Date: 21/11/84

YELTA MINE AND SMELTER HISTORIC SITE

HERITAGE SIGNIFICANCE

<u>Historically</u>, the Yelta site is significant as a second-rank mining and smelting complex, ancillary to the larger Moonta area adjacent.

<u>Physically</u>, the site contains relics of most elements of the copper smelting process. It was the third largest copper smelter in the State (after Wallaroo and Burra), and now has the most substantial surface remains of the three.

Environmentally, the site covers a large area in an otherwise rural landscape, but it is relatively inconspicuous, and its scale and complexity became apparent only on close inspection.

The integrity of the site is poor. All useful plant has been removed, but more remains than on comparable sites.

NOMINATION SOURCE/THREAT/OWNER

This report has been prepared as part of a continuing process of assessing items within the Copper Triangle. Most of the site is Crown Land, leased to the National Trust, and part is agricultural leasehold held by Mr. R. Leeton of Moonta. There is no known threat.

HERITAGE CONSERVATION BRANCH RECOMMENDATION:

Enansi h Manager

It is recommended that this item be included on the Register of State Heritage Items, and that it be categorized H1, H2, H3.

SOUTH AUSTRALIAN HERITAGE COMMITTEE RECOMMENDATION:

Chairman

	South Australian	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	ŧ.		No 9-11			
	Heritage		L		85000000000000000000000000000000000000		<u>nenestatetete</u>	<u>genitinge</u>
	Act 1978-82	Item YELTA MINE AND SMELTER HISTORIC SITE	2	itat	us -			
	Age	Subject	Ts	ite	Ту	ne		
	1864-1913	Original Use: 1211 Smelter Present Use: 0000 Disused						
	remains mainly b built. It is a occurred, ie. or	Ita mine site dates back to the 1860's. The extant elong to the 1903-1907 period when the smelters were compact site and one on which all aspects of mining e recovery, processing and smelting. It demonstrates of contemporary advances in scientific knowledge and ctise.		E	VG x	AG	<u>FP</u>	NA
		Leigh Hancock. Count de Venancourt.				x		
History	Event					a for a second second second	waada	X
Ŧ		Flat plain, typical of northern Yorke Peninsula, on of mallee scrub and other native vegetation after of the mining period.				x		
Physical		elements in various condition remaining. Virtually all 1912 plan have vestiges on the ground which have			x			
		The site is representative of the plethora of medium ning activity which occurred in the Copper Triangle. ge Wallaroo and Moonta Smelting and Mining Company,		x				
	Continuity this works -	was the only operation to establish its own smelting .						x
ment	Local Character contained mining	The ruins constitute an excellent example of a self operation of the period.			x			
Environment		elevated and levelled slag dump is prominent local it is fast becoming obscured by vegetation.		х				
		the context of ruins the site is relatively intact. ite based activities is extant.			x			
egrity T	condition. Slag	dings ruinous. Engine bases/foundations in good dump excellent.			x			
eg	Compatibility	Disused.						x

tegrity

;

South Australian	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	Ref. No. 6429-11167
Heritage Act	ltem	Prepared By: Laurie Parkes
1978-82	YELTA MINE AND SMELTER HISTORIC SITE	Justin McCarthy Jack Connell

Supplementary Information

The site has potential as an archaeological research resource if the available extensive documentary material is correlated with the extant site based remains.

The site also has an interpretive/public use potential in association with the Moonta Mines State Heritage Area (adjacent).

History and Sources

The Yelta Mine site, northeast of Moonta Mines, was operated in three distinct periods, first from 1864 until the mid 1870's, then by the Paramatta company from 1903 until 1907, and finally as a State enterprise, 1910-1913. Most of the significant relics on the site date from the period 1903-1907, and the construction of smelters by the French company.

The turn of the century marked a dramatic change in the industrial technology related to large scale mining in South Australia. Technological advances by way of evolutionary innovation from the solid basis of traditional British mining techniques gave way to a much more professional appraisal of the developments in scientific knowledge and engineering expertise in countries such as Germany, Spain and particularly the United States.

