

W458

DEPT. NAT. RES & ENV

PE904230

EAST END-1.

LAHES OIL LTD.

EAST END-1
WELL SUMMARY

EAST END. No 1

W458

PE904231

This is an enclosure indicator page.
The enclosure PE904231 is enclosed within the
container PE904230 at this location in this
document.

The enclosure PE904231 has the following characteristics:

ITEM_BARCODE = PE904231
CONTAINER_BARCODE = PE904230
NAME = well card
BASIN = GIPPSLAND
PERMIT =
TYPE = WELL
SUBTYPE = WELL_CARD
DESCRIPTION = well card East End No 1
REMARKS =
DATE_CREATED = 31/01/59
DATE_RECEIVED =
W_NO = W458
WELL_NAME = East End-1
CONTRACTOR = Lakes Oil Co
CLIENT_OP_CO = Lakes Oil Co

(Inserted by DNRE - Vic Govt Mines Dept)

EAST END No. 1

Locⁿ : 37°48'04"S, 148°21'14"E

W458

El. : 10 ft.

T.D. ~~1230~~ ? 1230 ft. bin.

B. Hocking Picks.

Haunted Hill Cp. : 0-45
Jemmy's Pt : 45-116
& Tambo River : 116-802
Grippland Lst.
* Lakes Entrance : 802-~~1029~~
* Colquhoun Gravels : 1029
Ord. basement : 1029-1230.5

* Differentiation impossible due to contamination.

Barry Hocking

PE904829

This is an enclosure indicator page.
The enclosure PE904829 is enclosed within the
container PE904230 at this location in this
document.

The enclosure PE904829 has the following characteristics:

ITEM_BARCODE = PE904829
CONTAINER_BARCODE = PE904230
NAME = East End 1 Bore Locality Map
BASIN = GIPPSLAND
PERMIT = PEP 116
TYPE = WELL
SUBTYPE = MAP
DESCRIPTION = East End 1 "Lakes Oil" Eastern Bore
locality Map
REMARKS = PPL 116 (Lakes Oil) now PPL 252
(Woodside)
DATE_CREATED = 8/05/59
DATE_RECEIVED =
W_NO = W458
WELL_NAME = East End-1
CONTRACTOR =
CLIENT_OP_CO = Lakes Oil Co.

(Inserted by DNRE - Vic Govt Mines Dept)

PPL 161
LAKES OIL LTDNOW
PPL 252.
(WOODSIDE)

Page 1 of 5

1 copy.

EAST END-1

REPORT ON LAKES OIL EAST BORE
NEAR ORBOST.

Lakes Oil East Bore, southwest of Orbost, was spudded in early in January 1959 on recommendations from Professor E. Rudd of Adelaide University. It was abandoned as a water hole later in the same month.

On Friday 9th January, I was directed to proceed to Orbost and to keep an eye upon the drilling of the well, while also acquainting myself with the geology of the Orbost area. I spent the week from Monday 12th January to Monday 19th January inclusively at Orbost and visited the boring site daily. There were no representatives of the Company on the site, but only two contractor drillers. On Saturday morning January 17th, Mr. Clarke a Company Agent from Lakes Entrance visited the bore and I was able to talk to him for a quarter of an hour.

When I reached the site on Monday evening 12th January the bore was drilling at 489 feet. Drilling proceeded without incident until Friday evening January 16th, when the depth of 987 feet was reached and after making water, the hole caved in, burying the drill and drill stem. Efforts to free the drilling tools went on until near midday on Saturday January 17th, where they were abandoned. After contacting headquarters in Melbourne by phone, Mr. Clarke decided to stop drilling until Professor Rudd could be contacted in Adelaide for advice. On Sunday morning the drillers abandoned the camp and all returned to Melbourne. I remained behind and collected, by common consent, all samples recovered to date, including the Company samples. On Tuesday morning January 20th. I reported to the Chief ^{Government} Geologist and was directed not to return to Orbost, whatever the Company's decision in respect of the well might be. Samples which I brought back to Melbourne with me were from 0' to 987' inclusively.

About ten days later I was visited by Mr. Clarke in Melbourne, who informed me that it had been decided to go on with the hole on Professor Rudd's advice. He brought me a conglomeratic sample from 1029 - 1045 feet. The hole, he informed me was making much water.

cont.... 2

Samples from 1070 feet to 1230 feet 6 inches were sent in by the Company at a much later date. We still have at South Melbourne store, samples belonging to the Company which have so far not been collected. We also have a complete set at the core library shed and another complete set has been reserved for Mr. Alan Carter.

I have been made to understand that the hole was abandoned at 1230 feet 6 inches and the sample from that depth is a quartz pebble conglomerate of the type which around Orbost, rests on basement palaeozoic rocks and is interbedded with lateritic soils. A similar association is observable in the bore. I consider this conglomerate as basal Tertiary. Much water was encountered between 987' - 1070' and again between 1200' and bottom. The Forestry Department had approached Mr. Clarke with the request to leave the bore flowing for fire fighting use and, on behalf of this Department, I gave my consent to this.

N. Boutakoff

N. Boutakoff

Senior Geologist.

6th May 1959.

Enclosures:

1. Log of Bore.
2. Plan showing location of Bore.

P. 1
"LAKES OIL EAST BORE"

(Near Orbost.)

