# WELL ELEMENTARY
# CHARLTON OIL - 3
# W363

PE904068

This is an enclosure indicator page.
The enclosure PE904068 is enclosed within the container PE905720 at this location in this document.

The enclosure PE904068 has the following characteristics:

| | |
|---|---|
| ITEM_BARCODE | = PE904068 |
| CONTAINER_BARCODE | = PE905720 |
| NAME | = well card |
| BASIN | = OTWAY |
| PERMIT | = |
| TYPE | = WELL |
| SUBTYPE | = WELL_CARD |
| DESCRIPTION | = well card Charlton Oil Co 3 |
| REMARKS | = |
| DATE_CREATED | = |
| DATE_RECEIVED | = |
| W_NO | = W363 |
| WELL_NAME | = Charlton Oil Co-3 |
| CONTRACTOR | = Charton Oil Co |
| CLIENT_OP_CO | = Charlton Oil Co |

(Inserted by DNRE - Vic Govt Mines Dept)

Charlton Oil Co  Nos 1. 2. 3. 4.

No 1. Location: Clifton Hill ½ mi. west of Charlton Township.

El.

T.D. 103'.

Abandoned

Ordovician sandstone, slate & mudstone 0 – 103'.

Gas at 37', 80'

Oil films present in water at 80'.

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No 2 Location: on Charlton P.R. about 2 mls Northwards from Charlton.

El.

T.D. 85

Abandoned

Gravel & sand of Tertiary age 0 – 85'

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No 3 Location: allot 98 Pk. Waranook. 3 Mls W. of Charlton.

El.

T.D. 185'

Abandoned

Sunk in Tertiary entering Ordovician before T.D.

Gas at 125' and 185'

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No [redacted] Location: allot 27. Pk. Charlton West about 2½ mls N.W. of Charlton

El.

T.D. 70'

Abandoned

Ordovician 0'–70'

Gas show at 27' increasing with depth until at 70' gas in the bore water effervesced at the surface & burnt into a strong white flame with a loud report on being touched with a match

## SUPPOSED BITUMEN AT WARATAH BAY.

*By W. Baragwanath.*

In company with Mr. A. R. Dowling, I visited Waratah Bay to inspect the site of an alleged deposit of bitumen, and to determine its possible relation or otherwise to petroliferous formations at a depth.

The deposit is situated at high-water mark on the sea shore about 5 chains south-east of the Lime Company's jetty, and at the foot of a steep bank of highly metamorphosed strata, both siliceous and calcareous. I was informed that soft black material with a conchoidal fracture was obtained from a shaft now filled with sand. At the surface this material occurred in a small circular pipe, which widened at a depth of a few feet, sending out ramifications into the containing strata, and the prospector was justified in thinking the deposit was enlarging in depth, and consequently getting towards the source. The black material, however, instead of being bitumen, is a brown coal which filled the crevices from the surface, and has subsequently undergone chemical change until it attains the present lustrous character. Similar material, associated with lignite and brown coal occupying larger faults and fissures, is noticeable between high and low-water mark further north, so the origin of the material is undoubted.

An analysis of sample at the Geological Laboratory gave:—

| | Per cent. |
|---|---|
| Water ... ... ... ... | 53.6 |
| Volatile matter ... ... ... | 17.2 |
| Fixed carbon ... ... ... | 8.90 |
| Ash ... ... ... ... | 20.30 |
| Bitumen .. ... ... | .04 |
| Total ... ... ... | 100.04 |

[9.6.22.]

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## SUPPOSED PETROLIFEROUS GAS AT CHARLTON.