Insufficient work has been done in this field to evaluate the impact of these new sources of information on the South Australian mining industry as a whole but the production of copper matte at Yelta is one verifiable example. We are in the extraordinarily fortunate situation with Yelta of having a dynamic site and excellent records and this combination makes it an invaluable bench mark for testing hypotheses about industrial sites of similar vintage.

The French company, (The Paramatta Copper Mines Ltd.), which bought Paramatta Mine in 1899 bought Yelta on Leigh Hancock's advice in May 1903).

At that time the mine had been closed for 30 years, but because it adjoined the Moonta Mining Company leases local people set great store by its potential as a profitable mine. Leigh Hancock, second son of Henry Richard Hancock, longest serving and most famous of the Moonta Mining Company's managers, was Manager of Paramatta at the time and subsequently became manager of both mines from 1903 to 1905.

The mine was reactivated immediately and by 11th June 1903 Hancock was able to write to Cartier, one of the Company's Managing Directors, in Lille, France, informing him that he (Hancock) had already ordered a Lancashire Boiler from Martins in Gawler, an Ingersoll Sargeant Air Compressor from Parke & Lacy in Sydney and employed David Edwards as engineer.

South . Australian Heritage	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	·Ref. No.
Act 1978-82	ltem	Prepared By:

History and Sources

By October 1903 Hancock had constructed railway lines from the government branch line to both Yelta and Paramatta, established telephone communication between the two mines, installed the new 120 horsepower Lancashire Boiler, moved a 75 horsepower Cornish Boiler from Paramatta to Yelta, installed a hauling engine and winching plant, a six drill air compressor plant and began work on erecting the first Blast Furnace.

In a paper, "On Work and Methods at the Yelta Copper Mine" published by the Australasian Institute of Mining Engineers in 1906, Hancock describes the Yelta lode as copper pyrites with a large proportion of hematite and silicious felspathic material, and maintained that the mine had previously been given up because of the iron ore in the lode which could not be treated satisfactorily by the concentration methods in use at that time. He extolled the virtues of modern methods of mining and treatment of ore by direct blast furnace smelting and said ... "the Yelta is a good illustration of how scientific mining and treatment succeed where cruder methods entirely failed".

Setting up a smelting plant had obviously been considered a high priority by the company when they first bought Paramatta; and their original plan was to build it at Wallaroo. Hancock opposed this; considered smelting at Paramatta "injudicious" and was only cautiously optimistic about the viability of a smelting plant at Yelta. He thought one reverberatory furnace (costing between £3,000 and £3,500) the best bet but he warned the company ..."many smelting concerns in Australia have proved failures through rushing to erect furnaces before the necessary estimates for quantity actually available and in prospect have been made".

Despite this Hancock was commanded by cable to order smelting machinery and in a letter dated 25th August 1903 Hancock writes "An order has been placed for the ironwork complete for one cold blast steel pedestal single jacket copper furnace capable of dealing with 70 tons per 24 hour day".

Hancock's men also constructed a lime kiln to provide mortar for the furnaces brick foundations. The furnace stood 17 ft. from hearth to feed floors and was blown in on the 25th January, 1904.

In May, 1904, the furnace began to display the idiosyncrasies which caused de Venancourt, who took over as manager in 1905 to write in July 1906 "our furnace is possessed of vagaries all of its own which completely baffle all endeavours to bring it up to a state of efficiency".

Undaunted de Venancourt ordered another furnace (designed to his own specifications) from Martins costing £1384.0.0 not including foundations, which was erected under the supervision of Joseph Coombe and blown in on the 4th November 1906. This became known as No. 1 Furnace and the first furnace No. 2. (See Yelta Mine Surface Plan).

The French engineer Count de Venancourt, who managed Paramatta and Yelta mines from November 1905 until they were closed in October 1907 remains an elusive figure. His correspondence reveals nothing of his life, his background, his personality, his habits or even his first name. The only facts about him which can be verified are that he aroused the ire of the Hancocks by showing total lack of interest in one of their pet projects, the local Floricultural Society, he

South . Australian	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	Ref. No.
Heritage Act 1978-82	ltem	Prepared By:

History and Sources

earned £1,000 per yearand received 2% of the mines' profits, and the South Australian Railways were consistently able to reduce him to a blithering mess.