East End-1

0	-	20'	Ferruginous sand. Ironstone pellets.	}	Shallow Water
20	-	30'	Coarse yellow, micaceous sand.		
30	-	40'	Coarse yellow quarry sand.		
40	-	45'	-do-		
45	-	64'	-do-		
64	-	69'	-do- but with yellow silt cement.		
69	-	85'	Pale green gritty silt.		
85	-	95'	-do-		
95	-	106'	Pale green silty fine sand.		
106	-	116'	Pale green somewhat coarse silty sand.		
116	-	126'	-do-		
<hr/>					
126	-	136'	Shelly, marly limestone.		
136	-	147'	Polyzoal, shelly limestone.		
149	-	157'	Polyzoal marl		
157	-	168'	-do-		
168	-	178'	Marly clay		
178	-	189'	Grey polyzoal marl		
189	-	200'	-do-		
200	-	210'	-do-		
210	-	220'	-do-		
220	-	231'	-do-		
231	-	241'	-do-		
241	-	251'	-do-		
251	-	261'	-do-		
261	-	272'	-do-		
272	-	282'	-do-		
282	-	292'	-do- Good fragments of branching polyzoa.		
292	-	303'	Shelly polyzoal marl		
303	-	313'	-do-		
313	-	323'	-do-		
323	-	334'	-do-		
334	-	344'	-do-		
344	-	355'	White polyzoal marl		
355	-	365'	-do-		
365	-	375'	-do-		
375	-	385'	Yellow shelly and polyzoal marl.		
385	-	396'	White polyzoal marl.		
396	-	406'	-do-		
406	-	416'	Grey polyzoal marl.		
416	-	426'	-do-		
426	-	437'	-do-		
437	-	447'	-do-		
447	-	458'	-do-		
458	-	468'	-do-		
468	-	478'	-do-		

East End-1

478	-	488'	-do-
488	-	500'	Grey calc. clay
500	-	510'	-do-
510	-	519'	Ferruginous yellow silt.
519	-	529'	Grey marl.
529	-	540'	Grey marl.
540	-	550'	-do-
550	-	560'	-do-
560	-	570'	Dark grey silt.
570	-	580'	Grey silt.
580	-	590'	-do-
590	-	612'	Dark grey silt.
612	-	622'	Greenish - grey silt; somewhat marly.
622	-	632'	Marly silt.
632	-	642'	Grey marl.
642	-	653'	Grey marl.
653	-	663'	-do-
663	-	673'	Dark grey silty marl.
673	-	688'	Dark grey silt.
688	-	698'	-do-
698	-	709'	-do-
709	-	719'	Calcareous grey clay.
719	-	730'	Grey, calcareous clay.
730	-	740'	-do-
740	-	750'	-do-
750	-	760'	-do-
760	-	770'	-do-
770	-	786'	-do-
786	-	802'	Dark grey shelly clay.
802	-	812'	-do-
812	-	822'	-do-
822	-	832'	-do-
832	-	842'	Silty yellowish grey clay.
842	-	853'	-do-
853	-	863'	Yellowish grey silt.
863	-	873'	-do-
873	-	884'	-do-
884	-	894'	-do-
894	-	905'	Yellow silt.
905	-	915'	Greenish silty clay.
915	-	925'	Greenish grey silt.
925	-	936'	Grey marl.
936	-	946'	-do-
946	-	956'	Shelly grey marl.
956	-	966'	-do-
966	-	976'	-do-
976	-	987'	Shelly sandy clay.

Gap probably containing washed-out sand. Hole caving water at this level.

East End - 1

1029 - 1045' Very coarse, sharp conglomerate and splintered quartz pebble grit.

Hole making much water.

1070 - 1080' Pink clay. Probably land surface lateritic soil.

1080 - 1090' Same pink to reddish soil clay.

Gap which may be washed out sand.

1106 - 1174' Slump material from higher up.

1174 - 1184' Fine greenish-grey silt.

1184 - 1200' -do-

1200 - 1224' Conglomerate in silty marly cement

1224 - 1230' 6" Coarse, quartz pebble conglomerate.

Probably basal conglomerate

} Main
Water
Levels.

EAST END-1

Waygana ①

855/7

(Non-subdivided)

