NORTH CENTRAL GOLDFIELDS PROJECT

HISTORIC MINING SITES IN THE MALDON MINING DIVISION

PART TWO: SITE GAZETTEER

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Department of Conservation and Natural Resources
North West Area

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SITE NO. & NAME:	**1**	**HAVILAH CO.**
	2	**CHARLOTTE PLAINS PIONEER CO.**
	3	**DEEP LEADS ELECTRIC COMMISSION CO.**
LOCATION:	**Berry-Moolort-Loddon Deep Lead, Baringhup.**	
VHR NO:	**3**	**H1689**
HI NO:	**1**	**H7623-0002**
	2	**H7623-0003**
	3	**H7623-0004**

DIRECTIONS: West side of the Bald Hill-Baringhup Road, 7 km south west of Baringhup. Shafts 1.7 km apart.

MUNICIPALITY: Sites 1 and 2—Mount Alexander Shire
Site 3—Central Goldfields Shire

LAND STATUS: Freehold Land

HISTORY:

Charlotte Plains deep lead prospecting (1883 to 1888).

March 1883. There is one party boring a line of holes in the parish of Eddington, between the Deep Creek and the Loddon River. From the last hole bored, near Rumboldt's farm, the prospect was sufficient to induce them to start a shaft from the surface, and a steam engine has been purchased to work the mine.[1]

June 1883. The company on the Charlotte Plains, near Rumbold's farm, is also sinking a shaft and erecting a steam-engine for pumping and hauling the dirt.[2]

June 1887. Alluvial Mining. In alluvial mining there is no improvement hitherto. A bore has been started near the Boundary Gully on allotment 12A1 of section 3, parish of Eddington, on the north-west of the Carisbrook-road. The bore has passed through between 70 and 80 feet of basaltic rock, under which it has passed through several strata of drift to over 200 feet. At the bottom the drift is very loose, and it is found a difficulty to keep open the bore. A log or tree has been passed through, which, in my opinion, is an indication of being near the bottom. To all appearances, the Charlotte Plains before long will become a large gold-field. All the leads from Maryborough, Talbot, Creswick, Daylesford, and Castlemaine are trending in that direction, and the only outlet is at Eddington, near the junction of the Loddon and the Tullaroop Creek, where the basaltic bed is only about half-a-mile in width.[3]

September 1887. Boring is still going on on the Charlotte Plains, and the third bore on lease No. 659 P.P. is now down 177 feet, and still in drift.[4]

December 1887. Alluvial. The only work done on the Charlotte Plains is on lease No. 659, private property. The fifth bore has been recently bottomed at 133 feet, but this being on 39 feet higher ground than the deep bores would be equal to 100 feet shallower than the first and fourth bores, both of which have passed through drift containing gold in the cores.[5]

September 1888. Alluvial. Boring is still going on in Lease No. 977, Charlotte Plains. In the last bore they got through the rock at 75 feet, and came on to a heavy wash, where (at 91 feet) the rods got jammed and cannot be got out. Another bore is to be started about half-a-mile further north. The bore put down in Lease No. 723, P.P. is bottomed at 305 feet 8 inches (in wash).[6]

December 1888. The Pioneer Company, on the Charlotte Plains, has bottomed the ninth bore at a depth of 278 feet 9 inches; there is 5 feet of wash on the bottom, with a good prospect of gold. Golden prospects have also been found in three other bores, all nearly of the same depth. Having now proved the deep ground to be running through their lease, their next step, I presume, will be to select a position for the shaft, and start sinking. Nearly all the other companies having been waiting the result of this company's operations.[7]

March 1889. Alluvial. The Charlotte Plains Pioneer Company has commenced to sink a shaft, and are now down 85 feet, but have not yet got through the basaltic rock.
The Havilah Company, adjoining on the west, has bottomed another bore at a depth of 296 feet.[8]

June 1891. In connection with alluvial mining, the Charlotte Plains Pioneer Company has put up several bores from the back of the drive to the wash, and as favourable prospects were discovered in several of them, a large area of

ground has been applied for in the vicinity and for miles around. The Havilah Company has again started boring for the lead.[9]

October 1898. On the following morning a party, consisting of the Minister, Messrs. Stirling, W.B. Gray. J. Drysdale Brown (representative of three English companies), and Wright (engineer to the Tasmanian Mine, Beaconsfield), made a tour of the district to view the works in progress by the great alluvial mining companies, namely, The Gold Estates, Charlotte Plains Pioneer, Deep Leads Junction, and Havilah. At each mine evidence of great undertakings were noted.[10]

Amalgamation of both properties. Charlotte Plains Consolidated Co. (c.1900 to 1909).

c.1900-1907. The Charlotte Plains Consolidated Company's lease, consisting of 4,000 acres, is situated in the south of the parish of Eddington, and about midway between the townships of Carisbrook and Baringhup.