Molybdenite, a very valuable, if somewhat unfamiliar metal, was found in small quantities at Yelta, hand sorted and sold for between £80.00 and £170.00 a ton. It was used in steel alloy and very much sought after for weapon manufacture. Yelta's most consistent customer for this product was Blackwells of Liverpool.

The slag dump at Yelta is an arresting landmark which unmistakeably distinguishes Yelta from other mine sites in the area. A high circular platform was built up on the site of the first company's tailing heap (that Hancock had removed to Paramatta to be treated by the cementation process) using a narrow gauge railway with side tipping trucks which held conical shaped pots (supplied by Hawke & Co. when their moulder wasn't 'boozing' - something of a problem it seems, or Mays of Moonta) lined with wet clay. Slag was also used to form building bricks and the two slag brick buildings are one of the most distinctive features of the Yelta mine site. The bricks were formed in moulds supplied by Mays of Moonta and the blacksmith's shop was built in early 1904 by men already employed by the company for other duties.

This method of construction appears to have been Hancock's response to the problem of a severe shortage of masons and other skilled labour in the area. In a letter to the Company Director written in November 1903 Hancock says he was having difficulty getting the necessary buildings erected ... "many of our best men have left the district as wages here are 50% to 70% lower than can be obtained in Broken Hill or Western Australia".

It is interesting to note that de Venancourt was paying his 400 employees a minimum of 7/0 a day (compared to the 5/0 a day minimum paid by the Wallaroo and Moonta Mining Company) and his relations with the local unions appear to have been cordial. de Venancourt more than once called upon the help of John Verran, President of the Moonta Miners Trades and Labour Association, and Labor M.P. for the Copper Triangle, as he tried to devise some solution to the problem of the Beetaloo water supply. This apparently was erratic and could sometimes be no more than a trickle and on these occasions the furnaces, the air compressor and the steam plant would all have to be closed down causing major disruption to production.

John Verran strongly believed in the potential of Yelta to yield high profits and one of his first initiatives on becoming Premier, Commissioner of Public Works, and Minister of Mines in June 1910 was to buy the Yelta leases for £6,000 and appoint Frank Richards, a former employee of de Venancourt's as Manager.

The Paramatta Company records held in South Australia give no indication as to why the company chose to close down operations in October 1907, but the reasons were undoubtedly to do with the disastrous plunge in the copper price that year, which caused a downturn throughout the industry. Paramatta had always been only marginally profitable. Although it was said that they had yielded £250,000 worth of copper, the company had spent on average £30,000 a year for 8 years on both mines and it was estimated that the return to shareholders had been no more than £10,000 over that period.

South Australian Heritage	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	Ref. No.
Act 1978-82	ltem	Prepared By:

History and Sources

The Government Geologist Keith Ward wrote a substantial report on the Paramatta and Yelta leases which concluded that they were a promising proposition. Nonetheless the Opposition strongly attacked the purchase of the mines and the controversy over the viability of the mines, and particularly the Yelta Smelter, raged until operations were closed down in August 1913.

In May 1915 Leigh Hancock, then consulting engineer for Mount Bonnie (N.T.) Mining Company purchased some of the Yelta machinery and the rest was removed in 1920. Local feelings ran high on the subject and it was alleged that between 1914 and 1920 when the plant was totally dismantled, tributers had been able to raise over £70,000 worth of copper from the lease. Yelta, it was said, "was never given a proper go".

Sources:

Brown, H.Y.L.: Record of the Mines of South Australia, Adelaide 1908. Department of Mines: Letter Books Paramatta and Yelta Mines 11-7-1911, 18-8-1913, Department of Mines Archives, S.A. Hancock, L.G.: Work and Methods at the Yelta Copper Mine, South Australia. Transactions of the Australasian Institute of Mining Engineers, Vol. X1, 1906. Moonta Peoples Weekly (newspaper) Paramatta Mining Company Records and Letter books, S.A.A., GRG.30 Parliamentary Papers Nos. 36, 37, 1912. Report of Mr. Hartwell Condor on the Yelta Mine. The Register (newspaper) Ward, L.K. and Lockhart, Jack R.: Geological Survey of South Australia. Report No. 1 The Yelta and Paramatta Mines Department of Mines, S.A., 1912.