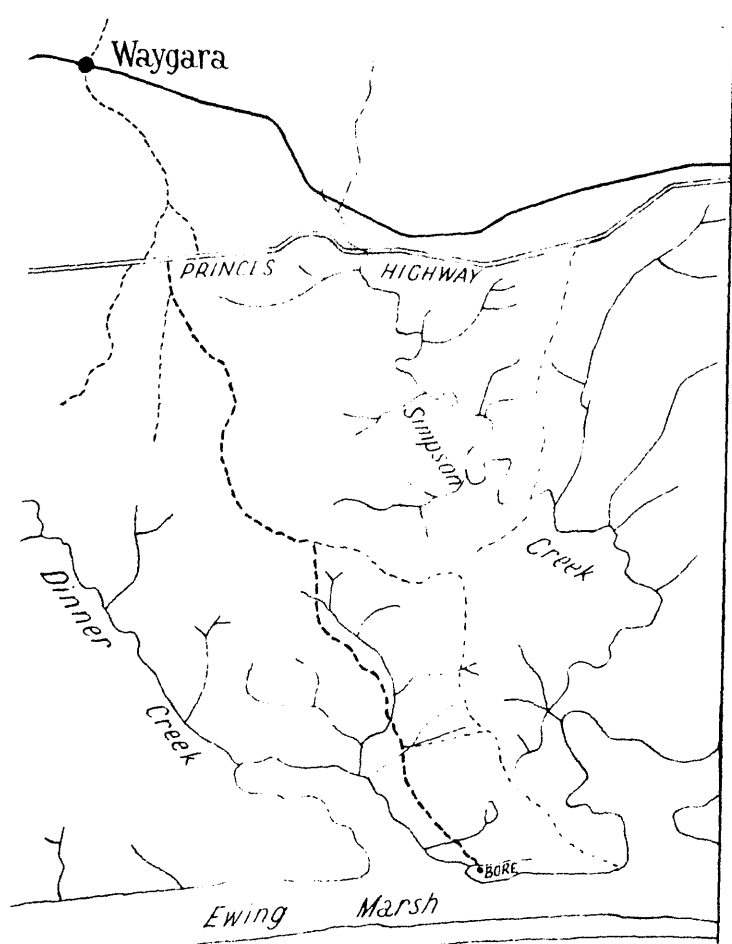
Lake dit dit - East End No. 1.

(Logged by N. Boutakoff).

- 0'-20' Ferruginous sand. Ironstone pellets.
- 20'-30' loose yellow, micaceous sand
- 30'-64' loose yellow quarry sand.
- 64'-69' " " " with yellow silt cement.
- 69'-95' Pale green gritty silt.
- 95'-106' Pale green silt; fine sand
- 105'-126' Pale green somewhat coarse silty sand.
- 125'-136' Shelly marly limestone
- 136'-147' Polyzoid shelly limestone
- 149'-163' Polyzoid marl
- 163'-178' Marly clay.
- 178'-282' Grey polyzoid marl
- 282'-292' " " " with good fragments of branching polyzoa.
- 292'-344' Shelly polyzoid marl.
- 344'-375' White polyzoid marl.
- 375'-385' Yellow shelly & polyzoid marl
- 385'-406' White polyzoid marl
- 406'-488' Grey polyzoid marl.
- 488'-510' Grey calcareous clay.
- 510'-519' Ferruginous yellow silt.
- 519'-560' Grey marl.
- 560'-570' Dark grey silt
- 570'-590' Grey silt
- 590'-612' Dark grey silt
- 612'-622' Greenish-grey silt; somewhat marly.
- 622'-632' Marly silt.
- 632'-663' Grey marl

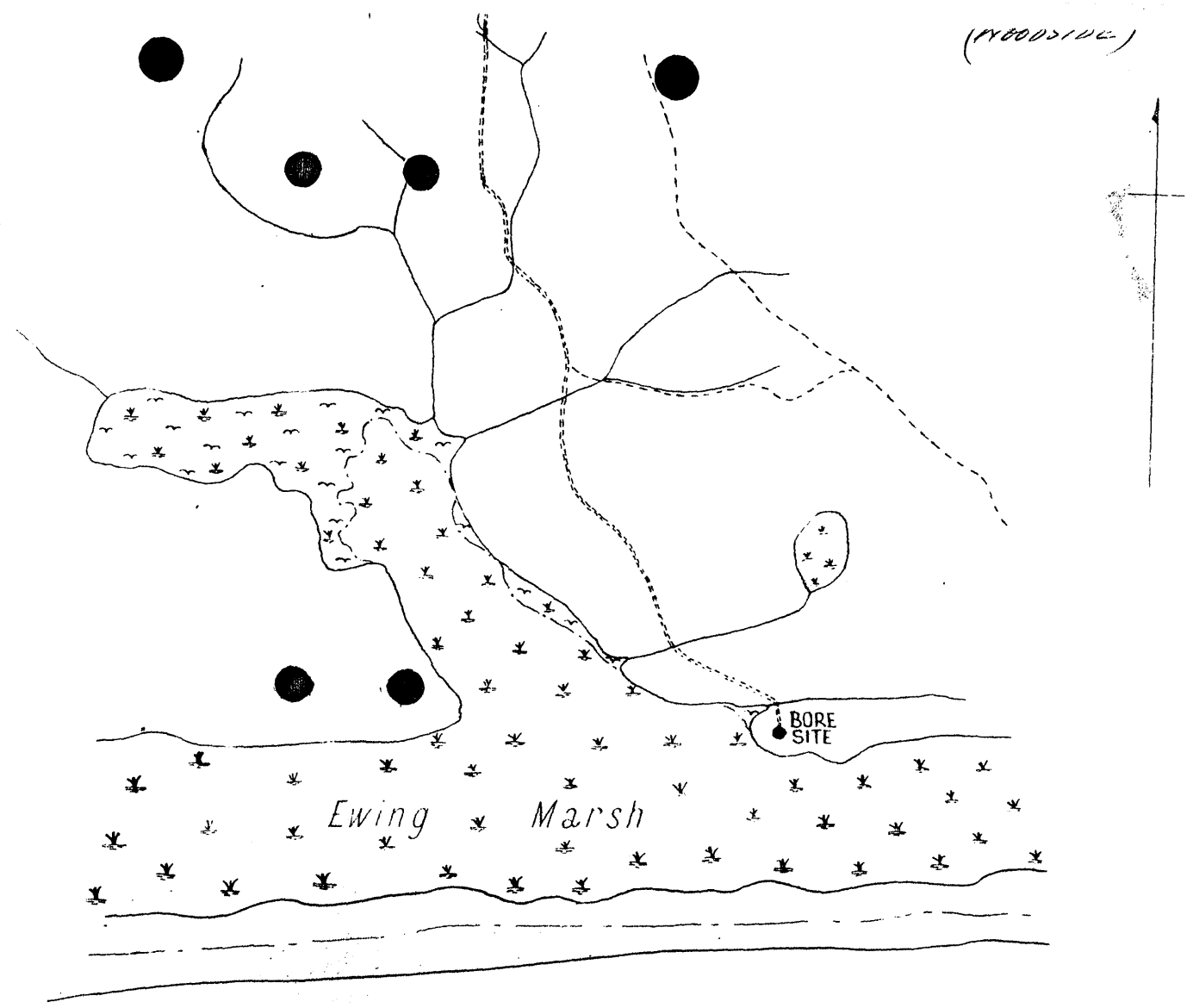
EAST END-1.

