

Greymouth Petroleum Limited
Waimanu 1 Wellsite (Exploration)
Monitoring Programme Report

Technical Report 2010– 61

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Executive summary

Greymouth Petroleum Limited operated a hydrocarbon exploration site located on Airport Drive, Bell Block, in the Tasman Sea catchment. The site is called Waimanu 1. The operation took place from November 2009 through to May 2010.

This report describes the monitoring programme implemented by the Taranaki Regional Council to assess the Company's environmental performance in relation to drilling operations at the Waimanu 1 well during the period under review, and the results and environmental effects of the Company's activities.

The Company holds a total of 8 resource consents, for the activities relating to exploration at the Waimanu 1 site, which include a total of 111 conditions setting out the requirements that the Company must satisfy. The Company holds consent 7476-1 to maintain a structure in the coastal marine area; consent 7477-1 to discharge treated stormwater and treated produced water; consent 7478-1 to discharge stormwater and sediment during construction; consent 7479-1 to discharge emissions to air during clean up, initial testing, and production testing; consent 7480-1 to discharge emissions to air during flaring from well workovers and in emergencies; consent 7481-1 to discharge drilling waste via land farming; consent 7482-1 to take groundwater that may be encountered as produced water; and consent 7483-1 to take and divert produced water from an aquifer in the coastal marine area.

The Council's monitoring programme for the period under review included 13 compliance monitoring inspections of the site and surrounding environment. No water samples were collected for physicochemical analysis, as there was no discharge to any surface water body.

The monitoring showed that the site was neat and tidy at all inspections. The ringdrains, skimmer pits and bunds were all secure. The flare pit was well situated to minimise off-site effects. The site was well managed and staff undertook to carry out improvements where necessary.

Drill cuttings were disposed of off-site, some of the wastes were removed from the site and disposed of to an approved area in the Auckland region and some were disposed of at the Uruti worm farm.

Flaring was carried out on-site.

During the period under review the Company demonstrated a high level of environmental performance and compliance with the resource consents.

There were no unauthorised incidents recorded by the Council relating to operations at the Waimanu 1 site.

This report includes recommendations for any future operations at the site.

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1. Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This is the report for the period November 2009-May 2010 by the Taranaki Regional Council on the monitoring programme associated with resource consents held by Greymouth Petroleum Limited. The Company operated the wellsite on Airport Drive, Bell Block, in the Tasman Sea catchment.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by Greymouth Petroleum Limited that relate to abstractions and discharges of water and discharge of drilling waste within the Tasman Sea catchment, and the air discharge permits held by Greymouth to cover emissions to air from the site.

One of the intents of the Resource Management Act (1991) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Taranaki Regional Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of Greymouth Petroleum's use of water, land, and air, and is the first combined annual report by the Taranaki Regional Council for the Waimanu site.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about compliance monitoring under the Resource Management Act and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by Greymouth Petroleum in the Tasman Sea catchment, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at Greymouth Petroleum's site.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretation, and their significance for the environment.

Section 4 presents recommendations to be implemented in future monitoring.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act (1991) and monitoring

The Resource Management Act primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- (a) the neighbourhood or the wider community around a discharger, and may include cultural and socio-economic effects;
- (b) physical effects on the locality, including landscape, amenity and visual effects;
- (c) ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- (d) natural and physical resources having special significance (e.g., recreational, cultural, or aesthetic);
- (e) risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Taranaki Regional Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each discharge source. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the Resource Management Act to assess the effects of the exercise of consents. In accordance with section 35 of the Resource Management Act 1991, the Council undertakes compliance monitoring for consents and rules in regional plans; and maintains an overview of performance of resource users against regional plans and consents. Compliance monitoring (covering both activity and impact monitoring) also enables the Council to continuously assess its own performance in resource management as well as that of resource users particularly consent holders to resource management, and, ultimately, through the refinement of methods, and considered responsible resource utilisation to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental performance

Besides discussing the various details of the performance and extent of compliance by Greymouth Petroleum in the Tasman Sea catchment during the period under review, this report also assigns an overall rating. The categories used by the Council, and their interpretation, are as follows:

- a **high** level of environmental performance and compliance indicates that essentially there were no adverse environmental effects to be concerned about, and no, or trivial (such as data supplied after a deadline) non-compliance with conditions.
- a **good** level of environmental performance and compliance indicates that adverse environmental effects of activities during the year were negligible or minor at most, items of concern were resolved positively, co-operatively, and quickly, the Council did not record any verified unauthorised incidents involving significant environmental impacts and was not obliged to issue any abatement notices, there were perhaps some items noted on inspection notices for attention but these items were not urgent nor critical, and follow-up inspections showed they have been dealt with.
- **improvement desirable** indicates that the Council may have been obliged to record against the consent holder a verified unauthorised incident involving

significant environmental impacts, and/or abatement notices may have been issued; there were adverse environmental effects arising from activities and intervention by Council staff was required, and there were matters that required urgent intervention, took some time to resolve, or remained unresolved at end of the period under review.

- **poor** performance is used when there were grounds for prosecution or infringement notice.

1.2 Process description

The Waimanu 1 wellsite is located in the same area as the Terrace A wellsite drilled several years ago. The Waimanu wellsite is located approximately 1400 metres along an access track from Airport Drive. The site is located on flat land which is maintained by the New Plymouth District Council in relation to the New Plymouth Airport operation. The soil has high sand content due to the proximity to the coast. The site is approximately 26 metres above mean sea level, with the topography generally flat to undulating. Historically in the area of the site, sand dunes were present however these were extensively modified (cut and fill) during construction of the airport.

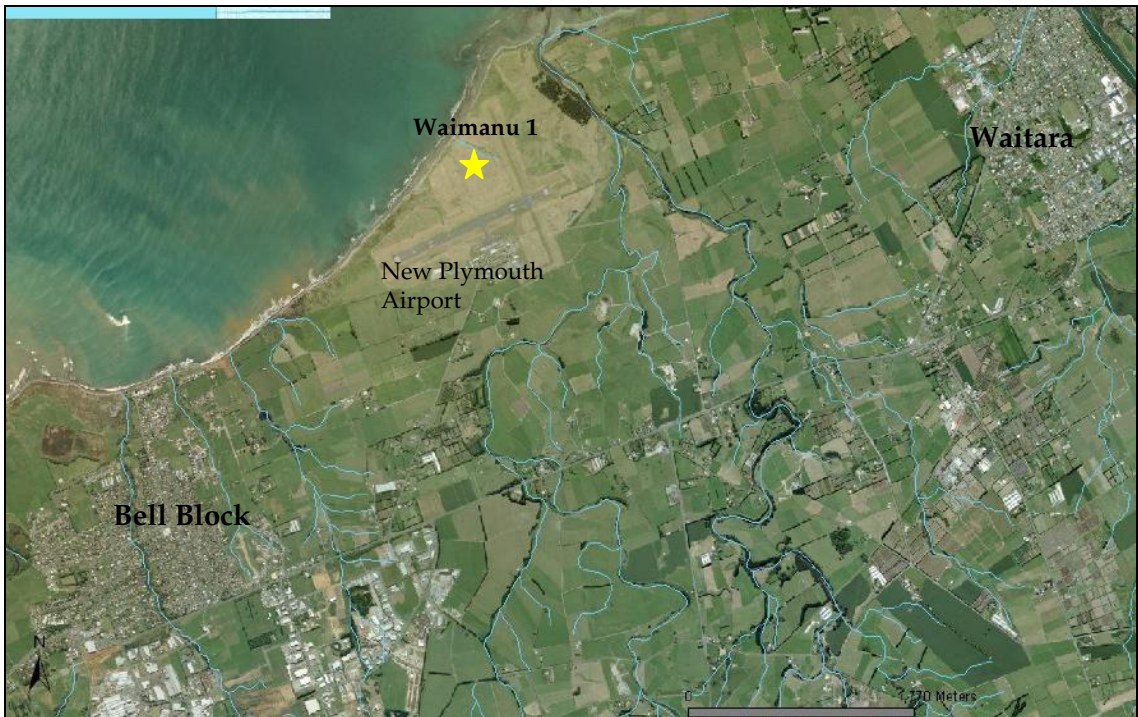


Figure 1 Approximate location of the Waimanu 1 wellsite off Airport Drive, Bell Block

1.3 Resource consents

1.3.1 Background

Greymouth Petroleum Limited holds eight resource consents related to exploration activities at the Waimanu 1 wellsite. Six of the consents were granted on 25 June 2009, one on 20 July 2009 and one on 11 September 2009. The consent applications were processed on a non-notified basis as Greymouth Petroleum had obtained the

landowner's approval as an affected party, and the Council was satisfied that the environmental effects of the activity would be minor.