Boring operations were commenced in 1887, and proved the existence of a deep lead, with the result that the Charlotte Plains Pioneer Company was formed, with a nominal capital of £40,000, in £1 shares, the shareholders consisting principally of those who had supplied the money for boring. A pumping and winding plant, which at that time was considered up-to-date and of full capacity, was erected, and a large amount of developmental work was carried out, when a burst of water and drift occurred, resulting in the loss of the mine. Subsequent operations have proved that, even if such loss had not occurred, the original plant would have been quite inadequate to cope with the volume of water to be pumped before driving in wash-dirt could be commenced. The shareholders were unable to supply the necessary funds to recommence operations, and a two-thirds interest in the property was granted to London capitalists for a sum of £20,000, and a company owning the adjoining mine (the New Havilah) soon afterwards obtained £25,000 from English capitalists on similar conditions. An amalgamation afterwards took place, and this mine now forms part of the Charlotte Plains Company's workings. It was soon discovered that the amounts above mentioned were insufficient to develop the mine, but the prospects of the preliminary work were sufficiently encouraging to justify additional capital coming forward when required. The present company consists of 260,000 shares at £1 each, and 520,000 shares at 3s 4d each, the legal manager being the Hon. J. Drysdale Brown, of Collins-street, Melbourne. Boring operations have proved the existence of a lead about 500 feet wide. An eastern and western run of gold frequently occurs in this lead, the latter usually being in the deeper ground and carrying the higher values in wash-dirt, and really constitutes the main lead … From the Pioneer shaft, which is 344 feet deep, a main level has been driven westward 1,040 feet to the edge of the lead. At a point about 1,000 feet from the shaft, a south-west branch bottom level has been driven towards the New Havilah workings, and from the bottom level rises communicate with the intermediate and wash drives.

Auriferous quartz leaders, which have assayed up to 10 dwts per ton, have been occasionally cut in the bottom level. Recent developments indicate that the main and deeper deposit of wash-dirt contains highly payable gold … The chief difficulty now appears to exist in raising sufficient capital to cut up the payable wash-dirt and panel it out.

The Havilah shaft, which is 339 feet deep was sunk at a distance of a little over a mile south-westward from the Pioneer shaft. Extensive wash workings have been carried out on the eastern deposit of wash, but in the author's opinion the best values lie still untouched to the west of the ground already treated.

Up to the end of 1907, the company had called up £232,400 of capital, and had treated 13,600 fathoms for a yield of over 6,800 oz, valued at about £27,000. About 250 men were engaged on the mine.

A sum of £25,000 has been spent on the electrical equipment of the power house, the plant being the property of the Deep Leads Electric Transmission Company, which originally consisted of the Charlotte Plains, the Victorian Deep Leads and Junction Deep Leads Companies, formed to supply power for pumping, hauling, and other mining work. The plant at the Central Power Station, which adjoins the Charlotte Plains mine, consists of three sets of 400 Kilowatt generators of the revolving field type, direct coupled to 600 H.P. compound condensing engines running at 150 revolutions per minute, and producing a three-phase alternating current at 6,600 volts and 60 cycles per second. Two generators are in constant use, the third being kept as a stand-by.

Pumping at both shafts is done by two three-throw double-acting plunger pumps, each capable of raising 2,500,000 gallons of water per 24 hours. It is by this machinery that the water trouble has been overcome.

The underground haulage plant at each shaft consists of a motor generator supplying 75 amperes at 240 volts, an earthed return being used. A 10 H.P. electro-locomotive, with the electrical parts protected from the water, is used for hauling, and will pull 60 full-loaded trucks, at a speed of 6 miles per hour, along a tram line about 5,000 feet long. The lighting of the drive is done by 16-candle-power electric incandescent lamps, and an extensive telephone system is also in operation. The puddling plant consists of a plat capable of containing four puddling machines, but only two are at present erected. The harrows make eight revolutions per minute, and power is supplied through bevelled gear from a 40 B.H.P. electro-motor. With four machines at work it is estimated that 900 tons can be handled per twenty-four hours. Another 40 B.H.P. electro-motor drives a Root's blower capable of discharging 15,000 cubic feet of air per minute, which is used for ventilation purposes. The whole of the mine workings and plant are in excellent order, and, provided no great fall in wash values occurs, the mine will be worked for years to come.[11]

1906. The Victorian Deep Leads Company, the only alluvial mine working within the division during the year, completed the installation of a double action 3-throw pump, similar to those at work in the Charlotte Plains Consolidated mine. This, with the two 20-feet Cornish pumps previously at work, gives a pumping capacity of over 5,000,000 gallons per day. A second shaft, in which, I am informed, additional pumps of very large size are to be fixed, has been commenced near the site of the present shaft. The whole of the pumping machinery at present in use in this mine is driven by electric power obtained from the power station of the Charlotte Plains Electric Transmission Company, some five or six miles distant. The average number of men employed by this company was 26 underground, and fourteen on the surface.[12]