Yelta Smelter Ruin

LOCATION

"時日

調査

and the second

い時料理

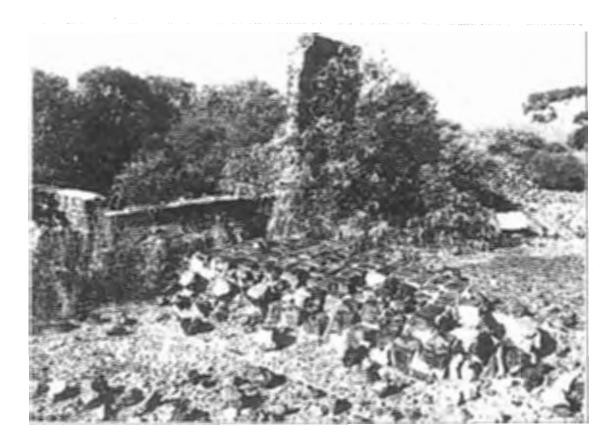
and the second

No.

1

COLUMN ST

Photograph No	PB	
State Heritage Status Other Assessments	Registered, 14 August 1986	SHR File No 11167
Owners	Department for Environment, Heritage and Adelaide SA 5001	d Aboriginal Affairs, GPO Box 1047,
Address Land Description Certificate of Title	North Yelta SA 5558 Lot 2, Section 2037, Hundred of Wallaroo D3 5920/2	



Yelta smelter ruin, showing fallen slag block wall

Weidenhofer Architects, Historical Research Pty Ltd, Austral Archaeology

Yelta Smelter Ruin

CC:206

DESCRIPTION

The principal element of the site is an extensive deposit of black copper slag, dotted with the distinctive conical casts formed by slag solidifying in a slag pot. There are also numerous building foundations and ruins, including some which are built from cast slag blocks, areas of mine waste and tramways. Some of the cast slag block structures have collapsed since the site was entered in the State Heritage Register.

STATEMENT OF HERITAGE VALUE

The Yelta site is significant for the physical evidence it provides of mineral processing operations. Yelta was the third largest copper smelter in South Australia after Wallaroo and Burra, and it has more substantial and better-preserved remains than either of the larger smelters.

HISTORY

Yelta was one of the small outlying mines of the Moonta copper field, opened in 1864 and operating until a fall in the copper price closed it in the mid-1870s. In 1903 with another copper boom underway, the mine was taken up by a French company, Paramatta Copper Mines Ltd, based in Lille, which had been formed in 1899 to operate the nearby Paramatta mine.

Leigh Hancock, son of Henry Hancock, was appointed manager of the Yelta and Paramatta mines. He had re-opened the Yelta shaft and installed machinery by late 1903. Against Hancock's advice, because he believed the development was premature, the French company also insisted on erecting a water-cooled steel blast furnace to smelt copper on site.

The furnace was fired in January 1904, but it produced poor results. Hancock resigned in 1905, and the company sent out a new manager, Comte de Venancourt, who responded to the smelter's failure by building a second blast furnace alongside it in 1906. Thus the French company had two smelters, both producing poor results, when the copper price fall of 1907 put them out of business.

In 1910 John Verran, the local member, became Premier and Minister of Mines. One of his first acts in office was to buy the Yelta mine and smelter to run them as a State enterprise in competition with the Wallaroo and Moonta Company's virtual monopoly in the State's copper industry. The opposition naturally attacked this initiative, and the Yelta State Smelter was politically controversial until it closed in 1913. The French company's plant remained on the site until 1920 when it was dismantled for scrap.

References

State Heritage Branch Files, File No. 11167

YELTA VALUATION LIST COMPILED FOR COMMERCIAL UNION ASSURANCE CO.