The consents are discussed below.

Copies of the consents and the Council reports describing the associated activities are contained in Appendix I to this report.

Site construction was permitted under Rule 25 of the Regional Fresh Water Plan for Taranaki.

1.3.2 Water abstraction permit

Section 14 of the Resource Management Act stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14.

Greymouth Petroleum Limited holds water permit **7482-1** to take groundwater that may be encountered as produced water during hydrocarbon exploration and production operations. This permit was issued by the Taranaki Regional Council on 25 June 2009 under Section 87(d) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 6 special conditions attached to this consent.

Condition 1 requires the consent holder to ensure abstraction does not cause lowering of the shallow static water level by 10%.

Condition 2 relates to freshwater aquifers.

Condition 3 requires the consent holder to keep a well log.

Condition 4 requires the consent holder to keep abstraction records.

Condition 5 relates to consent lapse.

Condition 6 allows the Council to review, amend, delete or add to the conditions of this consent.

Greymouth Petroleum Limited holds water permit **7483-1** to take and divert produced water from an aquifer on the marine area associated with well drilling activities. This permit was issued by the Taranaki Regional Council on 25 June 2009 under Section 87(d) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 6 special conditions attached to this consent.

Condition 1 requires the consent holder to adopt the best practicable option.

Condition 2 requires the consent holder to maintain abstraction records.

Condition 3 states that abstraction must not change static water level by 10% or more.

Condition 4 states there shall be no intrusion of saltwater into freshwater aquifers.

Condition 5 and 6 relate to consent review and lapse.

Copies of the permits are attached to this report in Appendix I.

1.3.3 Water discharge permit (treated stormwater)

Section 15(1)(a) of the Resource Management Act stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

Greymouth Petroleum Limited holds water discharge permit 7477-1 to cover the discharge of treated stormwater and treated produced water from hydrocarbon exploration and production operations. This permit was issued by the Taranaki Regional Council on 25 June 2009 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 18 special conditions attached to this consent.

Condition 1 requires the consent holder to adopt the best practicable option.

Condition 2 states the maximum stormwater catchment area.

Condition 3 requires the consent holder to notify the Council prior to works commencing.

Condition 4 relates to contingency planning.

Condition 5 relates to design, construction, management and maintenance of stormwater system.

Condition 6 relates to stormwater treatment.

Condition 7 relates to hazardous substance storage.

Condition 8 relates to constituents in the discharge.

Conditions 9, 10 and 11 relates to concentration limits in the soil.

Condition 12 states there shall be no direct discharge to water.

Condition 13 relates to soil sampling.

Condition 14 requires the consent holder to keep records of produced water discharges.

Condition 15 requires the consent holder to prepare a management plan before discharging produced water.

Condition 16 relates to site reinstatement.

Conditions 17 and 18 relate to consent review and lapse.

A copy of the permit is attached to this report in Appendix I.

1.3.4 Water discharge permit (stormwater and sediment –construction)

Section 15(1)(a) of the Resource Management Act stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

Greymouth Petroleum Limited holds water discharge permit **7478-1** to cover the discharge of stormwater and sediment from earthworks during construction. This permit was issued by the Taranaki Regional Council on 25 June 2009 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 6 special conditions attached to this consent.

Condition 1 relates to construction of the wellsite and access track.

Condition 2 requires runoff from areas of exposed soil to be treated.

Condition 3 requires consent holder to notify the Council 7 days prior to commencement of works.

Condition 4 requires all earthwork areas to be stabilised as soon as practicable.

Condition 5 relates to consent lapse.

Condition 6 allows Council to review, amend, delete or add to conditions of consent.

A copy of the permit is attached to this report in Appendix I.

1.3.5 Air discharge permit

Section 15(1)(c) of the Resource Management Act stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

Greymouth Petroleum Limited holds air discharge permit **7479-1** to cover the discharge of emissions to air from flaring of hydrocarbons and miscellaneous emissions associated with well clean-up, initial well testing, and production testing involving up to 3 wells. This permit was issued by the Taranaki Regional Council on 11 September 2009 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 24 special conditions attached to this consent.

Condition 1 limits the duration the consent can be exercised.

Condition 2 relates to flare pit location.

Condition 3 requires flaring not to be carried out when airport activities are undertaken.

Condition 4 requires the consent holder to notify Council prior to flaring.

Condition 5 requires the consent holder to notify residents prior to flaring.

Condition 6 states there shall be no alteration to plant equipment or processes without prior consultation.

Condition 7 requires the consent holder to have regard for prevailing and predicted wind when considering flaring.

Condition 8 requires all gas flared to be treated to minimise smoke emissions.

Condition 9 relates to separation failure.

Condition 10 states that no liquid or solid hydrocarbons are to be combusted.

Condition 11 states that gas shall be combusted so smoke emissions are minimised.

Condition 12 requires consent holder to adopt best practicable option.

Condition 13 states that only substances treated as outlined by conditions 8, 9, 10, 11 and 12 shall be combusted within the flare pit.

Condition 14 relates to smoke and odour discharges from the site.

Condition 15 relates to opacity of smoke emissions.

Conditions 16, 17, and 18 relate to emissions to air from the site.

Condition 19 requires the consent holder to ensure emissions do not exceed workplace exposure standards.

Condition 20 requires the consent holder to make available analysis of typical gas and condensate from the field.

Condition 21 requires the consent holder to keep records of all smoke emitting incidents.

Condition 22 requires the consent holder to keep logs of all flaring.

Condition 23 relates to consent lapse.

Condition 24 allows Council to review, amend, delete or add to conditions.

Greymouth Petroleum Limited holds air discharge permit **7480-1** to cover the discharge of emissions to air during flaring from well workovers, and in emergency situations and miscellaneous emissions associated with production activities. This permit was issued by the Taranaki Regional Council on 30 July 2009 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 22 special conditions attached to this consent.

Condition 1 requires the consent holder to notify the Council whenever continuous flaring is to occur.

Condition 2 requires the consent holder to notify residents of flaring.

Condition 3 states that there is to be no alteration to plant equipment or processes without prior consultation.

Condition 4 states the consent holder is to have regard for prevailing and predicted wind.

Condition 5 requires all gas to be treated prior to flaring.

Condition 6 relates to separation failure.

Condition 7 states that no liquid or solid hydrocarbons are to be combusted through the gas flare.

Condition 8 requires the consent holder to adopt the best practicable option to prevent or minimise any effects.

Condition 9 states that only gas treated as outlined by conditions 5, 6, 7, and 8 is to be combusted.

Condition 10 relates to discharge of offensive odour or smoke.

Condition 11 requires vapour recovery systems to be fitted to hydrocarbon storage vessels.

