtained at shallower depths). Fair drilling conditions should be encountered (say 15 feet per shift), full casing, slotted or perforated at appropriate aquifers being necessary.

(J.B.A. McKELLAR)
Assistant Geologist.

JBAMcK:AK.
29/10/53.



LEGEND

Spring ✝

Well ■

Bore ●

Depth in feet
Salinity in grns/gall.
Supply in galls/hr.

Strike & dip of bedding 60°

To accompany report by J. McKellar.

S. A. DEPT. OF MINES

Approved	Passed	Drn.	UNDERGROUND WATER INSPECTION	D.M.	Scale 20chns to 1"
		Tcd. J.McC.	SEC 219 HD MYPONGA	Rec.	S 840
		Ckd. R.R.	PROPERTY OF E.S.U. MANLEY		Hc4
Director	C.D.	Exd.			Date 23-10-53