5 · 6 · 1

3rd October, 1906. W.A. Paterson (Secretary)

1.	Building of Old Smelters shed - corrugated iron - including overhead travellers building.	£ 650
2.	Smelter itself with all spare parts whilst therein.	£ 800
3.	Building of New Smelters shed constructed of corrugated iron with communication between the two buildings.	£ 700
4.	Smelter itself with all spare parts whilst therein.	£1500
5.	Buildings of Blowers and Pump Houses, wood-iron roof.	£ 150
	1.Roots Blower£2502.2 Big Baker Blowers£4003.1 small Bakers Blower£1754.Pumps and their connections.£125Other machinery, belts etc. included in same building.£ 25	
6.	Iron water tank on Wooden trestles	£ 100
7.	4 Boilers housed in the building of blowers and pump house.	£1300
8.	Stone building (Office) 4 Rooms, Galvanised Iron Roof.	£ 150
	Contents of same whilst therein.	£ 50
9.	Small Office building - wood-iron roof.	£ 30
	Contents of same whilst therein.	£ 10
10.	Stone dwelling 5 rooms (occupied by Foreman in Cross Roads)	£ 50
11.	Stone dwelling 6 rooms (occupied by Foreman in Cross Roads)	£ 50
12.	Dwelling - stone and wood 6 rooms, Yelta Lease.	£ 200
13.	Assay Office, 3 rooms, 2 stone, 1 weatherboard, galvanised iron roof.	£ 150
14.	Stone boiler house, galvanised iron roof.	£ 80
15.	Stone Pumping engine house.	£ 100
	Engine whilst therein.	£ 100
16.	Small winding engine house - weatherboard, galvanised iron roof.	£ 30
	Engine whilst therein.	£ 100
17.	Air Compressor House – galvanised iron.	£ 50
	Engine whilst therein.	£ 300
	Air Compressor (Martin)	£ 200
	Air Compressor (Ingersoll)	£ 200
	Two Iron water Receivers (back of Compressor House)	£ 250
	One Iron Air Receiver.	£ 125

18.	Saw Mill Shed – galvanised iron	£ 30
	Contents of same.	£ 30
19.	Winding house, galvanised iron	£ 70
	Engine whilst therein.	?
20.	Galvanised iron miners changing room.	£ 70
21.	Blacksmith's shop - slag brick iron roof.	£ 60
22.	Building of Trommel Plant - weatherboard iron roof.	£ 200
	Contents of same whilst therein.	£ 300
23.	Timber shed - galvanised iron.	£ 25
24.	Stables - stone and galvanised iron.	£ 25
25.	Stables (back of assay office) galvanised iron.	£30
26.	Poppet Heads wood.	£ 500

2.

編集が対応ない。

FORMULA FOR SMELTING PRICE, YELTA 1906/1907

"To arrive at the price on these mines for smelting a ton of ore at a certain assay value at a certain price of copper, multiply the price of the unit of standard copper by .85 then from this result take off 5/- then multiply the result by the assay of ore and from this total take off 12/-. The result will be the price which will be paid here.

This formula can be written as follows:

A (0.85 p-5) 12

1 signal

- A standing for the assay value
- P Price of the unit of standard copper.