Condition 12 relates to opacity of smoke emissions.

Condition 13, 14, and 15 relate to emissions to air from the site.

Condition 16 requires the consent holder to ensure emissions do not exceed workplace exposure standards.

Condition 17 requires the consent holder to make available analysis of typical gas and condensate from the field.

Condition 18 requires the consent holder to keep records of all smoke emitting incidents.

Condition 19 requires the consent holder to keep a log of all continuous flaring.

Condition 20 requires the consent holder to provide the Council with a report.

Condition 21 relates to consent lapse.

Condition 22 allows the Council to review, amend, delete or add to conditions.

Copies of the permits are attached to this report in Appendix I.

1.3.6 Discharges of wastes to land

Sections 15(1)(b) and (d) of the Resource Management Act stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

Greymouth Petroleum Limited holds discharge permit **7481-1** to cover the discharge of drilling waste from hydrocarbon exploration onto and into land via landfarming. This permit was issued by the Taranaki Regional Council on 25 June 2009 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 25 special conditions associated with this consent.

Condition 1 requires the disposal area to be located as indicated in the application.

Condition 2 requires the consent holder to adopt the best practicable option.

Condition 3 requires consent holder to provide Council with a land spreading and incorporation management plan.

Condition 4 requires consent holder to notify Council prior to commencement of disposal operation.

Condition 5 requires consent holder to notify the Council prior to discharging stockpiled material.

Condition 6 requires the consent holder to supply Council with chemical analysis of wastes with 5% or more hydrocarbon content prior to discharge.

Condition 7 states that synthetic and water based wastes are to be kept separate and disposal for individual wells is to be separate.

Condition 8 requires the consent holder to keep detailed records of composition, volumes, dates, and treatments of wastes.

Condition 9 states that there is to be no discharge of waste within 25 metres of surface water.

Condition 10 relates to rates of application for the discharge.

Condition 11 states the maximum hydrocarbon content in surface soil.

Condition 12 relates to the electro-conductivity of the soil.

Condition 13 relates to sodium adsorption ratio of drilling waste.

Condition 14 relates to maximum rate of chloride application.

Condition 15 relates to maximum rate of nitrogen application.

Condition 16 requires hydrocarbon levels to be within guideline values at time of surrender, cancellation or expiry of this consent.

Condition 17 requires that the level of metals in the soil complies with guidelines.

Condition 18 relates to the level of dissolved salts.

Condition 19 states the concentration limits in the soil at cancellation, surrender or expiry of consent.

Condition 20 states that the discharge area shall be tilled and re-sown as soon as practicable.

Condition 21 states that discharge shall not lead or be liable to lead to discharge to surface water.

Condition 22 states that discharge shall not result in adverse impacts on groundwater.

Condition 23 relates to any finds of archaeological remains.

Condition 24 relates to consent lapse.

Condition 25 allows Council to review, amend, delete or add to conditions.

A copy of the permit is attached to this report in Appendix I.

1.3.7 Coastal permit

Section 12(1)(b) of the Resource Management Act stipulate that no person may, in the coastal marine area erect, reconstruct, place, alter, extend, remove, or demolish any structure or any part of a structure that is fixed in, on, under, or over any foreshore or seabed unless expressly allowed by a rule in a regional coastal plan or a resource consent.

Greymouth Petroleum Limited holds coastal permit **7476-1** to install, place and maintain a structure in the coastal marine area [namely well casing from directional drilling from shore]. This permit was issued by the Taranaki Regional Council on 25 June 2009 under section 87(d) of the Resource Management Act. It is due to expire on 1 June 2026.

There are 4 conditions attached to this consent.

Condition 1 requires the consent holder to adopt the best practicable option.

Condition 2 requires the consent holder to map and survey direction of drilling and position of well casings.

Condition 3 relates to consent lapse.

Condition 4 allows Council to review, amend, delete or add to conditions of consent.

A copy of the permit is attached in Appendix I.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the Resource Management Act sets out obligations upon the Taranaki Regional Council to: gather information, monitor, and conduct research on the exercise of resource consents and the effects arising, within the Taranaki region and report on these.

The Taranaki Regional Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations, and seek information from consent holders.

The monitoring programme for the Greymouth Petroleum site consisted of three primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Taranaki Regional Council in ongoing liaison with resource consent holders over consent conditions and their interpretation and application, in discussion over monitoring requirements, preparation for any reviews, renewals, or new consents, advice on the Council's environmental management strategies and the content of regional plans, and consultation on associated matters.

1.4.3 Site inspections

The Waimanu 1 site was visited 12 times during the monitoring period. With regard to consents for the abstraction of/or discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was surveyed for environmental effects.

1.4.4 Chemical sampling

The Taranaki Regional Council did not undertake sampling of the discharge from the site as no discharges to land or water were observed during compliance monitoring inspections.

1.4.5 Solid wastes

During exploration activities on the site, some drilling cuttings were removed from the site by a contractor and disposed of to an approved area in the Auckland region and some were disposed of to the worm farm at Uruti.

1.4.6 Air quality monitoring

Air quality monitoring is usually carried out in association with the well clean-up phase, where flaring can cause smoke emissions, as well as observing any miscellaneous emissions. Special conditions relating to the air discharge permit were complied with, relating to the location of the site and flare pit and distance to the nearest residence. These conditions and provision of specialist separation equipment ensure that no effects occur.

Flaring did occur at the Waimanu 1 wellsite.

The Council received notifications of the Company's intent to flare as per conditions of resource consent.

2. Results

2.1 Water

2.1.1 Inspections

Inspections paid special attention to the ring drains, mud sumps, treatment by skimmer pits and the final discharge point from the skimmer pit on to land and then into water.

During each inspection the following were checked and noted:

- weather;
- flow rate of surface waters in the general vicinity;
- flow rate of water take;
- whether pumping of water was occurring;
- general tidiness of site;
- ring drains;
- hazardous substance bunds;
- treatment by skimmerpits;
- drilling muds;
- drill cuttings;
- mud pit capacity and quantity contained in pit;
- sewage treatment and disposal;
- cementing waste disposal;
- surface works;
- whether flaring was in progress, and if there was a potential for flaring, whether the Council had been advised;
- discharges and surface waters in the vicinity for effects on colour and clarity, aquatic life and odour;
- site records; and
- general observations.

Inspections of the wellsite were undertaken on the following dates (main points noted during each visit are also indicated):

17 November 2009

The rig was being re-erected on a pre-existing site. Spud-in was to occur the following day. The site ringdrains and stormwater system are as constructed for the previous well (Terrace 1). The storage areas and bunds were being established. The flare pit had been constructed on the western side of the site, away from the airport. The site was neat and tidy.

30 November 2009

The monitoring inspection was undertaken during a period of sustained rainfall. Drilling was occurring at the time of inspection. There had been some minor mud spills near the pumping area (leaking glands), the area was being cleaned up and there was no risk of mud discharging to the ringdrain. There had been no run-off from the site to the ringdrains despite heavy rainfall. The skimmer pits were not discharging. No flaring anticipated at this stage.

15 December 2009

Drilling was occurring at the time of the monitoring inspection. There was no discharge to the skimmer pits occurring, water in the skimmer pits was clear. The site was neat and tidy and well managed. All ringdrains and bunds were secure. There had been no flaring or other off-site effects. The sewage system appears to have lifted out of the ground but has been stabilised.

22 December 2009

The site was neat and tidy. Drilling was occurring at the time of inspection. There was no discharge occurring to or from the skimmer pits and water in the skimmer pits was clear. No flaring or other emissions were occurring. The leaking septic tank area had been contained within a bund, the leak was due to a floating tank, and this was being assessed by Tom Crowley (Company Man, Tiger Drilling). The site has been well managed and is a credit to the crew.