*By H. S. Whitelaw.*

Robinson's dam is the site of some recent experiments carried out by Mr. Ryan and some dozen other residents, and is the spot, I am told, where the inflammability of the gas was first publicly demonstrated. It lies between the Swan Hill road and Klunder's Hill, about 1½ miles north of Charlton. The bedrock of the district is Ordovician. The Klunder's Hill beds dip westerly; those of the Barrakee Hills, 3 miles away, dip easterly. Between the two ranges the Avoca River has apparently cut its way along an anticline with a strike of a few degrees west of north. It is from the surface of the recent rocks of the river valley that gas can be tapped, and then only by disturbing the mud forming the bed of the dams and river. So far as I could learn, no natural gas has been found in the flanking bedrock, which is composed of sandstones and interbedded thin seams of shale, some of the latter being carbonaceous. It is to these beds that those interested look for the supply of petroleum, the supposition being that in the folded rocks underlying the valley there exists an oil reservoir from which has emanated the gas now found imprisoned in the dam mud, which prevents its escape at the surface. This view, though not wholly untenable, is discountenanced by the data in my possession. The outcropping standstones, for instance, are silicified to a degree of density that could hardly permit of the conservation of oil; the gas is inodorous, and further, the so-called

oil film (that portion I was able to collect from the sheltered pools in the river channel) is a bi-carbonate of iron deposit. The weight of evidence is in favour of the conception that the gas is the outcome of the decomposition of vegetable matter in the damp upper layers of the alluvial deposits—that is, that it is purely superficial, not of deep-seated origin.

However, there being no doubt as to the presence of the gas, but some as to its origin, the Charlton Valley Oil Syndicate is taking the right steps to determine the point at issue. Its intention is, when it becomes a properly constituted company, to enter on a well-devised scheme of deep boring.

*Addendum.*—The bores put down by the company failed to show any indications of mineral oil, and work has ceased.

[16.4.21.]

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## THE CHARLTON OIL COMPANY'S AREA, CHARLTON.

*By Stanley Hunter.*

The general formations of the area recently bored for oil by the Charlton Oil Company consist of granite, slightly altered slates and sandstones (probably Ordovician), and widespread but thin Tertiary flats. Within the last-named are small local areas containing magnesite and quartzite.

Four bores have been sunk as follows:—

No. 1.—Clifton Hill, lying on the north side of the town; sunk to 103 feet wholly in Ordovician.

No. 2.—On the Charlton P.R., about 2 miles northward from Charlton; sunk to 85 feet, and still in gravel and sand of Tertiary age when boring ceased.

No. 3.—In allotment 9B, parish of Wooronook, about 3 miles west of Charlton. Sunk to 185 feet. From the appearance of the dried sludge now on the surface, and obtained from the bottom of the bore-hole, I think the bore passed through the Tertiary covering and entered the Ordovician bedrock.

No. 4.—In allotment 27, parish of Charlton West, and about 2½ miles north-westward from Charlton. This was sunk wholly in Ordovician.

The Ordovician strata here have a pronounced westerly dip, and in places they are almost vertical. It is quite useless to hope for oil in these strata.

The overlying Tertiary strata have not sufficient thickness to warrant any hope of locating oil.

I regret being unable to give a favorable opinion on this district, as I recognize that a bona fide attempt has been made to prospect for oil, but under the geological conditions existing in the district I regard it as useless to bore further.

[16.3.22.]

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## GAS VENT NEAR CAMPBELLTOWN.

*By D. J. Mahony, M.Sc., F.G.S.*

In a small water reserve in allotment 48B, parish of Campbelltown, about half way between Franklinford and Campbelltown, is a gas vent

from which a considerable volume of gas constantly escapes. It has been known for many years, and is marked by a shallow hole sunk by some prospector. When inspected, the hole was full of water, which was kept in constant agitation by the escape of gas, so that it had the appearance of boiling. In the summer the water dries up, according to local residents, but the flow of gas continues. The ground is obscured by soil and grass, but some of the spoil from the hole can be seen, and this evidently consists of Ordovician slate traversed by quartz veins. Within a short distance are surface outcrops of Ordovician beds striking in a northerly direction, and having a steep dip. A faint mineral smell similar to that at the Hepburn spring can be noticed.

The vent is situated on a slope extending westerly from a basalt-covered ridge to the valley of a creek.