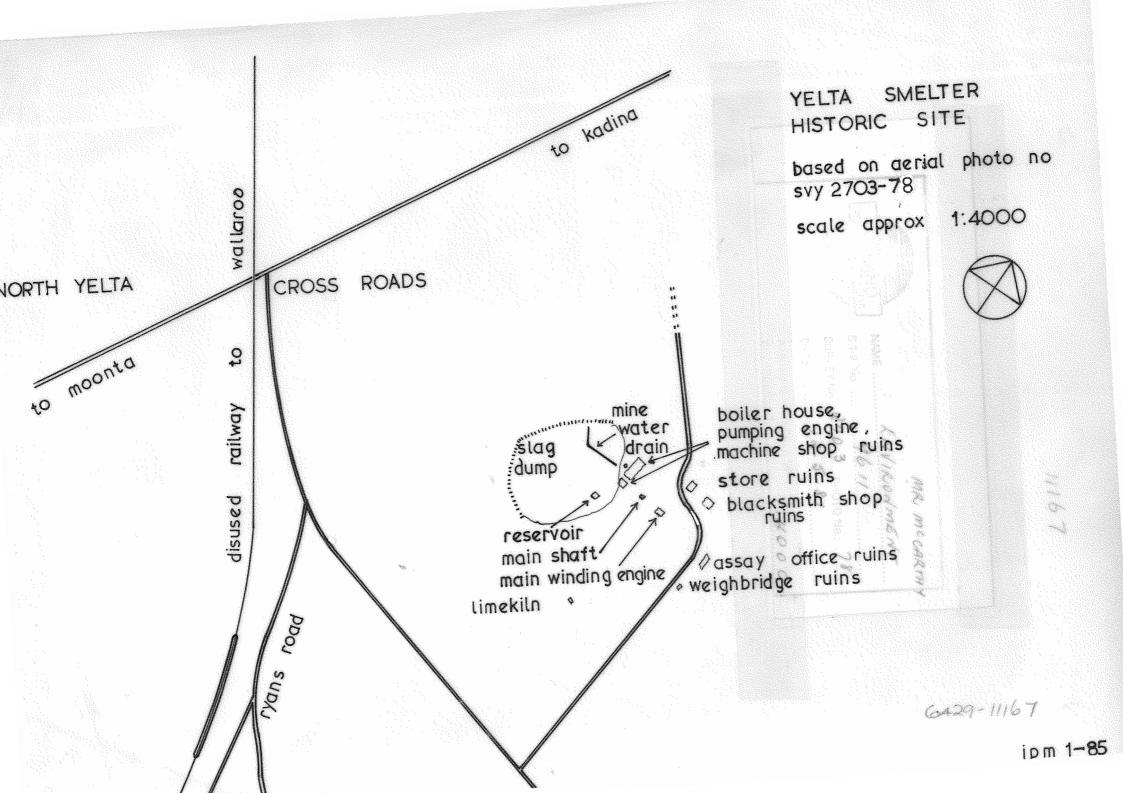
An example will better illustrate the application of this formula. For instance Copper at £100 per ton (the unit will be 20) assaying at 7% the calculation will be:

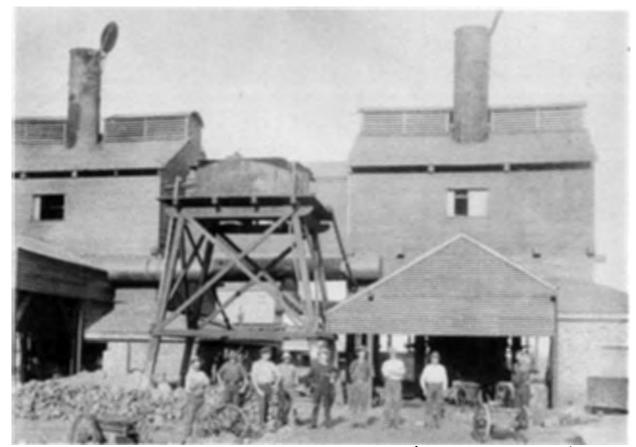


One ton of 7% ore will be paid for at the rate of £3.12.0 on the mine.

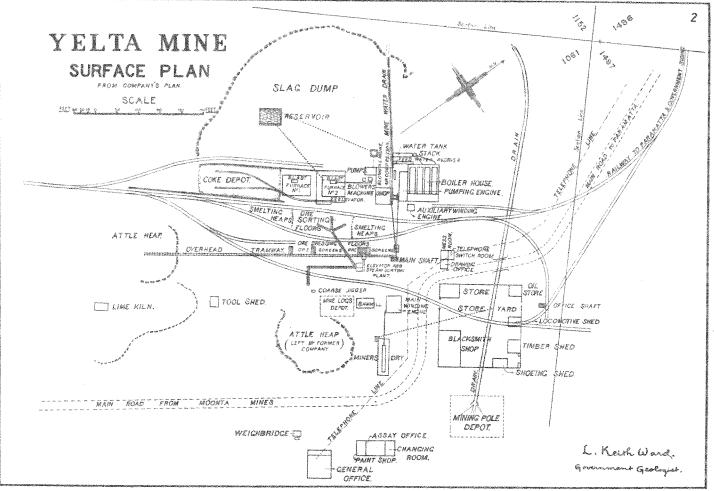
Count de Venancourt.







