

DEPARTMENT OF MINES

SOUTH AUSTRALIA

46/110
G.S. 968
D.M. 1778/57

MARINE MUD - MINERAL CLAIM 2331

(Wooltana Industries Ltd.)

LOCATION:

Claim 2331 is situated on the sea shore of St. Vincent Gulf at the northern end of Middle Beach recreation reserve, adjoining Sec. 702, Hd. Port Gawler. It is approached by way of a second class road 6 miles long which deviates from the Main Adelaide - Port Wakefield road at a point one mile north of Two Wells.

The claim is 10 chains wide and extends seawards from high water level for a distance of 20 chains.

INTRODUCTION:

An inspection of the above claim was made at low tide on January 21st, 1958 by J. S. Dwyer and several samples taken for partial analysis. Marine muds near the shore at Middle Beach reputed to contain phosphates, nitrates and traces of copper, zinc and molybdenum are being utilised by Wooltana Industries Ltd to prepare agricultural fertilizers.

PLAN:

Locality Plan No 58-23 accompanies this report.

THE DEPOSITS:

The claim is located over a shallow water tidal mud flat near the eastern shore of the Gulf. The shore is fringed by low dunes of calcareous sand which support sparse vegetation while mangrove swamps extend seawards for a distance of over one half mile.

A posthole auger drilled to a depth of 3 feet showed a thin surface layer of shell grit less than 1 inch in thickness over black mud. The black mud is about one foot thick and is soft and smells strongly of hydrogen sulphide - this stratum contains "the vital constituents." The lower most bed penetrated was also unconsolidated and consisted of fine black mud with shells.

MICROFILMED

WORKINGS:

No work was being done at the time of the visit. A strong west wind prevailed and the water level was higher than normal at low water.

The workings consist of a shallow excavation in the black mud, about 150 yards in diameter and 100 yards from the shore line. The mud is pumped by means of a 4 inch diesel engine driven pump mounted on an old truck chassis and conveyed to a stock pile above high water by means of 3 inch piping of the quick-release coupling type supported on forked stakes.

SAMPLES AND CONTENTS:

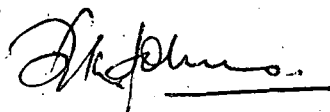
A sample was taken from the stock pile of mud on the shore and others from auger holes. These were submitted for partial analyses, the results of which are as below:-

Sample	CaCO ₃ %	NO ₃ %	P ₂ O ₅ %	Cu (ppm)	Zn (ppm)
1) From dump - mud	27.0	nil	0.02	35	< 50
2) From borehole -shelly grit	74.8	nil	0.02	3	< 10
3) " " Black mud	27.4	nil	0.08	10	50
4) " " Bulk sample	76.9	nil	nil	3	< 50

Molybdenum is absent.

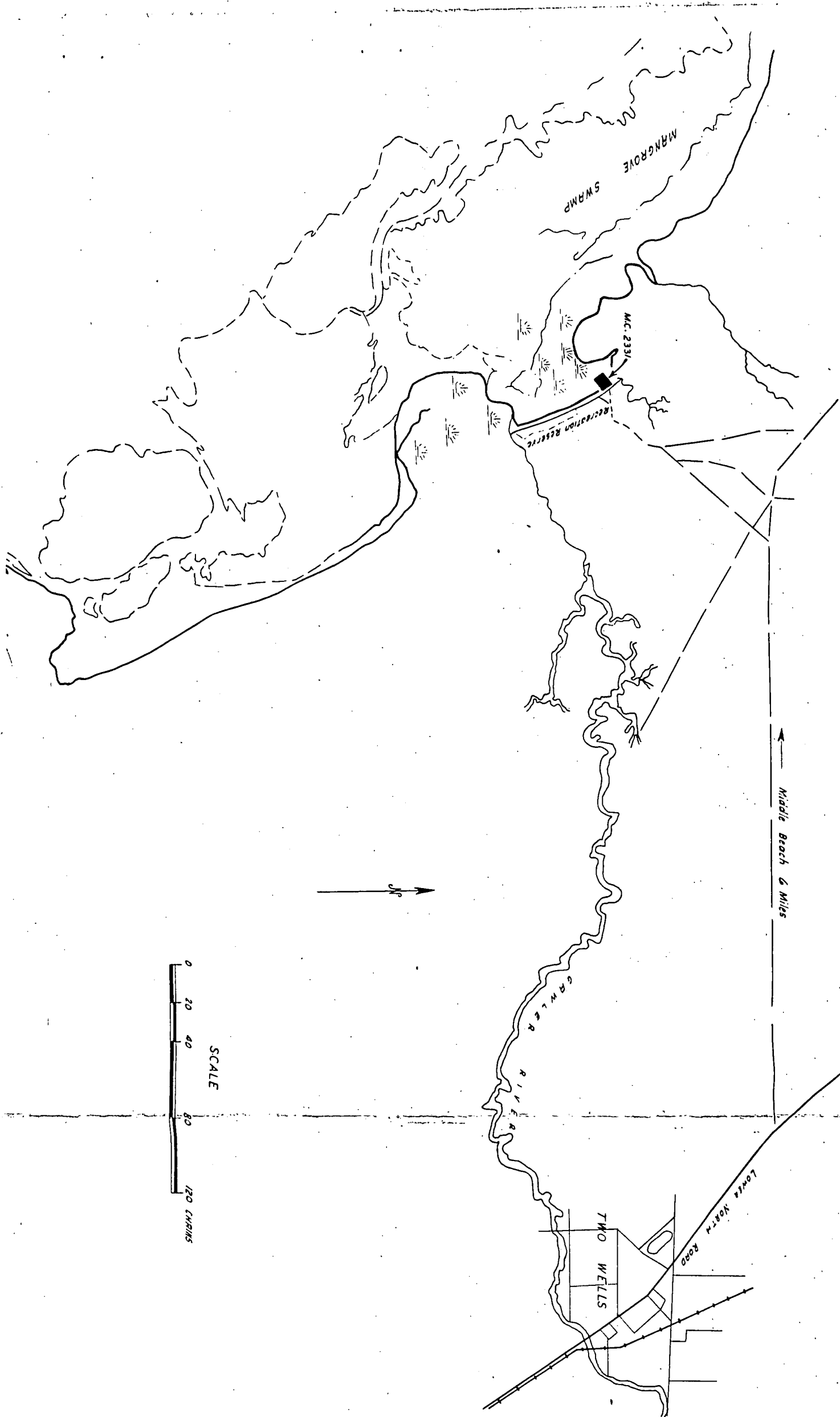
CONCLUSIONS:

The material being recovered from tidal flats at Middle Beach consists of fine black marine muds with fine shell grit and decomposed seaweed of little manurial value.



RKJ:CERF
25/3/58

R. K. JOHNS
SENIOR GEOLOGIST



To accompany report by J Dwyer

S.A. DEPARTMENT OF MINES						
			LOCALITY PLAN			
			MINERAL CLAIM 2331			
			Hd. PORT GAWLER			
			(WOOLTANA INDUSTRIES LTD)			
Appropriation	Loc	Date			Scale	60cm x 1"
						58 - 23
						G. 8
						30.1.58