

PLACE ID# 660

Luttrell's Sluicing Claim 1889-1892

Alternative names: Giandarra Sluice

Location	Kosciuszko National Park North (of Kiandra)	
Coordinates: GDA94/WGS84	634040 E	6031980 N
Accuracy:	GPS on site (+/- 5m)	
Topo maps:	Ravine 25k/Yarrangobilly 100k	

Summary

Late C19th gold diggings on the northern spur of New Chum Hill 3km north of Kiandra.

Established by Alfred Luttrell in 1889 it comprises two distinct areas of ground sluicing activity covering an area ~200 x 50m running along the contour. The northern sluice area and its tailrace remain reasonably intact albeit overgrown, the southern sluice area has been reworked, levelled and grassed during sand mining and soil conservation works c1960.

The site includes a race bringing water from 4 km up Racecourse Ck to two header dams above the workings. A number of building/structure sites are evident in the area, although it is difficult to separate the Luttrell sites from the Sand Mining sites without archaeological analysis.

The claim yielded ~14 oz of gold over the summer of 1890-91, however the total yield is unknown. Luttrell ceased operations by 1893, and the Giandarra Mine was established closeby in 1894 to work the lead by tunnelling.

Description of Place

Situated along the 1430m contour on the northern spur of New Chum Hill 3km north of Kiandra and 600m west of the Snowy Mts Hwy, on an east-facing slope below the treeline.

The location of the workings corresponds to the approximate location of Mining Tenement MT20 leased by Alfred Luttrell in 1890, occurring where the gold-bearing gravels of the Kiandra Lead are exposed at the surface below a line of basalt capping.

The workings comprised two adjoining areas of excavated ground (Sluice 'A' & 'B' on plan), extending over an area of 200 x 50m. These areas were worked by ground sluicing, involving excavation and flushing of material with large amounts of water over washtables or a ground-based equivalent within a tailrace. The depth of the excavation appears to be the order of 1-3 metres. The water runoff in each area was channelled into a tailrace running straight down the hillside. (RAAF airphoto 1944)

The remaining evidence and topography of Luttrell's Sluicing Claim is somewhat confused. The general vicinity includes the concurrent All Nations Sluicing Claim and Tunnel (c1890s) to the north and the latter Giandarra Mine workings (1894-36) to the north and south, whilst the immediate environs have been disturbed by sand mining and soil conservation work in the period 1958-61.

Sluice Area 'A', to the north, appears to have suffered lesser disturbance c1960, an adhoc arrangement of spoil heaps consistent with C19th sluicing evident across the cutting, and the excavated head of Tailrace A is clearly evident. Sluice Area 'A' appears to have been disturbed by mechanical excavation towards its southern end, and airphotos suggest some buildings or structures may have been erected within the sluice area c1960.

Sluice Area 'B', to the south, appears to have been all but destroyed in the c1960 operations. An open cut appears to cover a slightly larger area than the sluice cutting shown on 1945 airphotos; a road has been bulldozed in to the base of the sluice cut; the surface of the cutting has been worked by a mechanical excavator; there are remnant metal scraps, pipes, etc partially embedded across the area; and Tailrace B has been disturbed by the roadworks.

Two header dams situated above Sluice Area A and fed by a raceline from Racecourse Ck (Giandarra Race 2), are likely to have been constructed by Luttrell to provide the water necessary for ground sluicing, however the dams may originate from, or have been modified during, later operations of the Giandarra Mining Co or even the sand mining works.

Occupation sites: It is difficult to identify the sites of buildings and structures from the Luttrell period amidst the vast number of tracks, buildings and structures built on and around the sluicing area during the sand mining and soil conservation period. An attempt has been made to identify likely structures from the Luttrell period based on 1945 airphotos and survey evidence gathered by others. Some sites previously suggested as being Luttrell's, appear more likely to be of c1960 origin. Only through archaeological analysis can their C19th origin be confirmed, although the mid C20th origin of some sites can be identified by the bricks and metalwork present.

[Refer Appendix A for list of site features and coordinates]

Historical Background

The watercourses of Gibsons Plain between New Chum Hill and Mt Gooandra are believed to have been first prospected and worked by miners during the summer and autumn of 1860 — the time of the Kiandra Goldrush. Considering the rich finds on the southeast face of New Chum Hill during 1860, it is inconceivable that prospecting would not have occurred around the northern spur soon after.

There is no record of major workings on the northern spur prior to 1889, when Alfred Luttrell commenced ground sluicing work on his claim MT20.¹

Alfred Luttrell was described in his obituary as "one of the pioneers of the Kiandra goldfield".² He possibly arrived during the rush of 1860, although his first recorded presence at Kiandra is in 1862.³ The following year he signed a petition of complaint regarding the inquiry into Gold Sub-commissioner Cooper.⁴ Little is recorded of his life or mining work at Kiandra.

In October 1875 Luttrell acquired gold lease GL27, the first issued at Kiandra under the new Mining Act. It was for a sluicing claim on New Chum Hill, which he appears to have worked with a team of 2-5 men until the lease was cancelled in 1878.⁵

Other reports indicate Luttrell was still at work at New Chum Hill into the 1880s,⁶ possibly on a lease he had acquired from another party. In 1879 he was residing in a house on New Chum Hill (location unrecorded) and featured in a widely published article describing the perilous journey of Thomas Bridle in carrying the mails to Kiandra from Lobbs Hole:

"On Wednesday, the 13th inst, I started from Mr Harris's place, about nine or ten miles from Kiandra, and two and a half miles down a mountain by the falls of the Tumut River. . . With a pair of snow shoes, a break stick, and two mailbags on my back, I trudged up the hill, the snow becoming deeper every few yards, and by the time I got to the top of the range that divides Tumut from the Monaro district, I was floundering along, sometimes up to my knees and at others to my armpits in the snow, which varied in depth from 3ft to 8ft . . .

"Having climbed the steep hill I put on my snow shoes . . . when all at once I fell through into a running creek about 6ft under the snow, breaking one of my snow

shoes. I scrambled and scraped my way to the top, and by looking at my watch ascertained that I had been travelling five hours, and had only accomplished four miles of my journey. I had six more miles to go, and had only seven hours of daylight to do them in . . .

"I thought that by making for the river I would be able to proceed more quickly through the water. On reaching the stream I got along very well for a few hundred yards though the water was covered with half thawed snow, and I could not see the bottom, but all at once I dropped into a hole up to my neck I got out, emptied my gum boots, and carefully felt my way along a little further, when the water became completely bridged over with snow, and I had to leave it and struggle through the snow . . .

"A freezing wind was blowing, the ice hanging to my clothes and whiskers made me heavy, and I became exhausted and could not make sufficient exertion to keep myself warm . . . my only idea, was, that when I could get no further I would, burrow a hole under the snow to get out of the frosty wind.