- 663-673' Dark grey silty marl
 -709' Dark grey silt
 -719' Calcareous grey clay
 -786' Grey calcareous clay
 -832' Dark grey shelly clay
 -853 Silty yellowish grey clay
 -894 Yellowish grey silt
 -905 Yellow silt.
 -915 Greenish silty clay.
 -925 Greenish grey silt
 -946 Grey marl
 -976 Shelly grey marl
 -986 Shelly sandy clay.
 -1026 No sample: Hole caved, water.
 -1045 Very coarse, sharp conglomerate with splintered quartz pebbles.
 1070'-1090' Pink clay
 -1096' Some pink to reddish soil clay
 -1106' No sample
 -1174' Slump material from high up hole
 -1200 Fine greenish grey silt.
 -1224' Conglomerate in silty marly cement
 -1230'6" Coarse quartz pebble conglomerate.



SOUTHERN OCEAN

1 mile to 1 inch



Approx. 20 chains to 1 inch

EAST END-1

Date	Remarks	Checked

"LAKES OIL" EASTERN BORE
PARISH OF WAYGARA

Surveyed	
Drawn	
Traced	MB. 8.5.59
Checked	A. 11.5.59
Passed	

DEPARTMENT OF MINES VICTORIA	
Z Misc. 62	
Approved	

Issue No.	1
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REFERENCE

SCALE

P.P.L. 161
LAKES OIL LTDNOW
P.P.L. 252.
(WOODSIDE)

1 Copy.

Page 1 of 5

EAST END-1

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J. Boutakoff

N. Boutakoff

Senior Geologist.

6th May 1959.

Enclosures:

1. Log of Bore.
2. Plan showing location of Bore.

EAST END No. 1

Locⁿ 37° 48' 04" S, 148° 21' 14" E
 El. 10 ft.
 T.D. ~~1230~~ ? 1230 ft. 6 in.

W 458

B. Hocking Rocks

Haunted Hill Crp.	0-45
Jemmy's Pt	45-116
↳ Tambo River	
Crippsland Lst.	116-802
* Lakes Entrance	802- 1029
↳ Colyton Gravel	1029
Ord. basement	1029-1230.5

* Differentiation impossible due to contamination.

Barry Hocking

P.1
"LAKES OIL EAST BORE"

(Near Orbost.)

East End-1

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20	-	30'	Coarse yellow, micaceous sand.	
30	-	40'	Coarse yellow quarry sand.	
40	-	45'	-do-	
45	-	64'	-do-	
64	-	69'	-do- but with yellow silt cement.	
69	-	85'	Pale green gritty silt.	
85	-	95'	-do-	
95	-	106'	Pale green silty fine sand.	
106	-	116'	Pale green somewhat coarse silty sand.	
116	-	126'	-do-	
126	-	136'	Shelly, marly limestone.	
136	-	147'	Polyzoal, shelly limestone.	
149	-	157'	Polyzoal marl	
157	-	168'	-do-	
168	-	178'	Marly clay	
178	-	189'	Grey polyzoal marl	
189	-	200'	-do-	
200	-	210'	-do-	
210	-	220'	-do-	
220	-	231'	-do-	
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447	-	458'	-do-	
458	-	468'	-do-	
468	-	478'	-do-	

478	-	488'	-do-
488	-	500'	Grey calc. clay
500	-	510'	-do-
510	-	519'	Ferruginous yellow silt.
519	-	529'	Grey marl.
529	-	540'	Grey marl.
540	-	550'	-do-
550	-	560'	-do-
560	-	570'	Dark grey silt.
570	-	580'	Grey silt.
580	-	590'	-do-
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653	-	663'	-do-
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673	-	688'	Dark grey silt.
688	-	698'	-do-
698	-	709'	-do-
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740	-	750'	-do-
750	-	760'	-do-
760	-	770'	-do-
770	-	786'	-do-
786	-	802'	Dark grey shelly clay.
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812	-	822'	-do-
822	-	832'	-do-
832	-	842'	Silty yellowish grey clay.
842	-	853'	-do-
853	-	863'	Yellowish grey silt.
863	-	873'	-do-
873	-	884'	-do-
884	-	894'	-do-
894	-	905'	Yellow silt.
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925	-	936'	Grey marl.
936	-	946'	-do-
946	-	956'	Shelly grey marl.
956	-	966'	-do-
966	-	976'	-do-
976	-	987'	Shelly sandy clay.
Gap probably containing washed-out sand. Hole caving water at this level.			