A sample of the gas analyzed in the Geological Survey laboratory contained 99.3 per cent. of carbon dioxide—the same gas which is found in the effervescing springs of the Daylesford district. If the vent were in a more accessible locality it might be suitable for the manufacture of aerated water, but it is not likely to have any other commercial value. It has no relationship to the inflammable gases that sometimes indicate the presence of mineral oil below the surface.

[15.8.21.]

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## TERTIARY MAGNESIAN-LIMESTONE AT COIMADAI.

*By R. A. Keble.*

The magnesian-limestone in allot. 14A, sec. XXII., Parish of Merrimu, is the extension of that quarried by Alkemade Brothers on the south side and by E. Burnip on the north side of the Toolern-Bacchus Marsh-road. It is the remnant of a freshwater lacustrine deposit of post-Newer Basalt age resting on the sides of the valley of the Coimadai

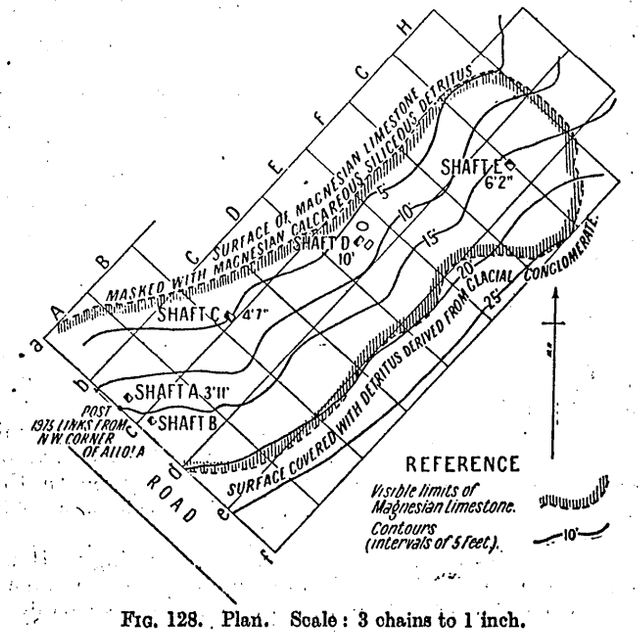


FIG. 128. Plan. Scale: 3 chains to 1 inch.

CHARLTON

justified in boring to greater depths of ~~3000~~ 5000 to ~~5000~~ feet where oil should be found in payable quantities.

The site of such a bore should be determined by careful study of the conditions and folds of the rocks visible on the surface". (Signed) W. Aghan, M.E. & M.
Charlton, 15/12/23.

The Company which had already spent £1,000 in the preliminary work attracted widespread interest in the Charlton area where following an abundant harvest the farmers had ready cash and were anxious to develop their district. The Local Member, however, was not favourably inclined towards the attitude of the promoters and asked that an official examination of the district should be made by an officer of the Department. This was done and the following report prepared:-

"I report having visited Charlton and examined the area recently bored for oil by the Charlton Oil-Company.

The general formations consist of granite, slightly altered slates and sandstones ( probably Ordovician) and widespread but thin Tertiary flats. Within the last-named are small local areas containing magnesite and quartzite.

Four bores have been sunk as follows:-

No. 1. Clifton Hill lying on the North side of the town sunk to 103 feet wholly in Ordovician.

No. 2. On the Charlton P. R. about two miles northward from Charlton, sunk to 85 ft, and still in gravel and sand of Tertiary age when boring ceased.

No. 3. In Allotment 9B, Parish of Wooroncook, about 3 miles west of Charlton, sunk to 185 ft. From the appearance of the dried sludge now on the surface and obtained from the bottom of the bore hole, I think the bore passed through the Tertiary covering and entered the Ordovician bedrock.

No. 4. In Allotment 27, Parish of Charlton West and about 2½ miles northwestward from Charlton. This was sunk wholly in Ordovician.

The Ordovician strata here have a pronounced westerly dip, in places they are almost vertical. It is quite useless to hope for oil in these strata.

The overlying Tertiary strata have not sufficient thickness to warrant any hope of locating oil.