1907. Alluvial Mines. Of the four deep alluvial mines in this division three--the Loddon Valley Goldfields, Charlotte Plains Consolidated Gold Mines, and Victoria Deep Leads--have continued, with their splendid pumping machinery, to reduce the pressure of water in the old river beds, and in the two former mines have so reduced it as to be able to open up drives in the wash, and in the case of the Charlotte Plains Consolidated to extract a considerable quantity of gold therefrom.[13]

1908. Alluvial. Of the three large deep alluvial mines in this division that were carrying on operations, and employing a large number of hands twelve months ago, I regret to have to report that two of them, viz., the Loddon Valley and Victorian Deep Leads Companies have suspended operations. The Charlotte Plains Company (the one that continues working) would in all probability have also suspended work had the Mines Department not come to its assistance with a loan of £6,000. This loan has been attended with fortunate results, since by its assistance what appears to be a large field of highly-payable wash has been discovered, and the future of the mine appears exceedingly promising. A large number of men are now employed, and this number must be considerably increased during the existing year.[14]

1909. Alluvial mining. I regret to have to report that there is practically no alluvial mining now being carried on in this division. The one mine that was working at this time last year, and about which I had good hopes, viz., the Charlotte Plains Company, has ceased operations, and I do not think there is any probability of work being resumed.[15]

DESCRIPTION & INTERPRETATION:

Havilah Co. (operated from 1889 to 1909).
The remains of this company's operations consist of a large intact grey/blue mullock heap associated with a small, partially quarried heap of washed gravel. Little survives of any machinery footings barring a small concrete slab and some scraps of timber.

Charlotte Plains Pioneeer Co. (operated from 1887 to 1909).
The remains of this company's operations consist of a large mullock heap and partially quarried heap of washed gravel. The mullock heap has a diameter of 90 m and would be around 20 m high. Little trace of any machinery footings etc.

Deep Leads Electric Commission Co. (operated from c.1906 to 1909).
On the south west side of the Charlotte Plains Co's heap are the footings of the Deep Lead Electric Commission Co's Central Power Plant. The site consists of 1-1/2 ft thick concrete footings for two adjoining structures. Presumably the footings were for Gal. Iron. sheds. The southern footings measures 46 ft (14 m) and contains a massive, below floor, concrete generator foundation which measures 32 x 24 ft (9.75 x 7.3 m) , and stands 7 ft (2.13 m) high. On the concrete foundation are several stone mounting beds with 1-1/2-inch mounting bolts.
The northern footings are 50 ft (15.25 m) square and contain two similarly sized concrete and stone generator foundations. There are also four concrete pedestals running along the front of the eastern ends of the foundations. The basements area surrounding the mounting beds in both buildings contains farm rubbish and the bones of many sheep.
15 m west of the machinery site is a large square dam. On the dam's edge is a small brick base (machine-made variety).

INTEGRITY/CONDITION: Power plant foundations in good condition.

CULTURAL SIGNIFICANCE:

The site has:

- Historical Significance, because the sites are associated with the first large-scale deep lead mining in the Maldon Mining Division.
- Scientific Significance, because the sites demonstrate the utilisation of electric power generation for deep lead mining.

The site's significance is increased by cumulative value because:

- the sites form part of a group or network of sites that together represent the development of deep lead mining technology on northern extension of the Berry-Moolort-Loddon deep lead, Charlotte Plains. The network comprises Sites 3, 4, 5 and 6 (Deep Leads Electric Commission Co., Victorian Deep leads Co., Loddon Valley Co. and Moolort Goldfields Co.).

SIGNIFICANCE RANKING: Site 3 Listed Heritage Register.
Sites 1 2 & 3 Listed Heritage Inventory.

Assessor: David Bannear **Date: November 1992.**

1 Mining Surveyors' Reports, March 1883
2 Mining Surveyors' Reports, June 1883
3 Mining Surveyors' Reports, June 1887
4 Mining Surveyors' Reports, September 1887
5 Mining Surveyors' Reports, December 1887
6 Mining Surveyors' Reports, September 1888
7 Mining Surveyors' Reports, December 1888
8 Mining Surveyors' Reports, March 1889
9 Mining Surveyors' Reports, June 1891
10 Australasian Mining Standard, Oct 1898, p3342.
11 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, pp. 79-80
12 Annual Report, 1906
13 Annual Report, 1907
14 Annual Report, 1908
15 Annual Report, 1909

SITE NO. & NAME:	**4**	**VICTORIAN DEEP LEAD CO. (KEYSTONE SHAFT)**
LOCATION:		**Berry-Moolort-Loddon Deep Leads, Baringhup**
HI NO:		**H7623-0005**

DIRECTIONS: 1 km west of the junction of Keystone Mine and Baringhup-Moolort Rds. North side of Keystone Mine road.