East End-1

1029 - 1045' Very coarse, sharp conglomerate and splintered quartz pebble grit.

Hole making much water.

1070 - 1080' Pink clay. Probably land surface lateritic soil.

1080 - 1090' Same pink to reddish soil clay.

Gap which may be washed out sand.

1106 - 1174' Slump material from higher up.

1174 - 1184' Fine greenish-grey silt.

1184 - 1200' -do-

1200 - 1224' Conglomerate in silty marly cement

1224 - 1230'6" Coarse, quartz pebble conglomerate.

Probably basal conglomerate

} Main
Water
Levels.

2nd Colby.

Waygava ①

855/7

(Non-subdivided)

EAST END - 1

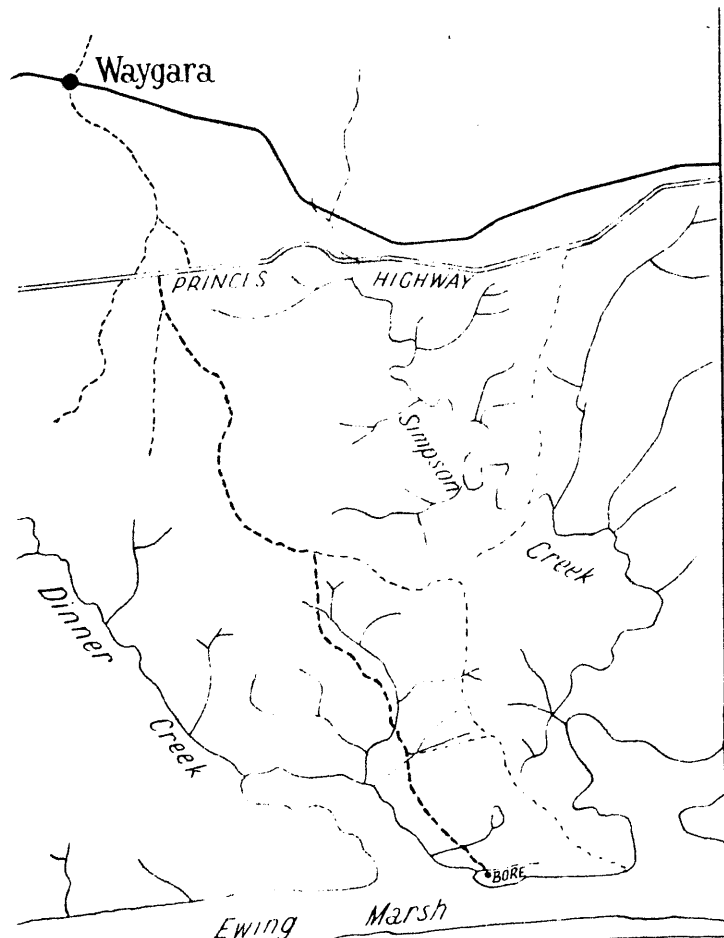
Tube dit 212 - East End No. 1.

(Layed by M. Boutakoff).

- 0'-20' Ferruginous sand. Ironstone pellets.
- 20'-30' Loose yellow, micaceous sand
- 30'-64' Looser yellow quarry sand.
- 64'-69' " " " with yellow silt cement.
- 69'-95' Pale green gritty silt.
- 95'-106' Pale green silt; fine sand
- 106'-126' Pale green somewhat coarse silty sand.
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- 136'-147' Polyzood shelly limestone
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- 488'-510' Grey calcareous clay.
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- 560'-570' Dark grey silt
- 570'-590' Grey silt
- 590'-612' Dark grey silt
- 612'-622' Greenish-grey silt; somewhat marly.
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- 632'-663' Grey marl