30 December 2009

Drilling was occurring (slowly) at the time of inspection. No discharge was occurring from the skimmer pits. Water contained within the skimmer pits was clean (frogs evident). The site was neat and tidy. All bunding and storage areas appear secure.

12 January 2010

No drilling was occurring at the time of inspection. The casing was being installed. The site was neat and tidy and all ringdrains and bunds were secure. The contents of the skimmer pit were to be pumped out to prevent any discharge (unusual yellow/green colour of water – possibly algae growth as a result of warmer weather). The site is generally well managed and neat and tidy.

5 February 2010

No drilling was occurring at the time of inspection, the site was generally neat and tidy but some drilling fluids in the ringdrain and first skimmer pit needed to be cleaned out. There was no discharge occurring from the final skimmer pit. The sewage area was secure. There was no flaring occurring or any expectation of flaring at this stage.

9 February 2010

Drilling ahead quietly at the time of inspection. All ringdrains were clean and secure. The first skimmer pit contained some drilling fluids; this needed to be pumped out to prevent contamination of the second skimmer pit which was clean. There has been no discharge of stormwater for a long time. No flaring was occurring and there were no other emissions off-site.

18 February 2010

The compliance monitoring inspection was carried out following significant overnight rain. Drilling ahead during inspection. The site was neat and tidy. The skimmer pits were clear and no discharge was occurring. No flaring or anticipation of any.

1 March 2010 (10.35am)

Drilling ahead slowly toward target depth at time of inspection, drilling almost completed. The site was neat and tidy. All storage areas were secure. Some drilling materials were being removed from the site as the drilling phase neared completion. Both skimmer pits were clear and there was no stormwater discharge from the site. Ringdrains and bunds were secure.

1 March 2010 (1.43pm)

Drilling had finished and tubing was to be installed. The ringdrains and bunds were secure. All stormwater directed through the system, there was no discharge off-site and the skimmer pits were clear. Some drilling mud and materials remained on-site, but the site was being progressively tidied in readiness to vacate site.

19 March 2010

Drilling has been completed and the site readied for demobilisation. The site was neat and tidy. There was no discharge off-site. No flaring or other emissions occurring. All ringdrains and bunds were secure.

27 May 2010

Coil tubing was underway to assess the viability of the well for production. There was some minor flaring occurring immediately prior to the site inspection, no effects were noted and the flare pit was sited in a position so as to minimise any effects. The ringdrains and skimmer pits were clear; there was no discharge through the skimmer pits at inspection. The septic tank area was regularly monitored to prevent any overflow occurring. The site was neat and tidy, despite extra equipment (coil tubing) required.

2.1.2 Results of abstraction and discharge monitoring

No abstraction or discharge monitoring was undertaken by the Council during the period under review. No discharges to land or water from the site were observed during compliance monitoring inspections.

2.1.3 Results of receiving environment monitoring

No sampling of receiving water was carried out as during the compliance monitoring inspections of the site as no discharges were observed.

2.2 Air**2.2.1 Inspections**

Compliance monitoring inspections at the site found that flaring had been occurring, but that due to the positioning of the flare pit, no effects were noted. There were no objectionable or offensive odours, smoke or dust being discharged from the site on any occasion.

2.2.2 Results of discharge monitoring

No air discharge monitoring was undertaken at the Waimanu 1 wellsite, as discharges to air were carried out in accordance with resource consent conditions.

2.2.3 Results of receiving environment monitoring

No receiving environment monitoring was carried out, as discharges were carried in compliance with resource consent conditions.

2.2.3.1 Other ambient monitoring

No ambient air sampling was undertaken, as the controls implemented by Greymouth Petroleum did not give rise to any concerns in regard to air quality.

2.3 Land

2.3.1 Land status

The site has not been reinstated. All drilling equipment has been removed from the site. Operations were carried out at the site to assess the viability of the well.

2.4 Contingency plan

An updated contingency plan was received, reviewed and approved prior to commencement of drilling. It was received on 13 November 2009.

2.5 Register of incidents

The Taranaki Regional Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The Unauthorised Incident Register (UIR) includes events where the company concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

Incidents may be alleged to be associated with a particular site. If there is an issue of legal liability, the Council must be able to prove by investigation that the identified company is indeed the source of the incident. (or that the allegation cannot be proven).

In the period under review, there were no incidents recorded by the Council that were associated with the Waimanu 1 wellsite.

3. Discussion

3.1 Discussion of plant performance

Greymouth Petroleum Limited provided the following plans and information in compliance with the consents:

- contingency plan for accidental spillage or discharge;
- advice of drilling mud disposal;
- site layout plan; and
- notification of the various stages of activity, particularly flaring operations

Careful management on-site ensured that there were no effects to the environment. All staff co-operated and if any minor works were requested these were promptly carried out.

3.2 Environmental effects of exercise of consents

All stormwater was directed to the well constructed skimmer pits where any contaminants were separated before discharge. Small spills of drilling fluid to the ringdrain and first skimmer pit were cleaned up quickly to prevent contamination of the second skimmer pit.

There were no environmental effects to water as a result of the drilling.

No complaints were received during the exercise of these consents.

3.3 Evaluation of performance

A tabular summary of the Company's compliance record for the year under review is set out in Tables 1-7. There is no table for consent 7481-1 as drilling wastes were disposed of off-site to an approved area in the Auckland region and to the worm farm at Uruti.

Table 1 Summary of performance for Consent 7476-1 to install, place and maintain a structure in the coastal marine area (well casing)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option	Inspections of site and records	Yes
2. Map and survey direction and position of well casings	Inspections of records	Yes
3. Consent lapse	N/A	N/A
4. Review, amend, delete or add	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

N/A = not applicable

Table 2 Summary of performance for Consent 7477-1 to discharge treated stormwater and produced water

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option	Inspections of site and records	Yes
2. Stormwater catchment area	Inspections of site and records	Yes
3. Notify Council prior to works	Notification received	Yes
4. Contingency plan	Received, reviewed, and approved	Yes
5. Design, construction, management and maintenance of stormwater system	Inspections of site and records	Yes
6. All stormwater and produced water to be treated	Inspections of site	Yes
7. Hazardous substance storage	Inspections of site	Yes
8. Constituents in discharge	Inspections of records	Yes
9. Conductivity of soil layer containing discharge	Inspections of records	Yes
10. Sodium adsorption layer in soil containing discharge	Inspections of records	Yes
11. Concentrations in soil at surrender or expiry	Inspections of records	Yes
12. No direct discharge of contaminants	Inspections of site	Yes
13. Analysis of soil prior to discharge	Inspections of records	Yes
14. Records of discharge of produced water	Inspections of site and records	N/A
15. Management plan	received	Yes
16. Site reinstatement	Site not yet reinstated	N/A
17. Consent lapse	N/A	N/A
18. Review, amend, delete or add	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 3 Summary of performance for Consent 7478-1 to discharge stormwater and sediment during construction