MUNICIPALITY: Central Goldfields Shire

LAND STATUS: Freehold Land

HISTORY:

The Loddon Valley Goldfields mine is situated about 2 miles in a north-easterly direction from the Moolort railway station, and on the northerly extension of the main Berry-Moolort-Loddon lead in the parish of Moolort. The lease consists of 6,921 acres.
It was originally included in the lease of the Victoria Gold Estates, which company owned about 7 miles of the main lead which was first referred to in 1897 as the Berry-Moolort-Loddon lead.
The Victorian Gold Estates in 1898 sank two shafts about 4 miles apart; the northern one now included in the company's lease is known, and will be referred to as the No. 1 shaft. This No. 1 shaft was sunk at the No. 4 Government Diamond Drill, but apparently little regard was paid to the suitability or otherwise of the site, and as the line of bores was carried in a north-easterly direction from the shaft it became obvious that a grave blunder had been made, and on the completion of the boring a sectional drawing of the results showed the lead to be over 5,000 feet eastward from the shaft, but, notwithstanding this, driving towards the lease was persevered with.
Subsequently, about 1901, the Victorian Gold Estates Company divided the property into two parts, which were worked by the Moolort Goldfields and Loddon Valley Companies respectively, and pumping and exploration work in a small tributary lead was carried on by the Loddon Valley Company until about June 1903, when the reconstruction of the companies became necessary owing to shortness of funds. By this time the Loddon Valley Company (No. 1 shaft) had extended the reef drive eastward to the main lead, a distance of some 6,000 feet, and had been pumping about 2-1/2 million gallons of water per diem. The cost of all this was about £120,000. On reconstruction being effected the pumping plant was at once increased to between 3-1/2 and 4 million gallons per diem, and subsequently a beam-engine pump from one of the Berry mines was obtained and set to work, but this pump was found to be so expensive for fuel and inefficient in results that it was discarded as soon as possible. After this huge amount of work had been more or less completed, it was recognised that the No. 1 shaft and main level therefrom would not command the deep ground, and a new shaft, now known as the Keystone Shaft, some 4,500 feet nearer the head, and 15 feet lower in surface level, was decided upon. The pumping machinery and mining plant were shifted from the Moolort Goldfields Shaft and re-erected at the Keystone Shaft in a little over five months, the pumps being started in August, 1906, and, at the end of 1906, wash-dirt was touched. Since then the pumps have been kept going, and a large area of more or less auriferous wash-dirt is drained. The expenditure from the end of 1903 until the present date is some £82,000, making in all an expenditure of £202,000 on the original property.
Nearly 200 bores have been put up from the back of the drives and about 30 safety lock-doors built.
Messrs Bewick, Moreing and Co., of Melbourne, are the legal managers for this company, which has a capital of 160,000 £1 shares fully paid up.
So far only the affluents and tributaries of this lead system have been described. Many, however, are so large that they have justly been termed "main leads". North of the boring completed in 1904 by the Loddon Valley Pioneer Syndicate the channel is known as the Berry-Moolort-Loddon lead and has been proved in its northerly extension by thirteen lines of bores for a distance of 30 miles, giving in nearly all cases fair results in wash and gold prospects.
No mines are at present at work on this portion of the main lead, the Loddon Valley goldfields previously mentioned and the Victorian Deep Leads having recently closed down. The latter sunk a main shaft and drove a main reef drive and pumped for some years, but no wash was operated on, and the lead at the locality tested appears to be widespread and probably unpayable.[16]

1898-1909. Victorian Deep Leads Mine. Boring operations to locate the northerly extension of the main Berry-Moolort-Loddon Lead were carried out during 1898 in the locality of Baringhup and Neereman. The cost of most of the bores was defrayed by the companies interested, but Government supervision was exercised over the work to insure correctness in records, &c. The prospects of gold obtained from several of the bores were favourable, and payable results were confidently anticipated.
Shaft sinking was commenced in 1899, and a westerly reef drive was extended out about 525 feet. Work was then suspended for some time, and in July 1903, the management of the mine was taken over by Messrs Bewick, Moreing and Co. No plat having been cut, and the reef drive being considered too small, these two works were immediately undertaken, together with the further extension to the west of the reef drive.

A steam plant was first used for pumping, but subsequently electricity was used, and both the Cornish pump and three-throw pump were electrically driven. Approximately some 3,600,000,000 gallons of water were pumped when the company decided to close down. The portion of the lead where the mine is situated is very wide, and large tributaries converge at that point, consequently the wash is scattered and relatively poor. This factor is also responsible for the slow reduction of the water pressure when pumping was in full swing, and it is probable that nothing less than 10,000,000 gallons per day plant will be effectual should the reopening of the mine ever be considered.
The boring in the northern portion of the company's lease proved a well-defined and somewhat narrow valley, with less overlying and waterlogged strata than where the present mine is, and notwithstanding the recent failure to carry on operations, there is reason to anticipate that much better results will be obtained in such portion of the lease.[17]