"However, by getting on two or three yards at a spell, I managed to reach Mr Alfred Luttrell's place about a mile from Kiandra, and he did all in his power to relieve me. I could not get my socks off without his assistance, and he got a bucket of ice and water to bathe my feet with and prevent their being frost-bitten. He certainly saved my life, as he has done the lives of several others. I was 13½ hours in the snow, and two men perished in the same place within the last few years."⁷

By the late 1880s, Luttrell had shifted his operations northward to the present site above Racecourse Creek. At this part of the ridge, the gold-bearing gravels of the Kiandra Lead were exposed or close to the surface, where they could easily be removed by shallow surface excavation.

In 1889, certainly prior to March 1890, Luttrell applied for a lease of Mining Tenement MT20 at the present site for the purposes of ground sluicing.⁸

The survey plan for MT20 was not completed until April 1890. However in November 1889 Luttrell was reported as preparing to wash up ore from the ground he had been sluicing since the autumn, and it was reported "*this claim, when properly opened, ought to employ a great, many hands*".⁹ Was Luttrell working MT20 at this time? The text suggests he was working on a new enterprise rather than his old claim on New Chum Hill, so it appears likely he had been working MT20 from ~April 1889. From

¹ Mines Dept survey plan of MT20 1890 ref T1159

² SMH 25 Sep 1906 p9

³ SMH 2 Sep 1862 p8

⁴ Manaro Mercury 20 Feb 1863 p4

⁵ Mines Dept: Register of Auriferous Leases #53

⁶ Manaro Mercury 13 Oct 1880 p3

Original text: David Scott 4/2016 Last updated:

⁷ Argus 30 Aug 1879 p5 and various other newspapers

⁸ Mines Dept: survey plan of MT20 ref T1159

⁹ Sydney Mail 23 Nov 1889 p1175

the extent of workings Luttrell probably had a team of 3-5 men. Despite the above report, no returns are recorded that year for Luttrell in the Mines Dept annual report.

Luttrell appears to have continued to sluice the site through 1890 and the summer of 1890-91.¹⁰ However the Lead dips into the hill at an angle of ~20°¹¹ and Luttrell soon reached a depth where he could no longer flush ore out into his tailrace. By the autumn of 1891 Luttrell was considering tunnelling under his sluice workings to reach the Lead, and following a visit of the Mines Dept Surveyor William Anderson he received a grant of 4 shillings per foot of 'prospecting aid' to excavate a tunnel 46m (150').¹²

By the autumn of 1892 Luttrell had changed his approach; possibly he was unable to obtain labour at a reasonable rate for tunnelling. In any case he opted for the easier — albeit shorter-term — option of deepening his tail race, and his grant was varied to 3 shillings per foot to deepen the first 75' of tailrace to 5', 6s per foot to deepen the subsequent 33' of tailrace to 10', and 9s per foot to deepen the next 120' of tailrace to 17'.¹³ This work appears to have been undertaken through the spring of 1891; although it is unclear which tailrace (A or B) was extended.

Luttrell worked the claim for 14 weeks over the summer of 1891-92 for a return of 14 ozs of gold, the only recorded return from this site.¹⁴

Luttrell appears to have ceased work on his claim in late 1892 or 1893. Possibly he sold the claim to John Robyns, who commenced tunnelling into the hillside beside the claim in 1894 — refer Giandarra Mine.

By late 1893 Luttrell had acquired a 10 acre sluicing lease at an unrecorded location with John or Frank Lette. In October of that year they attempted to sue Wesselman and Blake for trespass — having tried to peg out part of Luttrell and Lette's claim as a new lease. The case against Blake was dismissed, but Wesselman was ordered to pay 10s damages.¹⁵

Alfred Luttrell remained at Kiandra until his death there on Saturday 22 September 1906, aged 78. He was interred in the Kiandra Cemetery the following day.¹⁶

[For further information refer Sources/further reading, Appendix C & D for copies of primary source material and Appendix E for copies of secondary source material]

Sources/further reading

Department of Land & Property Information (former Lands Dept) resources:

Maps of parish of Kiandra Ed 1-5 viewed online at
http://www.lpi.nsw.gov.au/mapping_and_imagery/parish_maps

Lease plans of Gold Leases (GL) and Mining Tenements (MT), viewed at the Goulburn or Wagga regional DLPI offices or online via the Dept of Industry, Resources & Energy 'Digs' website
<http://digopen.minerals.nsw.gov.au/>

2003 aerial imagery (post-bushfires) via NPWS Queanbeyan

Department of Industry, Resources & Energy (former Mines Dept) resources:

Mines Dept annual reports viewed online
<http://digopen.minerals.nsw.gov.au/>

Mineral Resources No.8: Geological Map of Kiandra Lead by EC Andrews 1901, viewed online via the 'Digs' website
<https://search.geoscience.nsw.gov.au/report/R00050671>

Mineral Resources No.10: Report on the Kiandra Lead by EC Andrews 1901, viewed online via the 'Digs' website
<https://search.geoscience.nsw.gov.au/report/R00050673>

Wagga Wagga 1:250,000 Metalogenic Map Mine Data Sheets And Metallogenetic Study, By PR Degeling 1980
<https://search.geoscience.nsw.gov.au/report/R00055625>

Google Earth aerial imagery dated 2013, overall image © CNES/Astrum 2015

Hutchinson, Greg private field survey notes and images March-Nov 2015

Moye, DG: *Historic Kiandra*, Cooma-Monaro Historical Society 1959, various pages (reciting EC Andrews)

National Library of Australia resources:

RAAF aerial imagery 1944-45 and 1961, proof sheets viewed in the map room (copyright held by private photographer)

Trove - various newspapers viewed online
<http://trove.nla.gov.au/ndp/del/home>

Williams, John: *Memories of Yesteryear*, Vol 1 2005, p121-2, unpublished report

¹⁰ Sydney Mail 27 Dec 1890 p1449

¹¹ Andrews EC: Mineral Resources #10 - Report on the Kiandra Lead, Dept Mines 1901

¹² Sydney Mail 25 Apr 1890 p950

¹³ Monaro Mercury 12 Apr 1892 p4

¹⁴ Mines Dept Annual Report 1892

¹⁵ Evening News 3 Oct 1893 p6

¹⁶ SMH 25 Sep 1906 p9

Original text: David Scott 4/2016 Last updated:

APPENDIX A: COMPONENT FEATURES OF THE PLACE**1 Luttrells Sluice Area A 1889-92**

Centre of 100 x 50m ground sluicing excavation undertaken by Alfred Luttrell 1890-92, the floor being covered in piles of stone mining spoil and woody shrubs. Southern end disturbed by c1958-60 sand mining & soil con activity.

634050 E 6031970 N

GPS on site (+/- 5m)



Sluice A from north, G Hutchison 2015

2 Tailrace A

Excavated channel 4m wide x 45m long, a tailrace for Alfred Luttrell's ground sluicing operation 1889-92. Runoff ditch (& possible washtable site) continues ESE for another 150m.