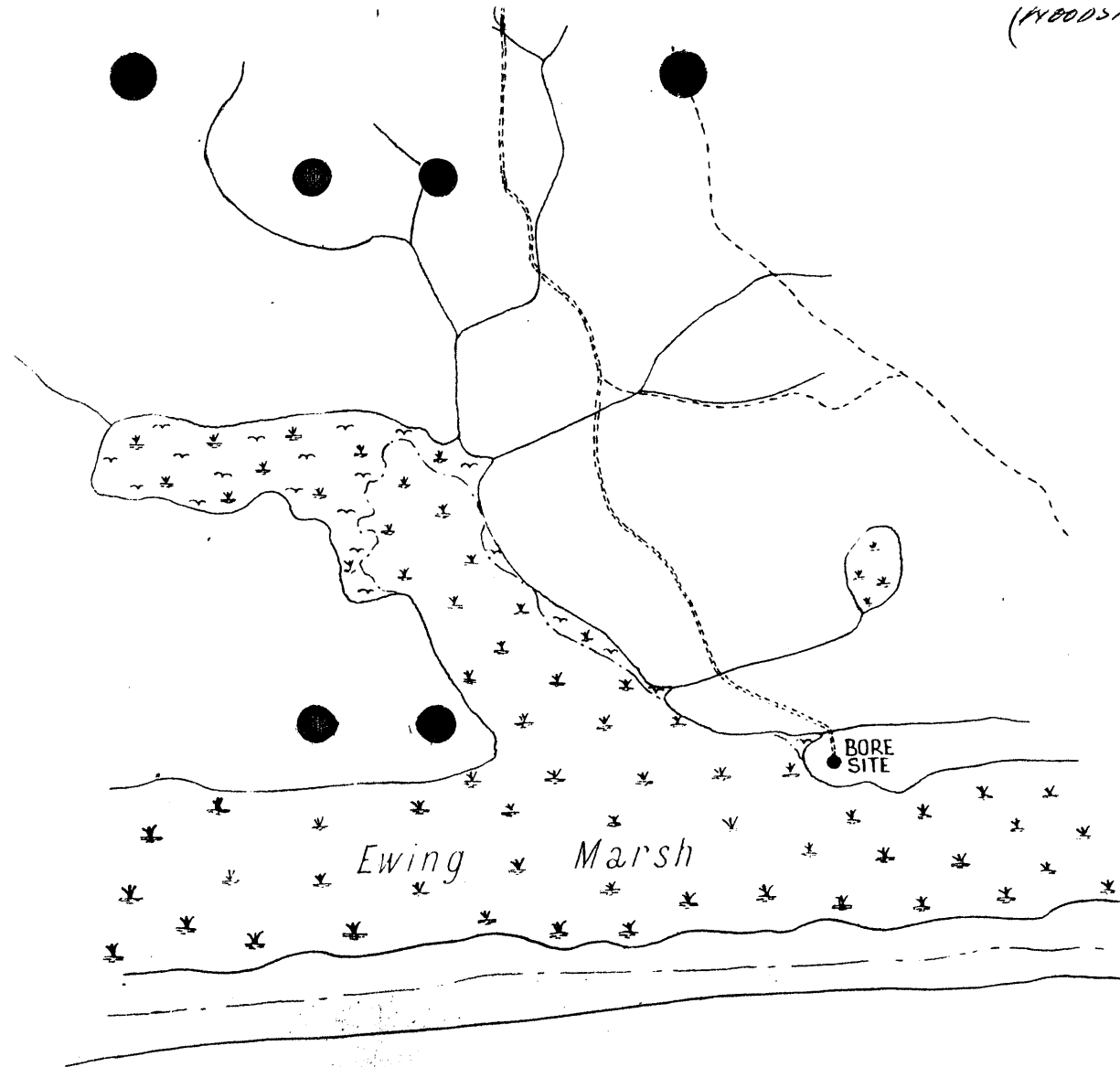
EAST END-1.

- 663-673' Dark grey silty marl
- 709' Dark grey silt
- 719' Calcareous grey clay
- 786' Grey calcareous clay
- 832' Dark grey shelly clay
- 853 Silty yellowish grey clay
- 894 Yellowish grey silt
- 905 Yellow silt.
- 915 Greenish silty clay.
- 925 Greenish grey silt
- 946 Grey marl
- 976 Shelly grey marl
- 986 Shelly sandy clay.
- 1026 No sampler: Hole caved, water.
- 1045 Very coarse, sharp conglomerate with splintered quartz pebbles.
- 1070'-1090' Pink clay
- 1096' Some pink to reddish soil clay
- 1106' No sampler
- 1174' Slump material from higher up hole
- 1200 Fine greenish grey silt.
- 1224' Conglomerate in silty marly cement
- 1230'6" Coarse quartz pebble conglomerate.



SOUTHERN OCEAN

1 mile to 1 inch



(WOODSIDE)

Approx. 20 chains to 1 inch

EAST END-1

Date	Remarks	Checked	"LAKES OIL" EASTERN BORE PARISH OF WAYGARA	Surveyed	DEPARTMENT OF MINES VICTORIA		Issue No.
				Drawn			1
				Traced	N.B. 8.5.59	Z Misc. 62	
				Checked	A. 11-5-59		
				Passed		Approved	

REFERENCE

SCALE

LITHOLOGY & STRATIGRAPHY

BY B. HOCKING

East End No. 1
Description of Washings.

64-69: c. Polyzoa, shell frags, subrounded qz. gm. Ruddy looking
mixture (? contamination).
f. Red-brown pellets (poss. lim. after glauc.) not uncommon,
Also some pellets of glauc. Shell frags (pelecypods)
glauco. moulds or
forams.
Ech. spine.

106-116

c. Ditrupe, polyzoa, mollusc fragments,
f. Glauc. not abundant, qz. grains. Glauc. may be oxidised.

136-47

Polyzoa, ech. frags, shell frags, Ditrupe.

157-68

Polyzoa, etc.

251-61

Polyzoa, shell frags, glauc. + some oxid. limonite.

365-75

Polyzoa, shell frags, ech. frags, Ditrupe.

406-16

Polyzoa, shell frags, Ditrupe, etc.

468-78

As above.

560-70

Polyzoa, molluscan shell frags in almost equal ppm.
Certain amount of quartz sand, glauconite - limonite.