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Construction to be as indicated in application	Inspections of site and records	Yes
2. Run-off from exposed areas of soil to be treated	Inspections if site	Yes
3. Notify Council prior to works	Notification received	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Earthwork areas to be stabilised vegetatively	Inspections of site	Yes
5. Consent lapse	N/A	N/A
6. Review, amend, delete or add	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 4 Summary of performance for Consent 7479-1 to discharge emissions to air from flaring (well clean up, initial testing and production testing)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on flaring allowed	Inspections of site	Yes
2. Flare pit location	Inspections of site	Yes
3. Flaring not to occur during airport activity	Inspections of site and records	Yes
4. Notify Council prior to flaring	Notifications received	Yes
5. Notify all residents prior to flaring	Undertook to notify	Yes
6. No alteration to plant process or equipment without consultation	No alterations	Yes
7. Regard for predicted and prevailing wind	Inspections of site and records	Yes
8. Treatment of gas to minimise smoke emissions	Inspections of site	Yes
9. Separation failure	Inspections of site and records	Yes
10. No liquid or solid hydrocarbons to be combusted	Inspections of site and records	Yes
11. Gas combusted to minimise smoke emissions	Inspections of site and records	Yes
12. Adopt best practicable option	Inspections of site	Yes
13. Only specified substances to be combusted	Inspections of site and records	Yes
14. No offensive odour or smoke at or beyond boundary	Inspections of site	Yes
15. Opacity of smoke emissions	Inspections of site	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
16. Control emissions of carbon monoxide	Inspections of records	Yes
17. Control emissions of nitrogen oxides	Inspections of records	Yes
18. Control other emissions to atmosphere	Inspections of records	Yes
19. Workplace exposure standards not exceeded	Inspections of records	Yes
20. Analysis of typical gas and condensate	Inspections of records	Yes
21. Records of all smoke emitting incidents	Inspections of records	Yes
22. Logs of all flaring	Inspections of records	Yes
23. Consent lapse	N/A	N/A
24. Review, amend, delete or add	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 5 Summary of performance for Consent 7480-1 to discharge emissions to air from flaring (emergency situations and miscellaneous emissions)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Notify Council prior to flaring	Notification received	Yes
2. Notify residents prior to flaring	Undertook to notify residents	Yes
3. No alteration to plant or equipment without prior consultation	No alterations	Yes
4. Regard for predicted and prevailing wind	Inspections of site	Yes
5. All gas flared must be treated	Inspections of records	Yes
6. Separation failure	Inspections of records	Yes
7. No liquid or solid hydrocarbons to be flared	Inspections of records	Yes
8. Adopt best practicable option	Inspections of site	Yes
9. Only specified substances to be combusted within the flare pit	Inspections of records	Yes
10. No offensive smoke or odour beyond boundary	Inspections of site and records	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
11. Permanent hydrocarbon storage vessels to be fitted with vapour recovery system	Inspections of site and records	Yes
12. Opacity of smoke emissions	Inspections of site	Yes
13. Control emissions of carbon monoxide	Inspections of records	Yes
14. Control emissions of nitrogen oxides	Inspections of records	Yes
15. Control all other emissions	Inspections of records	Yes
16. Workplace exposure standards not to be exceeded	Inspections of records	Yes
17. Analysis of typical gas and condensate stream	Inspections of records	Yes
18. Records all smoke emissions	Available upon request	Yes
19. Log of all flaring	Available upon request	Yes
20. Report detailing efficiency measures	No report received	No
21. Consent lapse	N/A	N/A
22. Review, amend, delete or add	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 6 Summary of performance for Consent 7482-1 to take groundwater (encountered as produced water)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Abstraction not to cause more than 10% lowering of static water level	Inspections of records	Yes
2. No intrusion of saltwater to freshwater	Inspections of records	Yes
3. Well log to 1000 metres	Well log to be provided to Council	No
4. Maintain abstraction records	Inspections of records	Yes
5. Consent lapse	N/A	N/A
6. Review, amend, delete or add to conditions	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		Good

Table 7 Summary of performance for Consent 7483-1 to take and divert produced water from an aquifer

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option	Inspections of site and records	Yes
2. Maintain abstraction records	Inspections of records	Yes
3. Abstraction not to cause 10% or more lowering of static water level	Inspections of records	Yes
4. No intrusion of saltwater into freshwater	Inspections of records	Yes
5. Consent lapse	N/A	N/A
6. Review, amend, delete or add	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		Good

The Company demonstrated a high level of environmental performance and compliance with the resource consents. During the period under review there were no incidents recorded by the Council in relation to operations at the Waimanu 1 wellsite. The site was well managed and generally neat and tidy at compliance monitoring inspections. The bunds, ringdrain and skimmer pits were well constructed. Any requests to undertaken maintenance or clean ups were carried out. Minor spills of drilling muds and fluids were cleaned up quickly preventing any off-site discharges.

4. Recommendations

1. THAT the current level of monitoring undertaken during exploratory drilling be continued for any future operations at the site; and
2. THAT this report be forwarded to the Company, and to any interested parties upon request; and
3. THAT the Company be asked to inform the Council of the intention to either drill, test or undertake reinstatement.

Glossary of common terms and abbreviations

The following abbreviations and terms that may have been used within this report:

Al*	aluminium
As*	arsenic
Biomonitoring	assessing the health of the environment using aquatic organisms
BOD	biochemical oxygen demand. A measure of the presence of degradable organic matter, taking into account the biological conversion of ammonia to nitrate
BODF	biochemical oxygen demand of a filtered sample
bund	a wall around a tank to contain its contents in the case of a leak
CBOD	carbonaceous biochemical oxygen demand. A measure of the presence of degradable organic matter, excluding the biological conversion of ammonia to nitrate
cfu	colony forming units. A measure of the concentration of bacteria usually expressed as per 100 millilitre sample
COD	chemical oxygen demand. A measure of the oxygen required to oxidise all matter in a sample by chemical reaction
Condy	conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m
Cu*	copper
Cumec	A volumetric measure of flow- 1 cubic metre per second (1 m ³ s ⁻¹)
DO	dissolved oxygen
DRP	dissolved reactive phosphorus
<i>E.coli</i>	<i>escherichia coli</i> , an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
Ent	enterococci, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre of sample
F	fluoride
FC	faecal coliforms, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
fresh	elevated flow in a stream, such as after heavy rainfall
g/m ³	grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures
l/s	litres per second
MCI	macroinvertebrate community index; a numerical indication of the state of biological life in a stream that takes into account the sensitivity of the taxa present to organic pollution in stony habitats
mS/m	millisiemens per metre
mixing zone	the zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point
NH ₄	ammonium, normally expressed in terms of the mass of nitrogen (N)

NH ₃	unionised ammonia, normally expressed in terms of the mass of nitrogen (N)
NO ₃	nitrate, normally expressed in terms of the mass of nitrogen (N)
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water
O&G	oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons)
Pb*	lead
pH	a numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5
Physicochemical	measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment
PM ₁₀	relatively fine airborne particles (less than 10 micrometre diameter)
Resource consent	refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15)
RMA	Resource Management Act 1991 and including all subsequent amendments
SS	suspended solids
SQMCI	semi quantitative macroinvertebrate community index
Temp	temperature, measured in °C (degrees Celsius)
Turb	turbidity, expressed in NTU
UI	Unauthorised Incident
UIR	Unauthorised Incident Register – contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan
Zn*	zinc

*an abbreviation for a metal or other analyte may be followed by the letters 'As', to denote the amount of metal recoverable in acidic conditions. This is taken as indicating the total amount of metal that might be solubilised under extreme environmental conditions. The abbreviation may alternatively be followed by the letter 'D', denoting the amount of the metal present in dissolved form rather than in particulate or solid form.

For further information on analytical methods, contact the Council's laboratory.