634090 E 6031960 N

GPS on site (+/- 5m)



View toward Tailrace A from above sluice, G Hutchison 2015

3 Luttrells Sluice Area B 1889-92

Centre of 100 x 50m ground sluicing excavation undertaken by Alfred Luttrell 1890-92, the floor being covered in piles of stone mining spoil and woody shrubs. Southern end disturbed by c1958-60 sand mining & soil con activity.

633805 E 6031885 N

GPS on site (+/- 5m)



Sluice B from bank 5, showing ground repaired by soil con work, gully to Sluice A on far side; G Hutchison 2015

4 Tailrace B

Excavated channel 2m wide x 25m long, a tailrace for Alfred Luttrell's ground sluicing operation 1890-92, shown 1945 airphotos. Runoff ditch continues ESE for another 50m to mullock. Destroyed by c1960 roadworks to sand mine.

634090 E 6031960 N

Estimated from historic map/report (+/- <250m)

5 L/S Mullock/Tailings B

Mullock heap of tailings 12m wide x 30m long, from tailrace B, shown 1945 airphotos.

634118 E 6031840 N

Estimated from historic map/report (+/- <250m)

6 L/S Hut/structure #1 (?)

Unconfirmed site of hut or structure suggested by 1945 & 1961 airphotos, believed to be associated with Luttrells operations. May have been removed on completion of sand mining & soil con works c1961.

634048 E 6031982 N

Existence uncertain (+/- 250m)

7 L/S Hut/structure #2 (?)

Unconfirmed site of hut or structure just north of Tailrace A, suggested by 1945 airphotos, believed to be associated with Luttrells operations. May have been removed on completion of sand mining & soil con works c1961.

633995 E 6031806 N

Existence uncertain (+/- 250m)

8 L/S Hut/structure #3 (?)

Unconfirmed site of hut or structure suggested by 1945 & 1961 airphotos, believed to be associated with Luttrells operations. Site and any remnants destroyed by sand mining & soil con works c1961.

634022 E 6031897 N

Existence uncertain (+/- 250m)

9 L/S Header Dam #1

Centre of earthen dam wall at termination of Race 2 from Racecourse Ck. Believed to be associated with Luttrell's operations or the Giandarra Mine; could be later.

634040 E 6032050 N

GPS on site (+/- 5m)



Lower Dam; G Hutchison 2015

(no image)

10 L/S Header Dam #2

Centre of earthen dam wall at termination of Race 2 from Racecourse Ck. Believed to be associated with Luttrell's operations or the Giandarra Mine; could be later.

634052 E 6032061 N

GPS on site (+/- 5m)

11 Luttrells/Giandarra Race 2

Major excavated race heading NW then SW to headwaters of Racecourse Ck. Likely built by Luttrell c1889 and

enlarged by Giandarra Mining Co 1898-1936.

634078 E 6031691 N

GPS on site (+/- 5m) GH 3/2015

12 Giandarra Race 2 Weir/Intakes #1-4

Location of weirs on headwaters of Racecourse Ck that are the source of Luttrells/Giandarra race 2. Likely to have been timber and stone & mud structures; no evidence remaining.