TWO SINGLE WATER JACKET BLAST FURNACES , YELTA , PROBABLY 1907



A. VAUGNAN, GOVERNMENT PHOTOLITHOGRAPHER, ADELANDE.

SOUTH AUSTRALIAN HERITAGE ACT, 1978

Entry of Items on the Register of State Heritage Items

There has been an increased community awareness of the need to protect those buildings and features of our State which reflect our cultural heritage. The South Australian Government has recognised that awareness by passing the South Australian Heritage Act, 1978, for which the Minister for Environment and Planning is responsible. In accordance with the provisions of the Act, the Register of State Heritage Items is being compiled.

Where the Minister considers that an item (defined as any land, building or structure) that is not on the Register is part of the physical, social or cultural heritage of the State and that the item is of significant aesthetic, architectural, historical or cultural interest, then the Minister may enter that item on the Register.

Pursuant to the provisions of the South Australian Heritage Act, 1978, I, Don Hopgood, Minister for Environment and Planning and Minister for the time being administering the said Act, hereby give notice that I have entered on the Register of State Heritage Items and the items described in The Schedule hereunder.

Items listed in The Schedule were previously placed on an Interim List in accordance with the provisions of section 15 of the South Australian Heritage Act, 1978. Excepting items owned by the Crown and those within the area of the corporation of the city of Adelaide, the remaining items listed in The Schedule are subject to Part V of the Planning Act, 1982. That Act requires that no the relevant Planning Authority. Items within the area of the corporation of the city of Adelaide are subject to the provisions of the provisions of the relevant Planning Authority. Items within the area of the corporation of the city of Adelaide are subject to the provisions of the City of Adelaide Development Control Act, 1976.

THE SCHEDULE Name Address **District** Council of Clare Dwelling, Outbuildings and Stone Wall Corner Burra Street and Hill Street, Mintaro 5415. CT volume 816, folio 75. Part of allotments 35 and 36 of section 187. Hundred of Clare, **District** Council of Hawker Hawker Railway Group—Hawker Leigh Creek Road, Hawker 5434. Railway Reserve. Hundred of Wonoka. Hawker OL 16771. Corporation of the City of Mitcham Dwelling—'Carrick Hill' 590 Fullarton Road, Springfield 5062. CT volume 1718, folio 159. Portion of allotment 292. Portion of section 891. Hundred of Adelaide.
1167 South Road, St Marys 5042. CT volume 4104, folio 228. Portion of sections 36 and 2084. Hundred of Adelaide. Anglican Church, Cemetery and Gates, St Marys . District Council of Mount Pleasant Herbig Homestead Mount Pleasant Road, Springton 5235. CT volume 3680, folio 180. Portion of sections 604 and 615. Hundred of Jutland. Pine Hut Road, via Sedan 5353. CT volume 4197, folio 411, sections 550, 562, Ruins-Engine House, North Rhine Mine Site 563 and 569 and portion of sections 150, 570, 801 and 812. Hundred of Jellicoe. District Council of Mount Barker Dwelling-Schach House 1 Main Street, Hahndorf 5245. CT volume 699, folio 62, part section 3812. Hundred of Kuitpo. St Paul's Lutheran Church 10 Main Street, Hahndorf 5245. CT volume 2440, folio 144. part allotments 235 and 236 of section 4002. Hundred of Onkaparinga.
47 Main Street, Hahndorf 5245. CT volume 4127, folio 601, lot 1 part section Dwelling-Jaensch Junior House and Shop 4234. Hundred of Kuitpo. 4234. Hundred of Kuitpo.
55 Main Street, Hahndorf 5245. CT volume 2201, folio 181. Portion of allotment 18 of section 4233. Hundred of Kuitpo.
84 Main Street, Hahndorf 5245. CT volume 2016, folio 70. Portion of allotment 25 of section 4002. Hundred of Onkaparinga.
90 Main Street, Hahndorf 5245. CT volume 3742, folio 169, allotments 24 and 34, section 4002. Hundred of Onkaparinga. Dwelling-Habisch Cottage Dwelling-Jaensch Senior House Dwelling-Wotzke House District Council of Munno Para Lady Alice Mine Via Williamstown 5115. CL volume 1589, folio 73, Miscellaneous No. 17787, sections 277, 278, 279, 280 and 396. Hundred of Para Wirra. District Council of Northern Yorke Peninsula Yelta Smelter Moonta 5558. Section 2037. Hundred of Wallaroo. Annual Licence 15713. District Council of Port Elliot and Goolwa RSL Club Rooms Goolwa 5214. CT volume 1914, folio 197, portion of section 271. Hundred of Goolwa. Goolwa 5214. CT volume 4175, folio 39, allotment 1, portion of section 271. Goods Shed Hundred of Goolwa. Railway Viaduct Railway Reserve, Currency Creek 5214, Railway Reserve, section 394. Hundred of Nangkita. Railway Station The Strand, Port Elliot 5212. CT volume 4243, folio 835. Hundred of Goolwa. Corporation of the City of Tea Tree Gully Golden Grove House Crouch Street, Golden Grove 5125. CT volume 4154, folio 138, part sections 2166, 2167 and 5116. Hundred of Yatala. Unincorporated Andamooka Historic Reserve Littra House Andamooka 5722, allotment 582, town of Andamooka. O.L. Number 17160. Near Main Road, Wentworth-Cooltong-Renmark, Chowilla, Section 17 (Chow-illa District). Out of Hundreds.