1905. The only alluvial mine within the division is the Victorian Deep Lead (an English company), situated near the Loddon River, at Baringhup. In this mine 700 feet of main-reef drives and cross-cuts were driven during the year, and 15 bores were put into the wash for drainage purposes. During the same period 690,312,662 gallons of water were pumped. Finding the pressure of water very strong, the company decided to materially increase the pumping capacity, and is now installing a new three-throws pump, which, when completed, will bring the total pumping capacity of the plant up to 6,000,000 gallons per day. For the installation of the new three-throws pump a large chamber has been cut in hard solid blue rock, and about 40,000 cubic yards of rock have been taken out. When completed, the cost of the chamber, pumps and machinery will be about £9,000. The shaft is 310 feet deep, and the end of the main reef drive is 1,700 feet from the shaft. The average number of men employed is 32, of whom 11 are at work on the surface. The pumps now in use are two 20-inch diameter Cornish lifts, which are driven by electricity. The whole of the pumping plant, when complete, will be driven by electricity.
The treatment of sand by the cyanide process continues to be a flourishing industry in this division. At least 46 plants have been in active operation during the year, employing not fewer than 245 hands and about 80 horses and drays. The yield of gold from this source, which, although I am unable to give, is, I know, considerable.[18]

1906. The Victorian Deep Leads Company, the only alluvial mine working within the division during the year, completed the installation of a double action 3-throw pump, similar to those at work in the Charlotte Plains Consolidated mine. This, with the two 20-feet Cornish pumps previously at work, gives a pumping capacity of over 5,000,000 gallons per day. A second shaft, in which, I am informed, additional pumps of very large size are to be fixed, has been commenced near the site of the present shaft. The whole of the pumping machinery at present in use in this mine is driven by electric power obtained from the power station of the Charlotte Plains Electric Transmission Company, some five or six miles distant. The average number of men employed by this company was 26 underground, and fourteen on the surface.[19]

1907. Alluvial Mines. Of the four deep alluvial mines in this division three--the Loddon Valley Goldfields, Charlotte Plains Consolidated Gold Mines, and Victoria Deep Leads--have continued, with their splendid pumping machinery, to reduce the pressure of water in the old river beds, and in the two former mines have so reduced it as to be able to open up drives in the wash, and in the case of the Charlotte Plains Consolidated to extract a considerable quantity of gold therefrom.
The Loddon Valley Gold-fields Company has not yet been able to open up the deep ground, owing to the water pressure being too great, and hence its yields are small. The fourth company, The Victoria Deep Leads Junction, has been hampered owing to the difficulty in getting the requisite capital to carry out the expensive work necessary.[20]

1908. Alluvial. Of the three large deep alluvial mines in this division that were carrying on operations, and employing a large number of hands twelve months ago, I regret to have to report that two of them, viz., the Loddon Valley and Victorian Deep Leads Companies have suspended operations. The Charlotte Plains Company (the one that continues working) would in all probability have also suspended work had the Mines Department not come to its assistance with a loan of £6,000. This loan has been attended with fortunate results, since by its assistance what appears to be a large field of highly-payable wash has been discovered, and the future of the mine appears exceedingly promising. A large number of men are now employed, and this number must be considerably increased during the existing year.[21]

DESCRIPTION & INTERPRETATION:

Victorian Deep Lead Co, Keystone shaft (operated from 1903 to 1908).
Remains of this company's operations comprise a large mullock heap. On the south side of the heap is a massive, roughly H-shaped, mounting bed. The bed, measuring 90 x 40 ft (27.5 x 12.2 m), and standing 9 ft (2.75 m) high is constructed of an outer layer of hand and machine-made red brick and an inner core of rough concrete. Running from the north side of the bed is an open concrete culvert that leads to a square pond.
West of the massive bed is a well preserved concrete pump arch which stands to a height of about 6 m. The arch measures 19 x 10 ft (5.8 x 3 m). Between the arch and the massive bed is a collapsed shaft which has been filled with farm rubbish, dead sheep and car bodies. Abutting the west side of the pump arch is a 18 x 5 ft (5.5 x 1.5 m) concrete-lined pit which is 5 ft deep. On the western side of the pit is a 7 ft (2.13 m) diameter concrete cylinder bed with 3-1/2 inch mounting bolts. Ten metres from the cylinder footing are three , 40 ft long, parallel concrete footings.

INTEGRITY/CONDITION:

CULTURAL SIGNIFICANCE:

The site has:

- Historical Significance, because, along with associated sites 5 and 6 (Loddon Valley Co. and Moolort Goldfields), the site documents a sequence of events brought on by difficulties encountered in mining the deep lead.
- Scientific Significance, because, along with sites 5 and 6, the remains demonstrate two different types of pumping appliance, and the massive size of the plant necessary to dewater a deep lead.

The site's significance is increased by cumulative value, because:

- it forms part of a group or network of sites that together document the development of deep lead mining technology on northern extension of the Berry-Moolort-Loddon deep lead, Charlotte Plains. The network comprises Sites 3, 4, 5 and 6 (Deep Leads Electric Commission Co., Victorian Deep leads Co., Loddon Valley Co., and Moolort Goldfields Co.).
- the mullock heap is aprominent landscape feature.