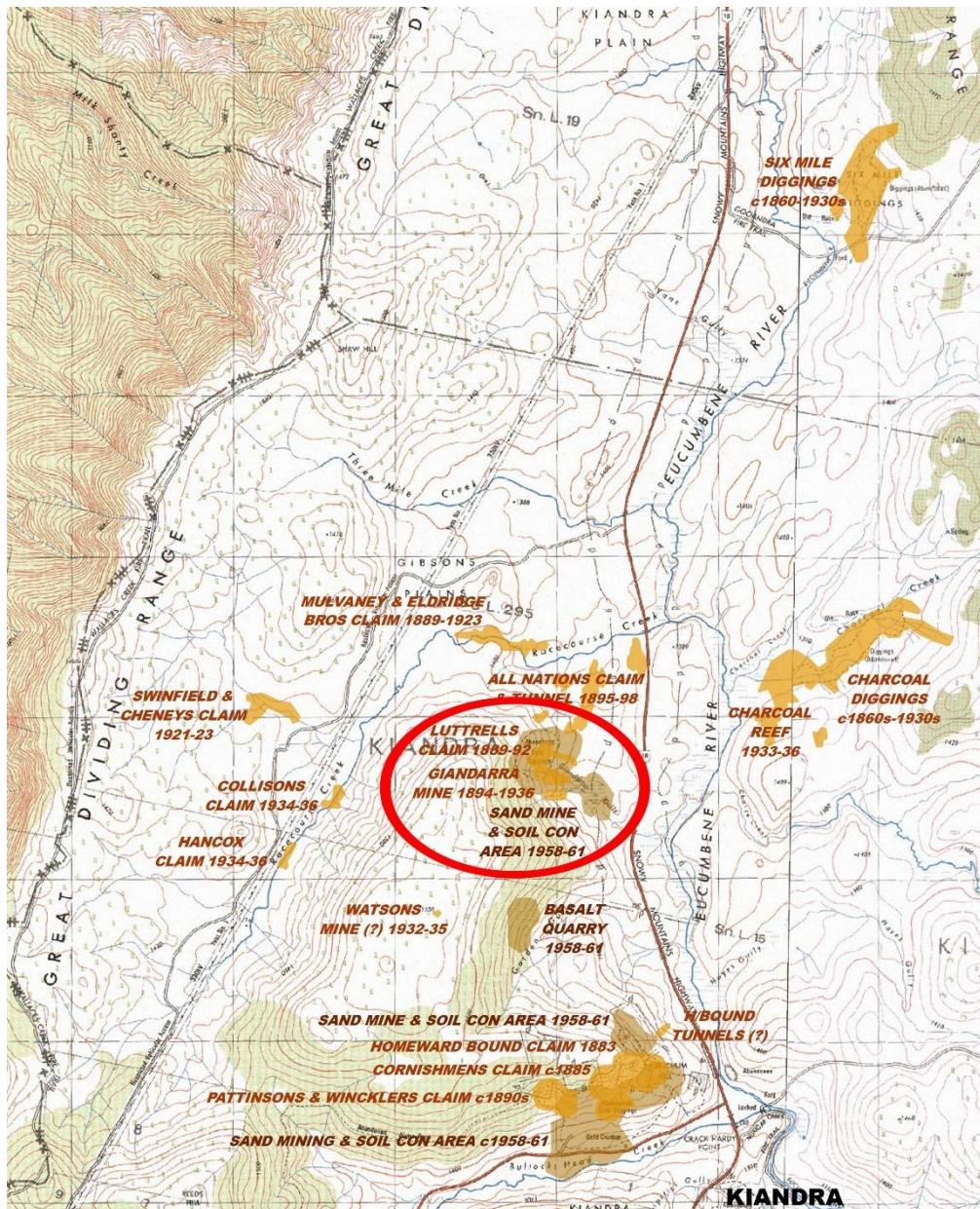
631550 E 6029700 N

GPS on site (+/- 5m) GH 3/2015

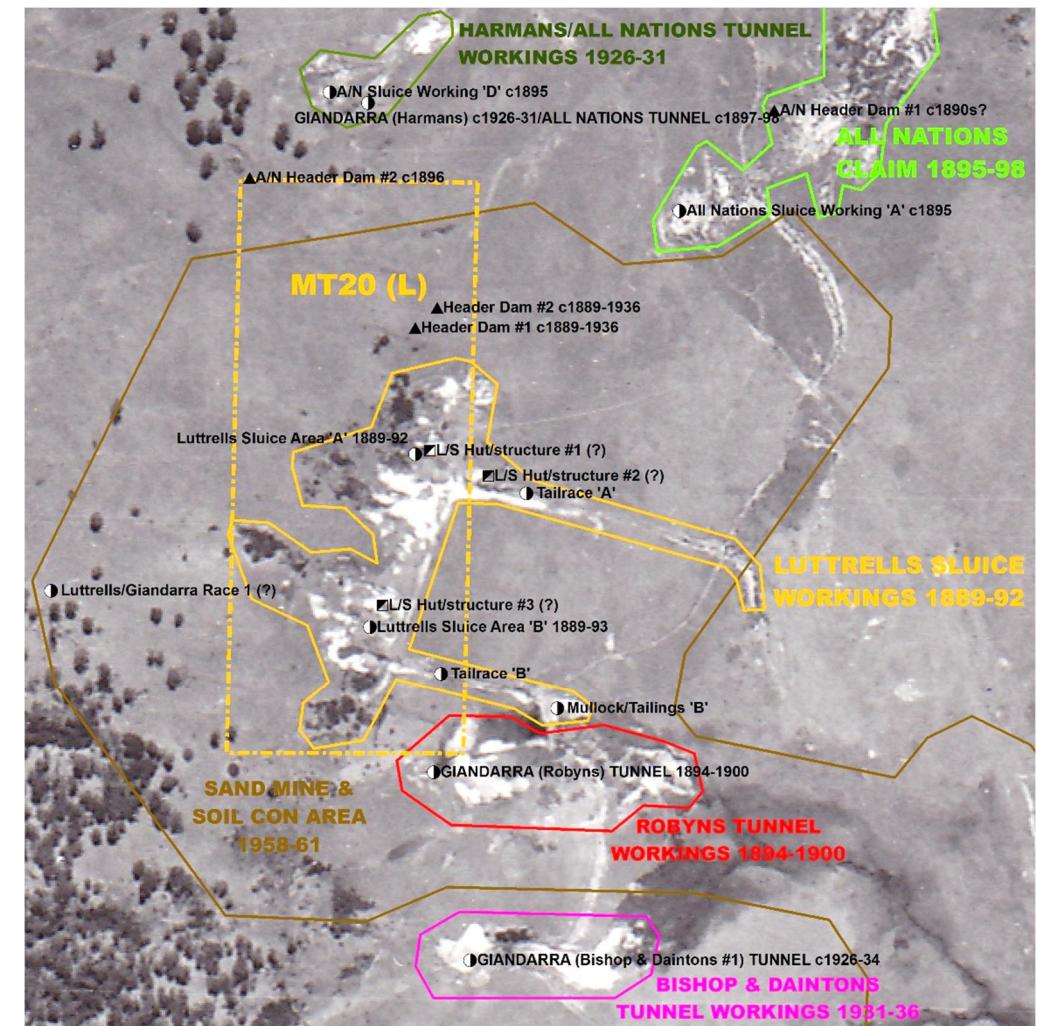
(no image)

Survey data: G Hutchison 2015/6, J Williams 2005, D Scott 4/2016 Last updated:

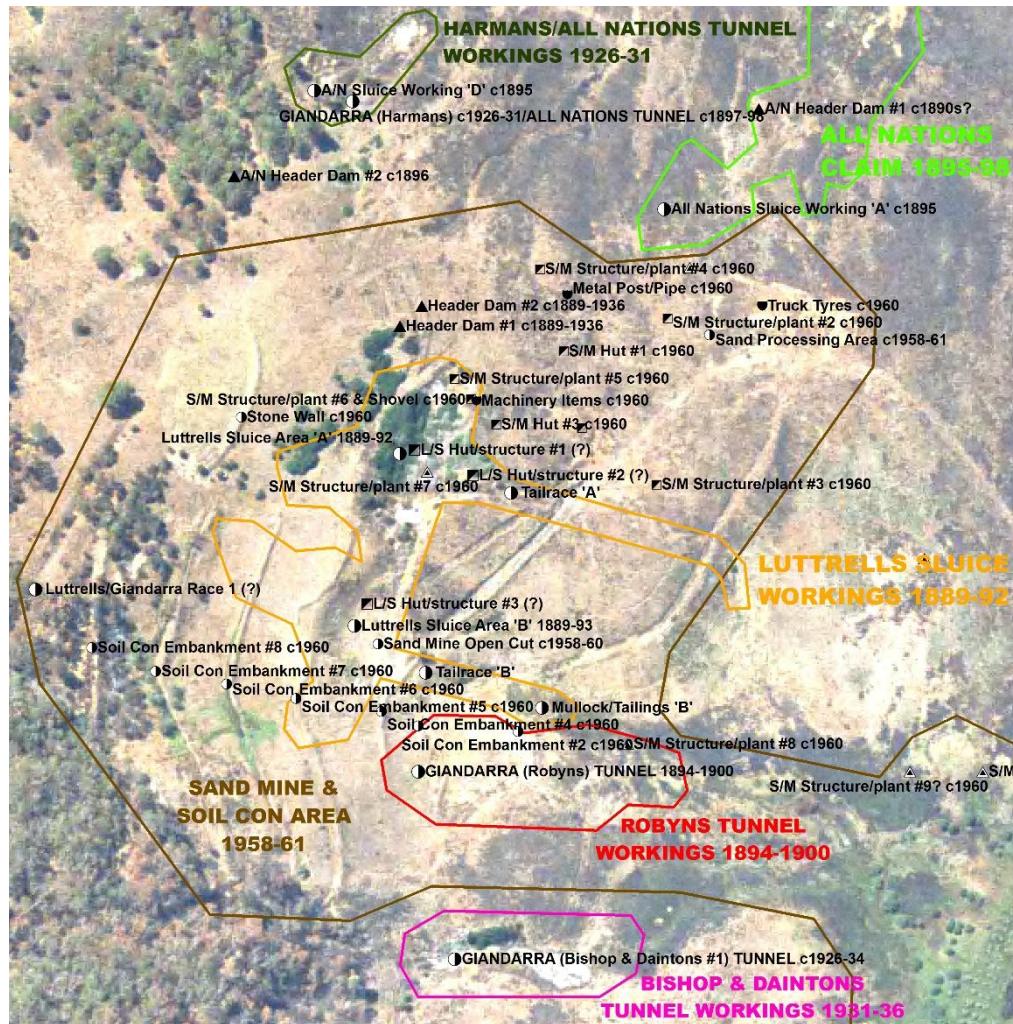
APPENDIX B: PLANS & AIRPHOTOS



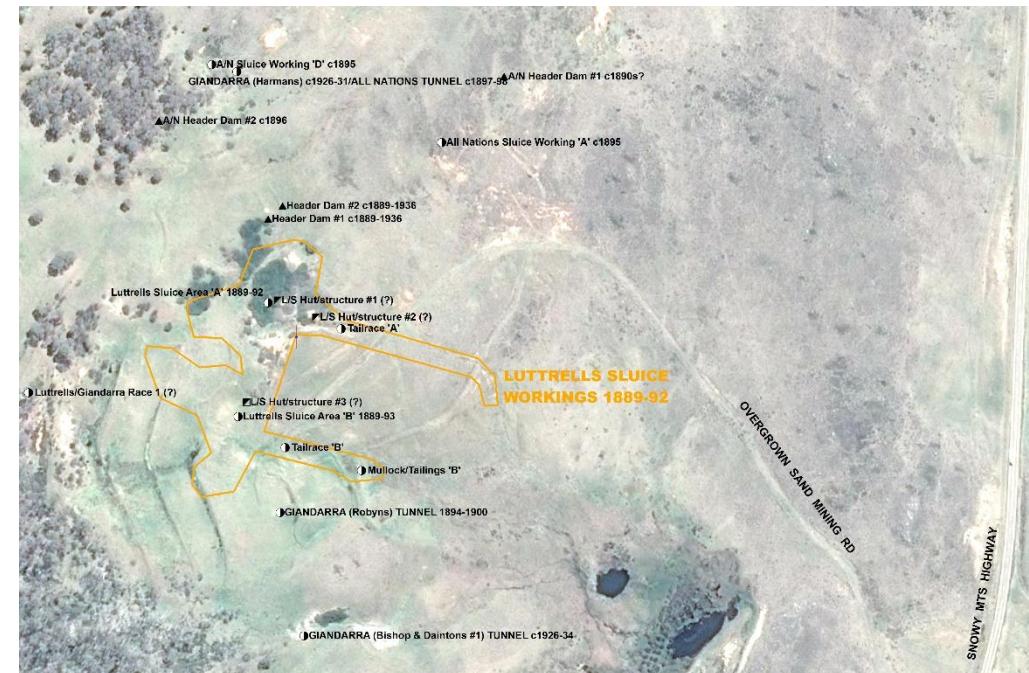
Location Plan of Luttrell's Sluicing Claim north of Kiandra, overlaid on 1:25k topo.



Luttrell's Sluice workings showing features identified in survey or interpreted from airphotos, and approx. location of MT20 lease, overlain on 1945 RAAF airphoto.



Luttrell's Sluice workings showing c1960 sand mining and soil conservation area and features identified in survey or interpreted from airphotos, overlain on 2003 airphoto.



Luttrell's Sluice workings and access from Snowy Mts Highway, overlain on Google Earth airphoto.

LUTTRELL'S SLUICING CLAIM - DOCUMENTARY EVIDENCE

APPENDIX C: SOURCE MATERIAL – DOCUMENTARY REFERENCES

Date:	Record:
1862 Sep	List of subscribers at Kiandra includes Alfred Luttrell SMH 2 Sep 1862 p8 http://nla.gov.au/nla.news-article13233626
1863 Feb	[background] Alfred Luttrell is signatory on a Kiandra petition complaining about Commissioner Cooper Manaro Mercury 1863 Feb 20 p4 http://nla.gov.au/nla.news-article112675512
1877 Apr	[background] Alfred Luttrell takes up lease #53 [GL27] of 2 acres on New Chum Hill, having applied 2 years previously [under the new mining laws and Luttrell may have been onsite earlier] Govt Gazette 1877 pp1838 2029 2360 2410, Mines Dept Lease plan GL27
1879 Sep	[background] Adelong and Tumut Times gives the following interesting narration, furnished to that journal by Mr Thomas Bridle, of his adventures when carrying the mails to Kiandra: . . . On Wednesday, the 13th inst, I started from Mr Harris's place, about nine or ten miles from Kiandra, and two and a half miles down a mountain by the falls of the Tumut River. In this place rain frequently falls when it is snowing half a mile higher up the hill. When I commenced my journey in the morning, snow about 9in deep had fallen during the night, and was still falling. With a pair of snow shoes, a break stick, and two mailbags on my back, I trudged up the hill, the snow becoming deeper every few yards, and by the time I got to the top of the range that divides Tumut from the Monaro district, I was floundering along, sometimes up to my knees and at others to my armpits in the snow, which varied in depth from 3ft to 8ft . . . Having climbed the steep hill I put on my snow shoes, but they sank a foot and clogged greatly, so with great labour I trudged along for two miles, when all at once I fell through into a running creek about 6ft under the snow, breaking one of my snow shoes. I scrambled and scraped my way to the top, and by looking at my watch ascertained that I had been travelling five hours, and had only accomplished four miles of my journey. I had six more miles to go, and had only seven hours of daylight to do them in, so I struggled onwards for Kiandra for an hour and a half, and found that I had only advanced a mile — I could calculate this by the telegraph posts, 30 of which go to a mile . . . The sun had now broken through the clouds, and I could see the hill on which Kiandra stands. I wished I had turned back when I broke my snow shoe, but I was getting tired and hungry, and I knew I could not get out of the snow, having gum boots on, so I thought that by making for the river I would be able to proceed more quickly through the water. On reaching the stream I got along very well for a few hundred yards though the water was covered with half thawed snow, and I could not see the bottom, but all

at once I dropped into a hole up to my neck I got out, emptied my gum boots, and carefully felt my way along a little further, when the water became completely bridged over with snow, and I had to leave it and struggle through the snow . . .

A freezing wind was blowing, the ice hanging to my clothes and whiskers made me heavy, and I became exhausted and could not make sufficient exertion to keep myself warm . . . I know that to lie and rest on the snow would ensure — death by freezing, and my only idea, was, that when I could get no further I would, burrow a hole under the snow to get out of the frosty wind.

However, by getting on two or three yards at a spell, I managed to reach Mr Alfred **Luttrell's** place about a mile from Kiandra, and he did all in his power to relieve me. I could not get my socks off without his assistance, and he got a bucket of ice and water to bathe my feet with and prevent their being frost-bitten. He certainly saved my life, as he has done the lives of several others. I was 13½ hours in the snow, and two men perished in the same place within the last few years.