I regret being unable to give a favourable opinion on this district as I recognize that a bona fide attempt has been made to proppect for oil, but under the geological conditions existing in the district I regard it as useless to bore further."

(Signed) STANLEY HUNTER,
ENGINEER FOR BORING.
16/3/22.

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CHARLTON No. 26

~~11th December, 1944.~~

By July, 1921, the Charlton Valley Oil Prospecting Syndicate had expended over £700 in prospecting the district for petroleum, and the results according to the Company's reports had been most satisfactory, and appeared to justify the Syndicate and the opinion of the Directors in floating a company with larger capital to develop the property. Four bores were put down, and the chief discovery of the Company seemed to be when buckets of the sludge taken from depths of up to 30 ft. when stirred up gave numbers of bubbles. When a match was applied to these, a flash appeared. As this gas is only associated with shallow alluvial deposits closely adjoining the river, its association with probable oil resources is never questioned. A further examination of the area was made at the request of the local people, when Stanley Hunter had no hesitation after pointing out the existing facts to condemn the project.

In the "Argus" of 19th March, 1921, the Honorable Frank Clarke, M.L.C., published an article on Petroleum Fields in which a short summary of the necessary conditions for accumulation of oil, the distribution of oil fields from Rumania to Borneo, and a reference to gas and lignite occurrences in the State as well as recognised surface indications were quoted, and in conclusion he wrote - "The unseen configuration of deep formations may make failure certain when every surface indication is favorable, and only a trained scientific man can make accurate geological maps. A good rule for the intending oil speculator is this - The Mines Department has geologists who have already classified, bored, and mapped, a large portion of this State, who are always available to report upon any reputed oil strike, and are keen to make such a find. An honest promoter has nothing to fear from their inspections. Insist upon such a report. A Government boring plant now employed in mapping the limits of our brown coal fields might with advantage be used to test the more likely areas for oil. A good find might well prove more valuable to the State than all the gold remaining in Victoria."

In April, 1921, a report appeared in the press that oil indications had been met with in the neighbourhood of Charlton. The report was prepard by J. Murray Scott, late Boring Expert, (G.I.P.) Bombay Government, India. The area was subsequently inspected by H. S. Whitelaw, Field Geologist, of the Mines Department, who reports that "the evidence in his opinion indicated that the gas was superficial, and not of deep seated origin, and was the outcome of the decomposition of vegetable matter in the damp upper layers of the alluvial deposits." In his report he stated that, "As there was no doubt as to the presence of gas, but some doubt as to its origin, the Charlton Valley Oil Syndicate was taking the right steps to determine the point of issue by a scheme of boring, but the theory that an oil reservoir existed in folded rocks underlying the valley was discountenanced by an examination of the outcropping strata." Investigations in the district were regarded more hopefully by the promoters than the Department, and a report submitted to the local syndicate stated

that surface indications "within a radius of 25 miles from Charlton township were remarkably favorable. In the whole of the area examined, in running streams, pools, and dams, gas is obtained.... A dam about three miles north of Charlton had a film of oil floating on it about 20' x 10'.... The gas from this dam was extremely strong. ... It is obvious that decaying vegetable matter could not be present in artificially made dams, which in the majority of cases bottomed on limestone and slates. The possibility of marsh gas existing in the areas examined can be eliminated. ... The gas from the investigated areas has a strong smell of petroleum, whereas marsh gas has absolutely no smell....From the foregoing facts, it is clearly evident that an enormous and abnormal seepage of gas associated with petroleum is present in the investigated areas. The area conforms in geological and surface indications to the oil fields at Yenangyoung and Digboi, in Burma, which I have visited, and at the latter place was Boring Engineer for some time... Two important factors affect the accumulation of gas or oil beneath the surface, the first being an anticlinal formation, and the sandstone or limestone strata. Only the first can be determined more or less definitely before drilling. The other must be obtained by sinking of test bores.... Excellent possibilities exist in the Charlton district for the discovery of oil of commercial value." An official opening of the boring operations took place on 30th May, 1921."