SIGNIFICANCE RANKING: Site Listed Heritage Inventory.

Assessor: David Bannear **Date: November 1992.**

16 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, p. 64
17 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, p. 80
18 Annual Report, 1905
19 Annual Report, 1906
20 Annual Report, 1907
21 Annual Report, 1908

SITE NO. & NAME:	**5**	**LODDON VALLEY CO.** **(Formerly Victorian Gold Estates Co.'s North Shaft)**
LOCATION:		**Berry-Moolort-Loddon Deep Lead, Baringhup**
HI NO:		**H7623-0006**

DIRECTIONS:	1 km west of Keystone mine (Site 4)
MUNICIPALITY:	Central Goldfields Shire
LAND STATUS:	Freehold Land

HISTORY:

The Loddon Valley Goldfields mine is situated about 2 miles in a north-easterly direction from the Moolort railway station, and on the northerly extension of the main Berry-Moolort-Loddon lead in the parish of Moolort. The lease consists of 6,921 acres.

It was originally included in the lease of the Victoria Gold Estates, which company owned about 7 miles of the main lead which was first referred to in 1897 as the Berry-Moolort-Loddon lead.

The Victorian Gold Estates in 1898 sank two shafts about 4 miles apart; the northern one now included in the company's lease is known, and will be referred to as the No. 1 shaft. This No. 1 shaft was sunk at the No. 4 Government Diamond Drill, but apparently little regard was paid to the suitability or otherwise of the site, and as the line of bores was carried in a north-easterly direction from the shaft it became obvious that a grave blunder had been made, and on the completion of the boring a sectional drawing of the results showed the lead to be over 5,000 feet eastward from the shaft, but, notwithstanding this, driving towards the lease was persevered with.

Subsequently, about 1901, the Victorian Gold Estates Company divided the property into two parts, which were worked by the Moolort Goldfields and Loddon Valley Companies respectively, and pumping and exploration work in a small tributary lead was carried on by the Loddon Valley Company until about June 1903, when the reconstruction of the companies became necessary owing to shortness of funds. By this time the Loddon Valley Company (No. 1 shaft) had extended the reef drive eastward to the main lead, a distance of some 6,000 feet, and had been pumping about 2-1/2 million gallons of water per diem. The cost of all this was about £120,000. On reconstruction being effected the pumping plant was at once increased to between 3-1/2 and 4 million gallons per diem, and subsequently a beam-engine pump from one of the Berry mines was obtained and set to work, but this pump was found to be so expensive for fuel and inefficient in results that it was discarded as soon as possible. After this huge amount of work had been more or less completed, it was recognised that the No. 1 shaft and main level therefrom would not command the deep ground, and a new shaft, now known as the Keystone Shaft, some 4,500 feet nearer the head, and 15 feet lower in surface level, was decided upon. The pumping machinery and mining plant were shifted from the Moolort Goldfields Shaft and re-erected at the Keystone Shaft in a little over five months, the pumps being started in August, 1906, and, at the end of 1906, wash-dirt was touched. Since then the pumps have been kept going, and a large area of more or less auriferous wash-dirt is drained. The expenditure from the end of 1903 until the present date is some £82,000, making in all an expenditure of £202,000 on the original property.

Nearly 200 bores have been put up from the back of the drives and about 30 safety lock-doors built.

Messrs Bewick, Moreing and Co., of Melbourne, are the legal managers for this company, which has a capital of 160,000 £1 shares fully paid up.

So far only the affluents and tributaries of this lead system have been described. Many, however, are so large that they have justly been termed "main leads". North of the boring completed in 1904 by the Loddon Valley Pioneer Syndicate the channel is known as the Berry-Moolort-Loddon lead and has been proved in its northerly extension by thirteen lines of bores for a distance of 30 miles, giving in nearly all cases fair results in wash and gold prospects.

No mines are at present at work on this portion of the main lead, the Loddon Valley goldfields previously mentioned and the Victorian Deep Leads having recently closed down. The latter sunk a main shaft and drove a main reef drive and pumped for some years, but no wash was operated on, and the lead at the locality tested appears to be widespread and probably unpayable.[22]

1907. Alluvial Mines. Of the four deep alluvial mines in this division three--the Loddon Valley Goldfields, Charlotte Plains Consolidated Gold Mines, and Victoria Deep Leads--have continued, with their splendid pumping machinery, to reduce the pressure of water in the old river beds, and in the two former mines have so reduced it as to be able to open up drives in the wash, and in the case of the Charlotte Plains Consolidated to extract a considerable quantity of gold therefrom.
The Loddon Valley Goldfields Company has not yet been able to open up the deep ground, owing to the water pressure being too great, and hence its yields are small. The fourth company, The Victoria Deep Leads Junction, has been hampered owing to the difficulty in getting the requisite capital to carry out the expensive work necessary.[23]

1908. Alluvial. Of the three large deep alluvial mines in this division that were carrying on operations, and employing a large number of hands twelve months ago, I regret to have to report that two of them, viz., the Loddon Valley and Victorian Deep Leads Companies have suspended operations.[24]

DESCRIPTION & INTERPRETATION:

Loddon Valley Goldfields Co. (operated from 1901 to 1908).
Mine site is located 1 km west of Keystone mine. Not surveyed, but contains the largest mullock heap to survive from the Maldon's deep lead mining industry. Certainly has substantial foundations.