The Argus 1879 Sep 30 p5 <http://nla.gov.au/nla.news-article5954506>

1880 Oct [background] Messrs Drummond, Nuttall, Barclay, and **Luttrell** still work on New Chum Hill. The tunnel of the former is in a considerable depth, and the sample of gold extremely clean and fine. Barclay and Luttrell are **ground sluicing** in their separate claims with a good stream; the latter has a heavy face of wash, and one has a good opportunity of observing the formation of the hill.

Manaro Mercury 1880 Oct 13 p3 <http://nla.gov.au/nla.news-article114520758>

1889 Nov Mr Alf **Luttrell**, who has a claim on the same range as the Kiandra Sluicing Company, expects a washing up this season. All the ground he has sluiced away last autumn and winter has prospected well. This claim, when properly opened, ought to employ a great, many hands, not in sluicing but in driving and blocking the ground out.

Sydney Mail 1889 Nov 23 p1175 <http://trove.nla.gov.au/ndp/del/article/162064169>

1890 Mar **Alfred Luttrell** takes up **Mining Tenement MT20** parish of Kiandra
Lease plan MT20 Mines Dept T1159

1890 Dec . . . payable results are certain to be obtained from the deep leads which intersect the whole or the surrounding country, and make their appearance . . . further north, where it makes its appearance in Mr Alfred **Luttrell's** claim, on the same range . . .

Sydney Mail 1890 Dec 27 p1449 <http://nla.gov.au/nla.news-article163648416>

1891 Apr As a result of the visit of Mr Anderson, geological surveyor . . Mr Alfred **Luttrell** has been granted four shillings a foot to drive a **tunnel** for a distance of 150ft at his claim on the main range. Soft diorite country is in evidence in the face, but how far will it continue? If the country towns haul, this grant would not pay the expenses of pointing picks for a week's work.

Sydney Mail 1891 Apr 25 p950 <http://trove.nla.gov.au/ndp/del/article/163653860>

1892 Apr	<p>From the Secretary for Mines and Agriculture notifying that the following alteration has been made in the prospecting grant to Alfred Luttrell, New Chum Hill, Kiandra: instead of driving a tunnel, as at first pro-posed, to deepen his tail race at the following rates: 3s per lineal foot for deepening deepening the first 75ft 5ft deeper, 6s per lineal foot for the next 33ft 10ft deeper, and 9s per lineal foot for the next 120ft 17ft deeper.</p> <p>Manaro Mercury 1892 Apr 12 p4 http://nla.gov.au/nla.news-article119418032</p>
1892	<p>At Kiandra, A. Luttrell, on the New Chum Hill, won 14 oz. of gold by sluicing during fourteen weeks' work.</p> <p>Mines Dept Annual Report 1892</p>
1893 Oct	<p>Warden's Court at Kiandra. Mr Warden Love presided at the Warden's Court held here on Saturday. Messrs Lett and Luttrell sued F Weselman and A Blake for £50 damages for trespass. The defendants had pegged off five acres, embracing a part of the land held by the plaintiffs under section 40, as a 10 acre sluicing claim. The case against Blake was dismissed, but Weselman was ordered to pay 10s damages and £2 12s 8d costs. Weselman's application for a lease of the ground, owing to the non-fulfilment of the labor conditions, was objected to by Lett and party. Several witnesses were called. The Warden's report will be forwarded to the Minister for Mines for his decision, as prescribed by the mining regulations. The application for the suspension of the labor conditions to the head and tail races, pending the Minister's decision, was also granted. Lett's application for a suspension of the labor conditions owing to the insufficiency of water was disallowed, Weselman objecting that the labor conditions had not been fulfilled.</p> <p>Evening News 1893 Oct 3 p6 http://nla.gov.au/nla.news-article112935953</p>
1901	<p>REPORT ON THE KIANDRA LEAD, EC Andrews.</p> <p><i>The Giandarra, Robyn's Tunnel, and All Nations' Claims, some two miles to the north of Kiandra, have all been started within the last few years . . . The claims just referred to are all on the line of what is known as the Kiandra Lead.</i></p> <p><i>At present gold-mining operations at Kiandra are confined to the dredging of ground along the Eucumbene River by the Kiandra Gold-dredging Company; to tunnelling at the Empress, Giandarra, and the Six Mile; and to fossicking along Nine Mile Creek, Scott's Gully, Four Mile Creek, the Eucumbene River, Bullock Head Creek, Six Mile Creek, and Racecourse Creek.</i></p> <p><i>Thence toward the northern point of New Chum Hill the channel appears almost totally confined beneath the basalt capping of the hill . . . to the north of the spur signs of wash are abundant on the hillside beneath the basalt.</i></p> <p><i>Here also the Giandarra and Robyn's Tunnels, Luttrell's and All Nations'</i></p>

Claims have proved the channel over a considerable distance, though they have not settled beyond doubt the width of the wash. Near the All Nations' Claim the channel has been cut across by later streams . . . From All Nations' Claim to the north both basalt and wash have been removed by the forces of erosion over a distance exceeding 2 miles. At the Six Mile workings the basalt is picked up again . . .

(g) Robyn's Tunnel, The Giandarra, &c.

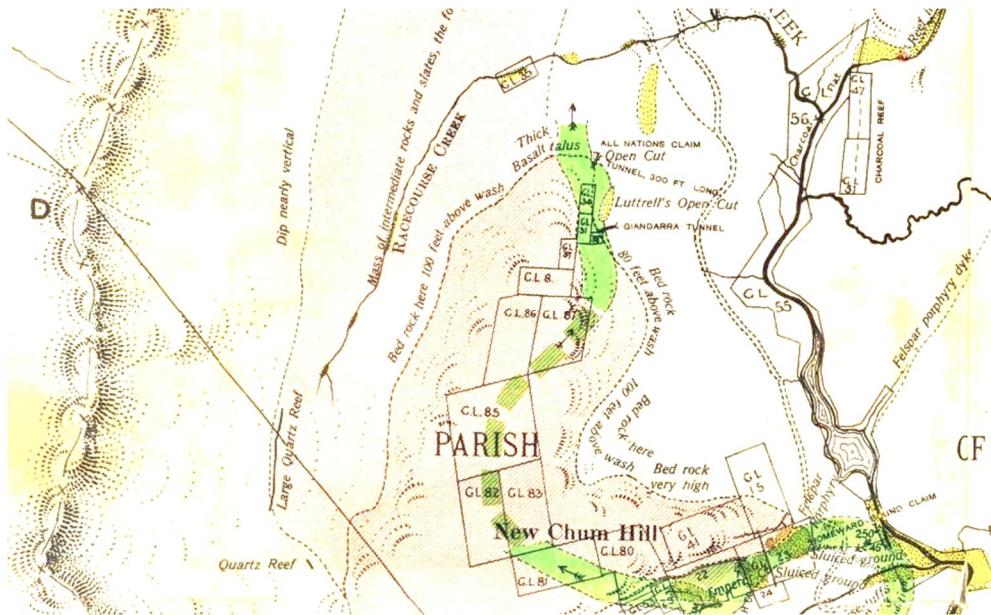
New Chum Hill has also been proved to the north by the claims known as Robyn's Tunnel, The Giandarra, Luttrell's Sluicing Claim, and the All Nations' Claim.