Appendix I

Resource consents held by Greymouth Petroleum Limited



Coastal Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: Greymouth Petroleum Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 25 June 2009

Conditions of Consent

Consent Granted: To install, place and maintain a structure in the coastal marine area [namely well casing from directional drilling from shore] at or about (NZTM) 1701906E-5682170N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Waimanu wellsite, Airport Drive, Bell Block

Legal Description: Pt Puketapu B3

Catchment: Tasman Sea

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

Consent 7476-1

General conditions

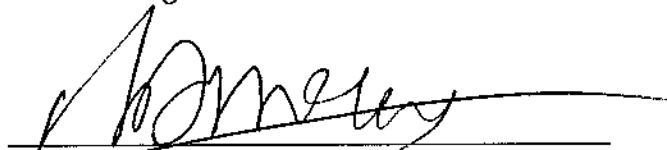
- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The consent holder shall map and survey the direction of drilling and position of well casings in relation to the sea bed within 90 days of the completion of their construction, and shall provide a copy of the plan showing the precise location [to within plus or minus 5 metres] of the structure[s] under the sea bed, to the Chief Executive, Taranaki Regional Council.
3. This consent shall lapse on 30 June 2014, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.
4. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 25 June 2009

For and on behalf of
Taranaki Regional Council



Director-Resource Management



**Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

CHIEF EXECUTIVE
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STRATFORD
NEW ZEALAND
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FAX: 06-765 5097
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Please quote our file number
on all correspondence

Name of
Consent Holder: Greymouth Petroleum Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 25 June 2009

Conditions of Consent

Consent Granted: To discharge treated stormwater and treated produced
water from hydrocarbon exploration and production
operations at the Waimanu wellsite onto and into land in
the vicinity of the Tasman Sea at or about (NZTM)
1701906E-5682170N

Expiry Date: 1 June 2026

Review Date(s): June 2010, June 2011, June 2012, June 2014, June 2020

Site Location: Waimanu wellsite, Airport Drive, Bell Block

Legal Description: Pt Puketapu B3

Catchment: Tasman Sea
Waiongana

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

Consent 7477-1

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of contaminants from the site.
2. Stormwater discharged shall be collected from a catchment area of no more than 18,000 m².
3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 7 days prior to any site works commencing, and again in writing at least 7 days prior to any well drilling operation commencing. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
4. The consent holder shall prepare and maintain a contingency plan that details measures and procedures to be undertaken that will, to the satisfaction of the Chief Executive, Taranaki Regional Council, prevent spillage or accidental discharge of contaminants not authorised by this consent and avoid, remedy or mitigate the environmental effects of such a spillage or discharge.
5. The design, construction, management and maintenance of the stormwater system shall be undertaken in accordance with Drawing No. 06455-03 supplied in support of applications 6242-6249.
6. All stormwater and produced water shall be directed for treatment through the stormwater treatment system before being discharged.
7. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not to the stormwater catchment.

8. Constituents in the discharge shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm ⁻³
total recoverable hydrocarbons	Concentration not greater than 15 gm ⁻³

This condition shall apply at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

9. The conductivity of the soil layer containing the discharge shall not exceed 400 mSm⁻¹ or 100 mSm⁻¹ above the background concentrations established prior to the exercise of this consent whichever is greater.
10. The sodium absorption ratio [SAR] of the soil layer containing the discharge shall be maintained at less than 18.0, or alternatively if the background soil SAR exceeds 18.0, the exercise of this consent shall not increase the SAR by more than 1.0 over the background concentrations established prior to the exercise of this consent.
11. At the time of expiry, cancellation, or surrender of this consent any soil sample taken from the disposal area shall meet the following standards: conductivity, not greater than 290 mSm⁻¹; total dissolved salts concentration, not greater than 2500 gm⁻³; sodium concentration, not greater than 460 gm⁻³; and chloride concentration, not greater than 700 gm⁻³.
12. The exercise of this consent shall not lead, or be liable to lead to a direct discharge of contaminants to a surface water body or the Tasman Sea.
13. Prior to the exercise of this consent the consent holder shall undertake an analysis of representative composite soil samples collected from the area of land where the discharge is to occur. Analyses shall be undertaken of conductivity, pH, total soluble salts, sodicity and chloride and the results shall be forwarded to the Chief Executive, Taranaki Regional Council.
14. Whenever produced water is discharged to land the consent holder shall keep records of the following:
- The results of analysis of a monthly representative sample of the composition of the treated produced water, which is being or will be discharged on the site [including pH level, electro-conductivity, Salinity, and concentration of total hydrocarbons];
 - volumes of treated produced water discharged directly to land; and
 - sampling, analysis and results of monitoring undertaken by the consent holder.

and shall forward these records to the Chief Executive, Taranaki Regional Council, on a quarterly basis, or as requested by the Council.

Consent 7477-1

15. Before discharging any produced water onto land, the consent holder shall prepare a management plan that, to the satisfaction of the Chief Executive, Taranaki Regional Council, demonstrates how the activity will be undertaken to comply with all of the conditions of this consent. The management plan shall be reviewed prior to the commencement of every new drilling programme or as requested by the Chief Executive, Taranaki Regional Council, and shall include as a minimum:
 - a. sampling regime
 - b. contingency procedures; and
 - c. site reinstatement and monitoring.
16. The consent holder shall advise the Chief Executive, Taranaki Regional Council, in writing at least 48 hours prior to the reinstatement of the site and the reinstatement shall be carried out so as to minimise effects on stormwater quality. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
17. This consent shall lapse on 30 June 2014, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.
18. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2010 and/or June 2011 and/or June 2012 and/or June 2014 and/or June 2020, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 25 June 2009

For and on behalf of
Taranaki Regional Council



Director-Resource Management



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Please quote our file number
on all correspondence

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Greymouth Petroleum Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 25 June 2009

Conditions of Consent

Consent Granted: To discharge stormwater and sediment from earthworks during construction of the Waimanu wellsite onto and into land in the vicinity of the Tasman Sea at or about (NZTM) 1701906E-5682170N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Waimanu wellsite, Airport Drive, Bell Block

Legal Description: Pt Puketapu B3

Catchment: Tasman Sea
Waiongana

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

www.trc.govt.nz

Doc# 624771-v1

Consent 7478-1

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.


Special conditions

1. The construction of the wellsite and access track shall be as indicated by Drawing No. 06455-02 and 06455-03 submitted in support of applications 6242-6249.
2. If any area of soil is exposed, all run off from that area shall pass through settlement ponds or sediment traps with a minimum total capacity of:
 - a) 100 cubic metres for every hectare of exposed soil between 1 November to 30 April; and
 - b) 200 cubic metres for every hectare of exposed soil between 1 May to 31 October;unless other sediment control measures that achieve an equivalent standard are agreed to by the Chief Executive of the Taranaki Regional Council.
3. At least 7 working days prior to the commencement of works the consent holder shall notify the Taranaki Regional Council of the proposed start date for the work. Notification shall include the consent number and a brief description of the activity consented and shall be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable only if the consent holder does not have access to email.
4. All earthwork areas shall be stabilised vegetatively or otherwise as soon as is practicable immediately following completion of soil disturbance activities.
5. This consent shall lapse on 30 June 2014, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 25 June 2009

For and on behalf of
Taranaki Regional Council



Director-Resource Management



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PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: Greymouth Petroleum Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 11 September 2009

Conditions of Consent

Consent Granted: To discharge emissions to air from flaring of hydrocarbons and miscellaneous emissions associated with well clean-up, initial well testing and production testing involving up to 3 wells at the Waimanu wellsite at or about (NZTM) 1701906E-5682170N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Waimanu wellsite, Airport Drive, Bell Block

Legal Description: Pt Puketapu B3

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

www.trc.govt.nz

Doc# 659975-v1

Working with people • Caring for our environment

Consent 7479-1

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

Exercise of consent

1. Flaring shall not occur on more than 45 days, cumulatively, per zone for each well [with a limit of 4 zones per well], for up to three wells.
2. The flare pit shall be located on the northernmost boundary of the site, as far from the New Plymouth Airport runway as possible.
3. As far as practicable, flaring shall not occur during times that airport activities are being undertaken.