673-88

Poorly preserved polypora, not common, Abundant shell fragments.
mic. punctate brach. Ech. sp. Sand grains not uncommon,
mic. glauc.-lin.

770-86

Abundant shell fragments, including Furr. Polypora common.
Ech. spines. Large grains of brown partially oxidized pyritic
material.

832-42

Poorly preserved polypora. Shell fragments.
High sand content; glauconite, mostly oxidized to
limonite.

976-87

Shell frags. Cravelly grains, + sand, Glauconite. Many of
quartz grains are iron stained. Rock appears to be a
calcareous sand.

LAKES OIL CO. EAST END 1, GIPPSLAND

BASIC INFORMATION

Drilled by: Lakes Oil Ltd.

Date: 1959

Location: 37°48'04", 148°21'14"; Parish of Waygara

Elevation: 10 ft.

Total Depth: 1230 ft. 6 in.

Present Sample Availability: Cuttings from 0-987 and 1029-1230.5 ft.;
core from 1224-1230.5 ft.

LITHOLOGIC LOG

The following log was prepared by the writer in 1963:

- 0-30 ft.: friable clayey sand, ferruginous in parts
30-45 ft.: sand and grit
45-69 ft.: brown calcareous sand with small shell fragments and occasional bryozoa
69-116 ft.: friable greenish grey sandy marl, glauconitic, shelly
116-157 ft.: yellowish sandy limestone with bryozoa, molluscan fragments; hard recrystallised chips also present
157-241 ft.: friable grey bryozoal marly limestone
241-344 ft.: light grey marl with shell fragments; Ditrupa and bryozoa are common below 303 ft.; varying degrees of crushing by the bit suggest varying degrees of cementation
344-406 ft.: whitish grey limestone with abundant bryozoa, also Ditrupa, Operculina and echinoid fragments
406-488 ft.: grey bryozoal marly limestone
488-560 ft.: yellowish brown marl, becoming grey at 529 ft.
560-802 ft.: dark grey marl, faintly micaceous, with shells (including common Turritella) and uncommon bryozoa; there is an apparent mud increase in passing downwards
802-987 ft.: brownish grey sandy marl, greenish brown at 822 ft., greenish grey at 905 ft., and brownish grey again at 946 ft.; molluscan fragments are very common; the sand content includes quartz^{and} glauconite/limonite
987-1029 ft.: no samples
1029-1174 ft.: angular chips of milky quartz, believed to be crushed quartzite
1174-1224 ft.: predominantly green shale (?sub-phyllite), but somewhat contaminated
1224-1230.5 ft.: hard grey sandy siltstone

STRATIGRAPHIC SUBDIVISION

The following interpretation is based on both lithological and micropalaeontological evidence:

Haunted Hill Gravels/?Nyerimalang Fm.: 0-45 ft.

Jemmy's Point/Tambo River Formations: 45-116 ft.

Gippsland Limestone: 116-802 ft.

(Bairnsdalian microfaunas recognised at 251-261 ft., Balcombian at 365-375 and 406-416 ft., Batesfordian at 468-488 ft. and Longfordian between 488 and 802 ft.)

Lakes Entrance Formation: 802-1029 ft.

(The Greensand Member was not specifically identified. The hole apparently took water between 987 and 1029 ft., suggesting that this interval is occupied by sands and/or gravels of the Colquhoun Gravels.)

Ordovician bedrock: 1029-1230.5 ft. (T.D.)

1.12.69

Barry Hocking

J.B. HOCKING,
Geologist



LAKES OIL CO. EAST END NO. 1 BORE

Location: Lat. 37° 48' 04" S, Long. 148° 21' 14" E, Parish of Waygara.
Elevation: 10 ft. above S.L.
Samples: Samples available (Mines Dept. store) from 0 ft. to 1230 ft.6in.; samples taken as rotary cuttings, except for a core at 1224 ft. to 1230 ft.6in.

LITHOLOGIC LOG:

0 - 30 ft. : friable clayey sand, ferruginous in parts.
30-45 ft. : sand and grit.
45-69 ft. : brown calcareous sand with small shell fragments and occasional polyzoa.
69-116 ft. : friable greenish grey sandy marl, glauconitic, shelly.
116-157 ft. : yellowish sandy limestone with polyzoa, molluscan fragments and Ditrupa; fragments and limestone chips coarser than above - presumably a harder rock.
157-241 ft. : friable grey polyzoal marly limestone.
241-344 ft. : light grey marl containing shell fragments. Ditrupa and polyzoa are common below 303 ft. Varying degrees of crushing by the bit suggest varying degrees of cementation.
344-406 ft. : whitish grey limestone, polyzoa abundant, also Operculina, Ditrupa, and echinoid fragments.
406-488 ft. : grey polyzoal marly limestone.
488-560 ft. : yellowish brown marl, becoming grey at 529 ft.
560-802 ft. : dark grey marl, faintly micaceous, shelly, including common Turritella; polyzoa uncommon. Apparent gradual increase in clay-silt percentage in passing downwards.
802-987 ft. : brownish grey ^{sandy} marl, greenish brown at 822ft. greenish grey at 905 ft., and brownish grey again at 946 ft.; shell fragments (mollusca) are very common. (Contamination is bad towards the base). } Glauconitic +
its lim. alteration
987-1029 ft. : no available samples: presumably sand; hole taking water.
1029-1174 ft. : quartzite, possibly somewhat fractured (occurs as angular chips of milky-quartz).
1174-1224 ft. : predominantly green phyllite, but somewhat contaminated.
1224-1230.5ft. : hard grey sandy siltstone (thin section cut).