Robyn's Tunnel is about 787 feet in length, driven in a direction a little south of west. . . The surface bed of the bed rock was, however, dipping into the hill, and the lignite was inclined at an angle of 20 degrees or more. . . The wash is very interesting in the Giandarra, being of decidedly black nature, owing to the colouring of the fine-grained sand between the pebbles. Large quartz-boulders occur, some as much as 5 feet in diameter. Much of the wash is also only partly rounded. Above the black wash a layer of iron pyrites occurs, varying from 1 to 6 inches in thickness, and on this a very soft, black, fine-grained carbonaceous clay is superimposed.

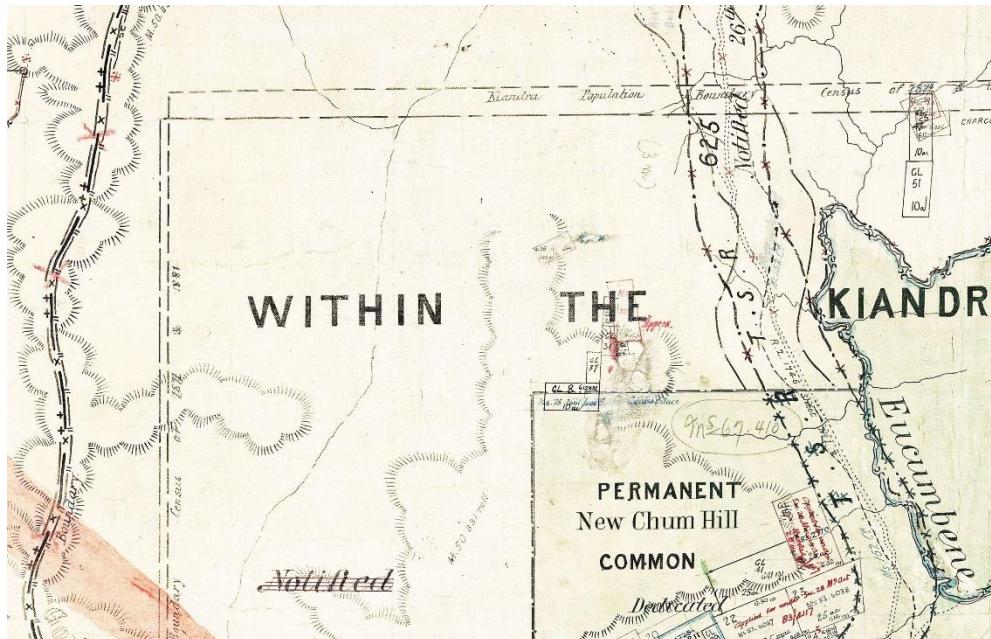
Mines Dept report <https://search.geoscience.nsw.gov.au/report/R00050673>

1906 Sep	<p>Alfred Luttrell "one of the pioneers of the Kiandra Goldfield" died at Kiandra on Sat 22 Sep 1906, aged 78, and was buried there on Sunday 23.</p> <p>SMH 1906 Sep 25 p9 http://nla.gov.au/nla.news-article14810768</p>
1958-60	<p>The sand for Tumut 1 power station was won from the old gold workings at New Chum Hill; for Tantangara Dam it comes from Giandarra on the northern side of New Chum; for the Tooma-Tumut Diversion from the southern end of the Eight Mile deep lead and for Tumut 2 also from the Eight Mile.</p> <p>Moye, DG 1959: Historic Kiandra</p>
1950s	<p>SMHEA issued license for removal of sand from Racecourse Creek catchment west of Snowy Mts Highway</p> <p>Parish of Kiandra Map Ed 5 1936</p>

APPENDIX D: SOURCE MATERIAL – HISTORICAL PLANS



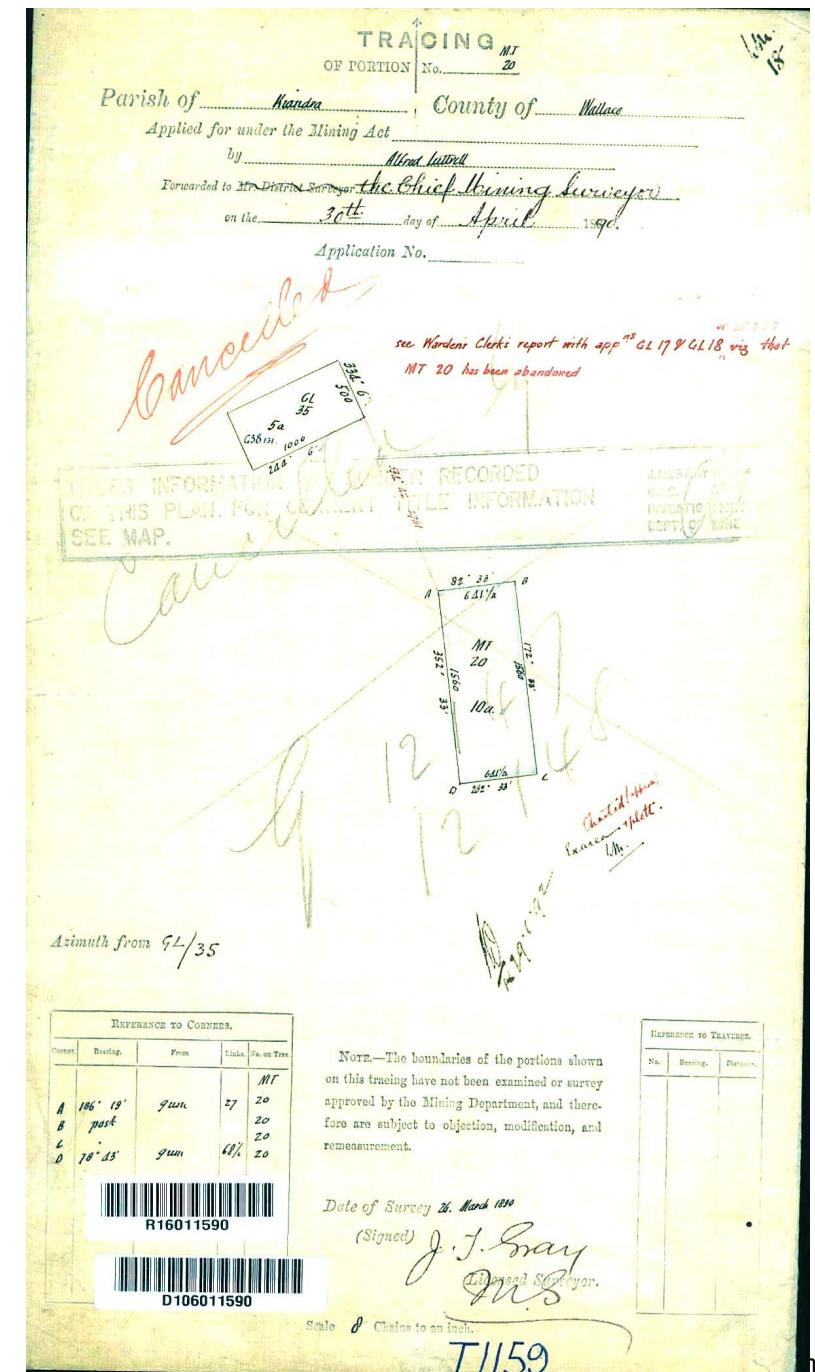
Extract from Geological Map of Kiandra Lead, EC Andrews, Dept Mines, 1901