INTEGRITY/CONDITION: Good.

CULTURAL SIGNIFICANCE:

The site has:

- Historical Significance, because, along with associated Sites 4 and 6 (Loddon Valley Co. and Moolort Goldfields), the site documents a sequence of events brought on by difficulties encountered in mining the deep lead.
- Scientific Significance, because, along with Sites 4 and 6, the remains demonstrate different types of pumping appliance, and the massive size of the plant necessary to de-water a deep lead.

The site's significance is increased by cumulative value because:

- it forms part of a group or network of sites that together represent the development of deep lead mining technology on northern extension of the Berry-Moolort-Loddon deep lead, Charlotte Plains. The network comprises Sites 3, 4, 5 and 6 (Deep Leads Electric Commission Co., Victorian Deep leads Co., Loddon Valley Co., and Mooloort Goldfields Co.).
- the mullock heap is a prominent landscape feature.

SIGNIFICANCE RANKING: Site Listed Heritage Inventory.

Assessor: David Bannear **Date: November 1992**.

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22 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, p. 64
23 Annual Report, 1907
24 Annual Report, 1908

SITE NO. & NAME:	**MOOLORT GOLDFIELDS CO.** **(Formerly Victoria Gold Estates Co.'s South Shaft)**
LOCATION:	**Berry-Moolort-Loddon Deep Lead, Baringhup**
HI NO:	**H7623-0007**
DIRECTIONS:	North side of Rodborough road, 12.5 km east of Newstead.
MUNICIPALITY:	Central Goldfields Shire
LAND STATUS:	Freehold Land

HISTORY:

October 1898. On the following morning a party, consisting of the Minister, Messrs. Stirling, W.B. Gray. J. Drysdale Brown (representative of three English companies), and Wright (engineer to the Tasmanian Mine, Beaconsfield), made a tour of the district to view the works in progress by the great alluvial mining companies, namely, The Gold Estates, Charlotte Plains Pioneer, Deep Leads Junction, and Havilah. At each mine evidence of great undertakings were noted.[25]

1897-1907. The Loddon Valley Goldfields mine is situated about 2 miles in a north-easterly direction from the Moolort railway station, and on the northerly extension of the main Berry-Moolort-Loddon lead in the parish of Moolort. The lease consists of 6,921 acres.
It was originally included in the lease of the Victoria Gold Estates, which company owned about 7 miles of the main lead which was first referred to in 1897 as the Berry-Moolort-Loddon lead.
The Victorian Gold Estates in 1898 sank two shafts about 4 miles apart; the northern one now included in the company's lease is known, and will be referred to as the No. 1 shaft. This No. 1 shaft was sunk at the No. 4 Government Diamond Drill, but apparently little regard was paid to the suitability or otherwise of the site, and as the line of bores was carried in a north-easterly direction from the shaft it became obvious that a grave blunder had been made, and on the completion of the boring a sectional drawing of the results showed the lead to be over 5,000 feet eastward from the shaft, but, notwithstanding this, driving towards the lease was persevered with.
Subsequently, about 1901, the Victorian Gold Estates Company divided the property into two parts, which were worked by the Moolort Goldfields and Loddon Valley Companies respectively, and pumping and exploration work in a small tributary lead was carried on by the Loddon Valley Company until about June 1903, when the reconstruction of the companies became necessary owing to shortness of funds. By this time the Loddon Valley Company (No. 1 shaft) had extended the reef drive eastward to the main lead, a distance of some 6,000 feet, and had been pumping about 2-1/2 million gallons of water per diem. The cost of all this was about £120,000. On reconstruction being effected the pumping plant was at once increased to between 3-1/2 and 4 million gallons per diem, and subsequently a beam-engine pump from one of the Berry mines was obtained and set to work, but this pump was found to be so expensive for fuel and inefficient in results that it was discarded as soon as possible. After this huge amount of work had been more or less completed, it was recognised that the No. 1 shaft and main level therefrom would not command the deep ground, and a new shaft, now known as the Keystone Shaft, some 4,500 feet nearer the head, and 15 feet lower in surface level, was decided upon. The pumping machinery and mining plant were shifted from the Moolort Goldfields Shaft and re-erected at the Keystone Shaft in a little over five months, the pumps being started in August, 1906, and, at the end of 1906, wash-dirt was touched.[26]

DESCRIPTION & INTERPRETATION:

Moolort Goldfields Co. (operated from 1903 to 1906).
The remains of this company's plant includes the remains of large mullock heap. On the heap's south side is a massive, roughly H-shaped winding and pumping engine bed. The bed, measuring 85 x 40 ft (26 x 12.2 m), and standing 8 ft (2.45 m) high is constructed of an outer layer of hand and machine-made red brick and an inner core of rough concrete. Running from the front end of the massive bed are the parallel brick walls of a bob-pit. The bob-pit terminates with a massive concrete footing profiled in the wall of a collapsing (fenced) shaft.