Information and notification

4. The consent holder shall notify the Chief Executive, Taranaki Regional Council, at least 24 hours before the initial flaring of each zone being commenced. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.
5. At least 24 hours before any flaring, the consent holder shall provide notification to all residents within 1000 metres of the wellsite of the commencement of flaring. The consent holder shall include in the notification a 24-hour contact telephone number for a representative of the consent holder, and shall keep and make available to the Chief Executive, Taranaki Regional Council, a record of all queries and complaints received in respect of any flaring activity.
6. No alteration shall be made to plant equipment or processes which may substantially alter the nature or quantity of flare emissions or other wellsite emissions, including but not limited to the recovery of produced gas, other than as authorised by this consent, without prior consultation with the Chief Executive, Taranaki Regional Council.

Flaring

7. Other than for the maintenance of a pilot flare flame, the consent holder shall have regard to the prevailing and predicted wind speed and direction at the time of initiation of, and throughout, any episode of flaring so as to minimise offsite effects.
8. All gas that is flared during well clean-up, drill stem testing, initial testing, well workovers, or production testing, or at any other time, must first be treated by effective liquid and solid separation and recovery, to ensure that smoke emission during flaring is minimised.
9. If separation required by condition 8 cannot be implemented or maintained at any time while there is a flow from the well, whether natural or induced, then the consent holder shall immediately advise the Compliance Manager, Taranaki Regional Council, and shall in any case re-establish liquid separation and recovery within three hours.
10. Subject to special condition 9, no liquid or solid hydrocarbons shall be combusted through the gas flare system.
11. The gas shall be combusted so that emissions of smoke are minimised.
12. Notwithstanding any other condition of this consent the consent holder shall adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or potential effect on the environment arising from any emission to air from the flare or any other emissions to air from the Waimanu wellsite [including use of a separator during well clean-up].
13. Only substances originating from the well stream and treated as outlined by conditions 8, 9, 10, 11 and 12 shall be combusted within the flare pit.
14. There shall not be any offensive odour or smoke, as determined by an enforcement officer of the Taranaki Regional Council, at or beyond the boundary of the property where the wellsite is located.
15. The opacity of any smoke emissions shall not exceed a level of 1 as measured on the Ringelmann Scale.
16. The consent holder shall control all emissions of carbon monoxide to the atmosphere from the flare so that, whether alone or in conjunction with any other emissions from the wellsite, the maximum ground level concentration of carbon monoxide arising from the exercise of this consent measured under ambient conditions does not exceed 10 milligrams per cubic metre [mg/m^3] [eight-hour average exposure], or 30 mg/m^3 one-hour average exposure] at or beyond the boundary of the property where the wellsite is located.

Consent 7479-1

17. The consent holder shall control all emissions of nitrogen oxides to the atmosphere from the flare, so that whether alone or in conjunction with any other emissions from the wellsite, the maximum ground level concentration of nitrogen dioxide arising from the exercise of this consent measured under ambient conditions does not exceed 100 micrograms per cubic metre [$\mu\text{g}/\text{m}^3$] [24-hour average exposure], or 200 $\mu\text{g}/\text{m}^3$ [1-hour average exposure] at or beyond the boundary of the property where the wellsite is located.
18. The consent holder shall control emissions to the atmosphere, from the production station and flare, of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides so that, whether alone or in conjunction with any other emissions from the production station, is not hazardous or toxic or noxious at or beyond the boundary of the property.
19. The consent holder shall control emissions to the atmosphere from the wellsite and flare of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides, so that whether alone or in conjunction with any emissions from the flare, the maximum ground level concentration for any particular contaminant arising from the exercise of this consent measured at or beyond the boundary of the property where the wellsite is located, is not increased above background levels:
 - a) by more than 1/30th of the relevant Occupational Threshold Value-Time Weighted Average, or by more than the Short Term Exposure Limit at any time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour]; or
 - b) if no Short Term Exposure Limit is set, by more than three times the Time Weighted Average at any time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour].

Recording and reporting information

20. The consent holder shall make available to the Chief Executive, Taranaki Regional Council, upon request, an analysis of a typical gas and condensate stream from the field, covering sulphur compound content and the content of carbon compounds of structure C₆ or higher number of compounds.
21. Each time there is visible smoke as a result of the exercise of this consent, the consent holder shall record the time, duration and cause. The consent holder shall make the record available to the Chief Executive, Taranaki Regional Council, upon request.
22. The consent holder shall record and make available to the Chief Executive, Taranaki Regional Council, logs of all flaring, including time, duration, zone, and volumes of substances flared.

Lapse and Review

23. This consent shall lapse on 30 September 2014, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 7479-1

24. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020, for any of the following purposes:
- a) dealing with any significant adverse effect on the environment arising from the exercise of the consent which was not foreseen at the time the application was considered or which it was not appropriate to deal with at the time;
 - b) requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment caused by the discharge;
 - c) to alter, add or delete limits on mass discharge quantities or discharge or ambient concentrations of any contaminant;
 - d) taking into account any Act of Parliament, regulation, national policy statement or national environmental standard which relates to limiting, recording, or mitigating emissions of gases which are products of combustion, and which is relevant to the air discharge from the Waimanu wellsite.

Signed at Stratford on 11 September 2009

For and on behalf of
Taranaki Regional Council



Director-Resource Management



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Please quote our file number
on all correspondence

**Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

Name of
Consent Holder: Greymouth Petroleum Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 30 July 2009

Conditions of Consent

Consent Granted: To discharge emissions to air during flaring from well workovers and in emergency situations and miscellaneous emissions associated with production activities at the Waimanu wellsite at or about (NZTM) 1701906E-5682170N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020 and/or within six months of receiving a report prepared by the consent holder pursuant to condition 20

Site Location: Waimanu wellsite, Airport Drive, Bell Block

Legal Description: Pt Puketapu B3

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall notify the Chief Executive, Taranaki Regional Council, whenever the continuous flaring of hydrocarbons [other than purge gas] is expected to occur for more than five minutes in duration. Notification shall be no less than 24 hours before the flaring commences. Notification shall include the consent number and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
2. At least 24 hours before any flaring, other than in emergencies, the consent holder shall provide notification to all residents within 1000 metres of the site of the commencement of flaring. The consent holder shall include in the notification a 24-hour contact telephone number for a representative of the consent holder, and shall keep and make available to the Chief Executive, Taranaki Regional Council, a record of all queries and complaints received in respect of any flaring activity.
3. No alteration shall be made to plant equipment or processes which may substantially alter the nature or quantity of flare emissions or other site emissions, including but not limited to the recovery of produced gas, other than as authorised by this consent, without prior consultation with the Chief Executive, Taranaki Regional Council.

Emissions from the site

4. Other than for the maintenance of a pilot flare flame, the consent holder shall have regard to the prevailing and predicted wind speed and direction at the time of initiation of, and throughout, any episode of flaring so as to minimise offsite effects.
5. All gas that is flared must first be treated by effective liquid and solid separation and recovery to ensure that smoke emission during flaring is minimised.