Parish of Kiandra Edition 2, Dept Lands – note MT20 in feint red behind "THE"

Original text: David Scott 4/2016 Last updated:

Mining Lease Plans, Dept Lands 1889-1892



APPENDIX E: SECONDARY INFO - PREVIOUS RESEARCH & SURVEY**Extract from Dept of Mines' Wagga Wagga 1:250k Mine Datasheets 1980**

Name of Mine:	KIANDRA LEAD (ROBINS TUNNEL, GIANDARRA, NERODERS CLAIM)	No. of mine	312
Principal commodities:	Au	Recorded:	P.R. Desgling
Minor commodities:		Date:	13-5-1974
Sheet reference:	SI 55-15, 8526 II	Grid reference:	64525735 to 64535720
County:	Wallace	Nearest town:	Kiandra
Parish:	Kiandra		
Main references:	Andrews (1901)		
Method of Working:	<input checked="" type="checkbox"/> Shots <input type="checkbox"/> Drives <input type="checkbox"/> Crosscuts <input type="checkbox"/> Wines <input type="checkbox"/> Steepings <input checked="" type="checkbox"/> Adits		
Extent of Working:	<input type="checkbox"/> Open cut <input type="checkbox"/> Shallow pits, etc. <input checked="" type="checkbox"/> Dredging and/or sluicing	Length:	m
Exploration (company, period, type):		Width:	m
Products and Periods of Production:			
Last Production (recorded) Value (1967) \$ Weight:	Records incomplete — certainly greater than \$10,000	Average grade:	20 g/m ³ Au
Reserves—specify status (with references)		Size Classification:	<input type="checkbox"/> <\$10,000 <input checked="" type="checkbox"/> \$10,000-1,000,000 <input type="checkbox"/> 1,000,000-10,000,000 <input type="checkbox"/> >10,000,000
Geological Setting:	C <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H <input type="checkbox"/> I <input type="checkbox"/> J <input type="checkbox"/> K <input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> N <input type="checkbox"/> O <input type="checkbox"/> P <input type="checkbox"/> R <input type="checkbox"/> S <input type="checkbox"/> T <input type="checkbox"/> U <input type="checkbox"/> V <input type="checkbox"/> W <input type="checkbox"/> X <input type="checkbox"/> Y <input type="checkbox"/> Z	Age of host rocks:	<input type="checkbox"/> Early <input type="checkbox"/> Middle <input type="checkbox"/> Late
Host Rocks (specify rock types):		Intrusive:	<input type="checkbox"/> Regional <input type="checkbox"/> Contact
Volcanic:	Recent alluvium; conglominate at base of deep lead	Sedimentary:	<input type="checkbox"/> Diagenesis <input type="checkbox"/> Alteration <input type="checkbox"/> Horizons <input type="checkbox"/> Facies <input type="checkbox"/> Pyroclastic horizons <input type="checkbox"/> Granular <input type="checkbox"/> Retrograde
Metamorphic:			
STRUCTURES (partially related to deposit)			
Faults:	<input type="checkbox"/> Major fault or shear zone <input type="checkbox"/> Minor fault or shear zone <input type="checkbox"/> Fault intersection	Hinges:	<input type="checkbox"/> Cleavage hinge or basin <input type="checkbox"/> Syncline hinge or basin <input type="checkbox"/> Anticline hinge or dome <input type="checkbox"/> Limb area
Joint(s):	<input type="checkbox"/>	Orientations:	<input type="checkbox"/> Joint intersection
Orientation of structures (I or M):			
Mineralization (listed in order of abundance):			
Major minerals:	Gold	Secondary:	
Minor minerals:	Primary: <input type="checkbox"/> Secondary: <input type="checkbox"/>		

Wellrock Alteration Assemblages

Mine No. 312	Gonge
	X : major
	x : minor
	Quartz
	Other silico
	Calcite
	Bolomite
	Cum. dolomite
	Siderite
	Rhodochrosite
	Clay minerals
	Fluorite
	Apophite
	Barite
	Gypsum
	Garnet
	Muscovite
	Other Mn sil.
	Feldspar
	Unknown
	Other
	Unknown

Relationships

Relationship to Host Rock (or Form)	
Vein	<input type="checkbox"/>
Multiple veins or stockwork	<input type="checkbox"/>
Pipe	<input type="checkbox"/>
Occupying fault or shear zone	<input type="checkbox"/>
Breccia fill (exclusive of fault breccia)	<input type="checkbox"/>
Stratobound - stratiform	<input type="checkbox"/>
Stratobound - discordant	<input type="checkbox"/>
Lenticular - massive alteration to host uncertain	<input type="checkbox"/>
Isogenic - massive alteration	<input type="checkbox"/>
Dissemination in host rock	<input type="checkbox"/>
Intrusive contact	<input type="checkbox"/>
Complex	<input type="checkbox"/>
Placer	<input type="checkbox"/>
Residual	<input type="checkbox"/>
Non determined	<input type="checkbox"/>

Microscopic Features (with references)

Economically important	<input type="checkbox"/>
Oxidation, depth: m	<input type="checkbox"/>
Supergene enrichment, depth: m	<input type="checkbox"/>
Residual enrichment, depth: m	<input type="checkbox"/>
Leaching, depth: m	<input type="checkbox"/>

General Remarks

The wash in the Giandarra consists of black, fine-grained sand interstitial to pebbles and boulders up to 1.5 m in diameter. Much of the wash is only partly rounded. Above the black wash a layer of pyrite occurs varying from 2.5 cm to 15 cm in thickness, and on this a very soft, black, fine-grained carbonaceous clay is superimposed.

Extract from 'Memories of Yesteryear' Vol1, John Williams 2005

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Not far from the Giandarra another claim was worked at about the same time, it was known as Luttrell's Sluicing Claim. Water races were dug from New Chum to bring the water for sluicing. The water was stored in a large dam above the Claim.

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At left - Water races that carried the water for Luttrell's Claim



Above – Miners hut ruins at Luttrell's Sluicing Claim **Above right** - Luttrell's Sluicing Claim