INTEGRITY/CONDITION: Good.

CULTURAL SIGNIFICANCE:

The site has:

- Historical Significance because, along with associated Sites 4 and 5 (Loddon Valley Co. and Moolort Goldfields), the site represents a sequence of events brought on by difficulties encountered in mining the deep lead.
- Scientific Significance because, along with Sites 4 and 5, the remains represent different types of pumping appliance, and illustrate the massive size of the plant necessary to dewater a deep lead.

The site's significance is increased by cumulative value because:

- it forms part of a group or network of sites that together represent the development of deep lead mining technology on northern extension of the Berry-Moolort-Loddon deep lead, Charlotte Plains. The network comprises Sites 3, 4, 5 and 6 (Deep Leads Electric Commission Co., Victorian Deep leads Co., Loddon Valley Co., and Mooloort Goldfields Co.).
- its mullock heap is a prominent landscape feature.

SIGNIFICANCE RANKING: Site Listed Heritage Inventory.

Assessor: David Bannear **Date: November 1992**.

25 Australasian Mining Standard, Oct 1898, p3342.

26 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, p. 64

SITE NO. & NAME: **7 JUNCTION DEEP LEAD CO.**

LOCATION: **Berry-Moolort-Loddon Deep Lead, Baringhup**

HI NO: **H7624-0108**

DIRECTIONS: 1.5 km north west of Baringhup. East side of Loddon River

MUNICIPALITY: Mount Alexander Shire

LAND STATUS: Freehold Land

HISTORY:

1898-1907. In October, 1898, the Junction Deep Lead Company commenced sinking a shaft on what appears to be a tributary lead coming in on the western side of the Charlotte Plains lead. Basalt was passed through at 108 feet from the surface, and a heavy inflow of water and fine sand was encountered, necessitating the use of iron cylinders to complete the shaft-sinking to bedrock. This work was proceeded with until July 1899, when the shoe or cutting ring on the bottom of the cylinder was fractured. The waterlogged drift surrounding the cylinder being of a dangerous nature, it was considered impossible to remove the broken iron segments, the engineer therefore decided to complete the sinking to bedrock (about 50 feet) by telescoping a second cylinder inside the fractured one; this was done, and the cylinder sunk to a distance of 14 feet into the bedrock, making a total depth from the surface to the bottom of cylinder of 177 feet. The remaining depth of 168 feet was sunk in the bedrock without any trouble, a chamber was cut and about 800 feet of an easterly drive extended. Work was suspended in December 1902, owing to want of funds.[27]

1906. Work was resumed at the Junction Deep Lead Co. ... towards the end of 1906 for a few weeks, after which the mine was finally closed down. The total expenditure at the mine was about £40,000.[28]

c.1906. A sum of £25,000 has been spent on the electrical equipment of the power house, the plant being the property of the Deep Leads Electric Transmission Company, which originally consisted of the Charlotte Plains, the Victorian Deep Leads and Junction Deep Leads Companies, formed to supply power for pumping, hauling, and other mining work. The plant at the Central Power Station, which adjoins the Charlotte Plains mine, consists of three sets of 400 Kilowatt generators of the revolving field type, direct coupled to 600 H.P. compound condensing engines running at 150 revolutions per minute, and producing a three-phase alternating current at 6,600 volts and 60 cycles per second. Two generators are in constant use, the third being kept as a stand-by.[29]

1907. The Victoria Deep Leads Junction, has been hampered owing to the difficulty in getting the requisite capital to carry out the expensive work necessary.[30]

DESCRIPTION & INTERPRETATION:

Junction Deep Leads Co. (operated from 1898 to 1906).
Remains of this company's operations included a large mullock heap. On the heap's eastern side are substantial concrete footings with some brickwork visible. Site not surveyed in any detail.

INTEGRITY/CONDITION:

CULTURAL SIGNIFICANCE:

The site has little historical significance or integrity.

SIGNIFICANCE RANKING: Site Listed Heritage Inventory.

Assessor: David Bannear **Date: November 1992.**

27 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, p. 80

28 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, p. 80

29 Hunter, S., The Deep Leads of Victoria, No. 7 in 'Memoirs of the Geological Survey of Victoria' series, Department of Mines, Victoria, 1909, pp. 79-80

30 Annual Report, 1907