Consent 7480-1

6. If separation required by special condition 5 cannot be implemented or maintained at any time while there is a flow from the well, whether natural or induced, then the consent holder shall immediately advise the Compliance Manager, Taranaki Regional Council, and shall in any case re-establish liquid and solid separation and recovery within three hours.
7. Subject to special condition 6, no liquid or solid hydrocarbons shall be combusted through the gas flare system, other than in an emergency.
8. The consent holder shall adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or potential effect on the environment arising from any emission to air from the flare or any other emissions to air from the Waimanu wellsite [including use of a separator during well clean-up].
9. Only substances originating from the well stream and treated as outlined by conditions 5, 6, 7, and 8 shall be combusted within the flare pit.
10. There shall not be any offensive odour or smoke at or beyond the boundary of the property where the wellsite is located.
11. All permanent hydrocarbon storage vessels shall be fitted with vapour recovery systems.
12. The opacity of any smoke emissions shall not exceed a level of 1 as measured on the Ringelmann Scale.
13. The consent holder shall control all emissions of carbon monoxide to the atmosphere from the flare so that, whether alone or in conjunction with any other emissions from the wellsite, the maximum ground level concentration of carbon monoxide arising from the exercise of this consent measured under ambient conditions does not exceed 10 milligrams per cubic metre [mg/m^3] [eight-hour average exposure], or 30 mg/m^3 one-hour average exposure] at or beyond the boundary of the property where the wellsite is located.
14. The consent holder shall control all emissions of nitrogen oxides to the atmosphere from the flare so that, whether alone or in conjunction with any other emissions from the wellsite, the maximum ground level concentration of nitrogen dioxide arising from the exercise of this consent measured under ambient conditions does not exceed 100 micrograms per cubic metre [$\mu\text{g}/\text{m}^3$] [24-hour average exposure], or 200 $\mu\text{g}/\text{m}^3$ [1-hour average exposure] at or beyond the boundary of the of the property where the wellsite is located.
15. The consent holder shall control emissions to the atmosphere, from the production station and flare, of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides so that, whether alone or in conjunction with any other emissions from the production station, is not hazardous or toxic or noxious at or beyond the boundary of the property.

Consent 7480-1

16. The consent holder shall control emissions to the atmosphere from the wellsite and flare of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides so that, whether alone or in conjunction with any emissions from the flare, the maximum ground level concentration for any particular contaminant arising from the exercise of this consent measured at or beyond the boundary of the property where the wellsite is located, is not increased above background levels:
- a) by more than 1/30th of the relevant Occupational Threshold Value-Time Weighted Average, or by more than the Short Term Exposure Limit at any time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour]; or
 - b) if no Short Term Exposure Limit is set, by more than three times the Time Weighted Average at any time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour].

Recording and reporting information

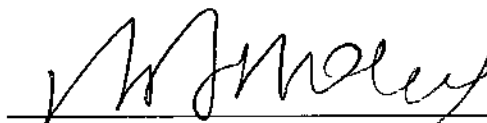
17. The consent holder shall make available to the Chief Executive, Taranaki Regional Council, upon request, an analysis of a typical gas and condensate stream from the field, covering sulphur compound content and the content of carbon compounds of structure C₆ or higher number of compounds.
18. Each time there is visible smoke as a result of the exercise of this consent, the consent holder shall record the time, duration and cause. The consent holder shall make the record available to the Chief Executive, Taranaki Regional Council, upon request.
19. The consent holder shall record and maintain a log of all continuous flaring events longer than five minutes duration, and any intermittent flaring lasting for an aggregate of ten minutes or longer in any 120-minute period. The log shall contain the date, the start and finish times of the flaring event, the quantity and type of material flared, and the reason for flaring. The log shall be made available to the Chief Executive, Taranaki Regional Council, upon request, and summarised annually in the report required under condition 20.
20. The consent holder shall provide to the Taranaki Regional Council during May of each year, for the duration of this consent, a report:
- i) detailing any energy efficiency measures implemented on the site;
 - ii) detailing smoke emissions as required under condition 18;
 - iii) detailing any measures undertaken or proposed to reduce smoke emissions;
 - iv) detailing any measures undertaken or proposed to reduce flaring;
 - v) addressing any other issue relevant to the minimisation or mitigation of emissions from the flare;
 - vi) detailing any complaints received and any measures undertaken to address complaints; and

Lapse and Review

21. This consent shall lapse on 30 June 2019, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.
22. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent within six months of receiving a report prepared by the consent holder pursuant to condition 20 of this consent, and/or by giving notice of review during the month of June 2014 and/or June 2020, for any of the following purposes:
 - a) dealing with any significant adverse effect on the environment arising from the exercise of the consent which was not foreseen at the time the application was considered or which it was not appropriate to deal with at the time;
 - b) requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment caused by the discharge;
 - c) to alter, add or delete limits on mass discharge quantities or discharge or ambient concentrations of any contaminant;
 - d) taking into account any Act of Parliament, regulation, national policy statement or national environmental standard which relates to limiting, recording, or mitigating emissions of gases which are products of combustion, and which is relevant to the air discharge from the Waimanu wellsite.

Signed at Stratford on 30 July 2009

For and on behalf of
Taranaki Regional Council



Director-Resource Management



Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

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Please quote our file number
on all correspondence

Name of
Consent Holder: Greymouth Petroleum Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 25 June 2009

Conditions of Consent

Consent Granted: To take groundwater that may be encountered as
produced water during hydrocarbon exploration and
production operations at the Waimanu wellsite at or about
(NZTM) 1701906E-5682170N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Waimanu wellsite, Airport Drive, Bell Block

Legal Description: Pt Puketapu B3

Catchment: Tasman Sea
Waiongana

Consent 7482-1

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

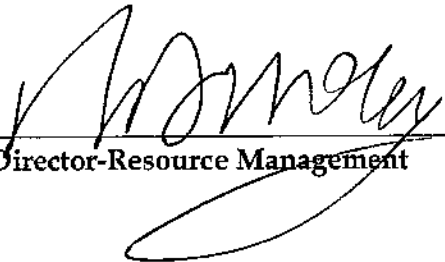
1. The consent holder shall ensure the abstraction does not cause more than a 10% lowering of static water-level by interference with any adjacent bore.
2. The consent holder shall ensure the abstraction does not cause the intrusion of salt water into any freshwater aquifer.
3. The consent holder shall submit, to the written satisfaction of the Chief Executive, Taranaki Regional Council, a summary well log to a depth of 1000 metres. The report shall:
 - a) provide a log to show the true vertical depth to all geological formation tops intersected within the freshwater zone;
 - b) identify the true vertical depth to, and thickness of, any freshwater aquifers intersected by the well.
4. The consent holder shall maintain records of abstraction including date, volume of groundwater abstracted per day, and shall make these records available to the Chief Executive, Taranaki Regional Council, upon request.
5. This consent shall lapse on 30 June 2014, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 7482-1

6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 25 June 2009

For and on behalf of
Taranaki Regional Council



Director-Resource Management



**Coastal Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

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Please quote our file number
on all correspondence

Name of
Consent Holder: Greymouth Petroleum Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 25 June 2009

Conditions of Consent

Consent Granted: To take and divert produced water from an aquifer in the
coastal marine area associated with well drilling activities
at the Waimanu wellsite at or about (NZTM)
1701906E-5682170N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Waimanu wellsite, Airport Drive, Bell Block

Legal Description: Pt Puketapu B3

Catchment: Tasman Sea

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

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Doc# 624999-v1

Consent 7483-1

General conditions

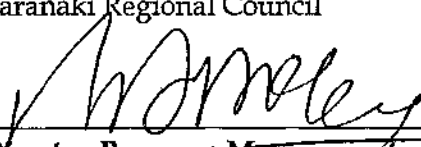
- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The consent holder shall maintain records of abstraction including date, volume of groundwater abstracted per day, and shall make these records available to the Chief Executive, Taranaki Regional Council, upon request.
3. The consent holder shall ensure the abstraction does not cause more than a 10% lowering of static water-level by interference with any adjacent bore.
4. The consent holder shall ensure the abstraction does not cause the intrusion of salt water into any freshwater aquifer.
5. This consent shall lapse on 30 June 2014, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.
6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 25 June 2009

For and on behalf of
Taranaki Regional Council


Director-Resource Management