Thin Section: core taken at 1224-1230.5 ft.

The most predominant mineral constituent is quartz which occurs as sand-sized grains associated with more abundant silt-sized grains. The sorting, however, is poor. The larger grains are usually sub-angular, and up to 0.2 mm. in size, whereas the majority are approx. 0.02 mm.

An irregular band of tight granular quartz, roughly 0.1 mm. across, transects the slide.

Sericite occurs in the groundmass, and tends to act upon the quartz, giving the latter irregular outlines.

Plagioclase feldspar is not uncommon, and is typically andesine. Muscovite occurs also.

Green-brown tourmaline, crystals of zircon, and specks and irregular grains of ilmenite are all found as accessories.

The rock could ~~be~~ be classed as a sandy siltstone.

STRATIGRAPHIC INTERPRETATION.

This interpretation is based on microfaunal evidence.

0-45 ft.:

Unfossiliferous sands, presumably post-Kalimnan.

45-116 ft.:

Calcareous sands and sandy marls. Species include Baggina philippinensis, Cibicides cygnorum, Elphidium pseudonodosum, Globigerina ouachitaensis-bulloides gp.,

Nonion victoriense, Notorotalia clathrata, rare Orbulina universa, Triloculina tricultrata, and Uvigerina sp. c.f. pigmea: these indicate a Kalimnan - Mitchellian age. The corresponding rock units are the Jemmy's Pt. Formation and the Tambo River Formation, which cannot be differentiated here.

Although the fauna suggests shallow water conditions, pelagics are relatively common.

116-802 ft.:

Polyzoal and shelly limestones at the top contain Orbulina universa which becomes common at 251-61 ft: this indicates a Bairnsdalian age. The occurrence of Elphidium spp. (including Elphidium crassatum) and also miliolids, suggest shallow water conditions.

Polyzoal limestones and marly limestones examined at 365-75 ft. and 406-16 ft. contain Balcombian faunas in which pelagic species are common. Typical diagnostic species are Globigerinoides transitoria, Globigerinoides glomerosa curva, and Astrononion obesum; Globigerinoides bispherica is also common.

Samples at 468-78 ft. and 478-88 ft. contain Batesfordian faunas; the lower one includes Lepidocyclina howchini.

The Batesfordian-Longfordian division occurs at 488 ft. where both Astrononion centroplax and Cibicides perforatus appear (i.e. in passing downwards: they have their last appearance stratigraphically). There is also a corresponding lithological division - a grey polyzoal marly limestone (Glencoe Limestone) overlies a yellowish brown foraminiferal marl (Longford Limestone).

Miliolids become significant towards the base of the Longfordian, particularly a species of Triloculina.

The sequence from 116-802 ft. represents the Gippsland Limestone.

~~802-1029 ft.~~
⁹⁸⁷
802-~~1029~~ ft.:

Brown and greenish brown marls. Janjukian species such as Globigerina ampliapertura, Globorotalia testarugosa, Elphidium crespinae, and Vagulinopsis gippslandicus (Carter's F.U.5). This rock unit is an equivalent of the Lakes Entrance Formation as it is typified at Lakes Entrance.

Below ~~1029~~ ft.:

~~The quartzite and phyllite are presumed to be of Devonian age, whereas the sediments beneath the sandy limestone are regarded as Ordovician.~~
Basement

{ 987-1029:
Presumably sands: suspected 'Colquhoun Gravels'.

Discussion:

Failure to differentiate between Jemmy's Pt. Formation and Tambo River Formation on both lithological and faunal grounds appears to be commonplace in the study of the Eastern Gippsland bores; likewise the failure to differentiate the upper rock units of the Gippsland Limestone. As far as the Gippsland Limestone is concerned in this bore, the only ready subdivision is into a lower marl member of Longfordian age, and an upper limestone (inc. marly limestone) member of post-Longfordian age.

There is an apparent absence of rocks referable to Boutakoff's 'Colquhoun Gravels' although it is noted that samples are missing between 987 and 1029 ft. —

~~presumed~~ to be sands, as are washed out by water.

B.H.
B. HOCKING

26/7/63.

1060-70, basically quartzite

1070-80:

1070-80:

1090-90:

1174-84

1186-74

1184-1200

1200-24

First appearance of gn phyllite lot of
olive-brown soft micaceous clay (? shale) ^{CONTAM.}

Phyllite, quartzite (? contamination)

Phyllite + greenish siliceous material

12/ Aug / 1965.

A series of cuttings samples were found in the core that labelled "Lakes Oil" & giving various depths.

"Lakes Oil" Company has only drilled one well ^(i.e. East End No. 1) as operator, although it has been associated with many others notably Area 112 who was operator.

On such evidence it is considered that these samples were from East End No. 1 Well, Drilled in 1959.

See Dr Boutakoff note in W.M. file.

Mr. Mr P.H. Kenby viewed the samples with me & we are both in accord that they are East End No. 1 samples.

P.H. Kenby
12/8/65.