THE SOUTH AUSTRALIAN GOVERNMENT GAZETTE

14 A

WHE

Proper certific of sec have certific Murra

with the certifi Murra Dat Adela

WHE

Prope certifi of Ma substi

Andre that u

person Augus will b

in res Dat Adela Ref. o

WHE Prope certifi Rand

to be unless havin next (issued

Da

Adela

Wippediate and a set a

THE SCHEDULE					
Name	Address				
District Council of Victor Harbor Dwelling—'Mount Breckan'	Renown Avenue, Victor Harbor 5211. CT volume 4145, folio 402, lot 56, part section 17. Hundred of Encounter Bay.				
Corporation of the Town of Wallaroo Methodist Church	Stirling Road, Wallaroo 5556. CT volume 4003, folio 886, portion of allotment 80. Hundred of Wallaroo.				
District Council of Warooka Inneston Gypsum Complex	Inneston 5577, portion of sections 125, 101 and 131, Innes National Park. Hundred of Warrenben.				

Dated at Adelaide, 14 August 1986.

D. J. HOPGOOD, Minister for Environment and Planning

MINING ACT, 1971, AS AMENDED

Department of Mines and Energy, 14 August 1986 NOTICE is hereby given that I propose to grant a mining lease over the undermentioned area. Any objections to this proposal must be lodged in writing at the office of the Department of Mines and Energy, 191 Greenhill Road, Parkside, on or before 11 September 1986.

R. G. PAYNE, Minister of Mines and Energy

Applicant	Location	Term	Area in ha	Ref. D.M.E.
Robert Malcolm Patterson Special conditions are proposed	Mineral lease In section 154, hundred of Haines for the above tenement details of which are available	7 years able from the Mini	12.00 ng Registrar.	T851

MINING ACT, 1971, AS AMENDED

Department of Mines and Energy, 14 August 1986

NOTICE is hereby given that I propose to grant an exploration licence over the undermentioned area. Any objections to this proposal september 1986

R. G.	PAYNE,	Minister	of	Mines	and	Energy
-------	--------	----------	----	-------	-----	--------

Applicant	Location	Term	Area in km ²	Ref. D.M.E.
Stockdale Prospecting Limited	Mount Bosanquet area—approximately 25 km south of Kimba, bounded as follows: commencing at a point being the intersection of latitude33°20'S and longitude 136°15'E, thence east to longitude136°29'E, south to latitude 33°25'S, west to the eastern boundary of Carappee Hill Conservation Park, thence generally northwesterly and southerly along the boundaries of the said park to longitude 136°15'S and north to the point of commencement. All the within latitudes and longitudes are geodetic and expressed in terms of the Australian Geodetic Datum as defined on p. 4984 of <i>Commonwealth Gazette</i> number 84 dated 6 October 1966.	I year	195	134/1986