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1. Introduction

The Department of Natural Resources, Mines and Energy (DNRME) requires all reports to be lodged in digital form through QDEX (Queensland Digital Exploration reports system). QDEX has been designed to make reporting a quick and straightforward process. All resource authority reporting must be lodged through QDEX, except for aerial geophysical survey data, which should be submitted separately to Geophysics@dnrme.qld.gov.au.

Reports about exploration and production activity form a vital part of the database DNRME maintains and makes publicly available. QDEX not only facilitates the submission of reports digitally, but also makes access to them much easier.

Reports must meet the standards for content and file formats for the type of report that are set out in this guideline or in either the Petroleum Reporting Guideline or Mineral and Coal Reporting Guideline. The standards are established to ensure that subsequent explorers can use the reports to assess prospects for mineral or hydrocarbon discovery, and are not forced into unnecessary expenditure to repeat investigations because they have been inadequately documented.

Adherence to these requirements will contribute to the development of comprehensive national databases of mineral and hydrocarbon prospects. Report assessment will be simplified, and the standards will ensure that data can be stored and maintained for their future availability.

Please note all reports lodged and submitted must be in English.

Reports that do not meet these standards will not be accepted.

2. Confidentiality

All reports become publicly available ('open file') via QDEX once any specified period of confidentiality expires. This varies with the type of report and tenure, and whether there are subsequent tenures for the same area.

Reports and data are required for DNRME to build up comprehensive databases of exploration and production data, and make those databases available to the minerals, coal, petroleum, geothermal and greenhouse gas industries. Refer to the reporting tables in section 8 for the lodgement and confidentiality periods for each Resource Act.
3. Submitting Reports

Generally, all reports must be submitted via the QDEX system. Report content and sequence should follow those stated in the Mineral and Coal Reporting Guideline for mineral and coal related reports.

Petroleum and gas related reports should follow the Petroleum and Gas Reporting Guideline and section 8 of this guideline.

The report content and sequence for geothermal reports is found in section 9 of the guideline, and in section 10 for greenhouse gas reports.

QDEX allows reports to be submitted via the web interface if all the files forming the report components are less than 100mb each in size. Where a whole report is no more than a total of 100mb in size it can be submitted as a single PDF file incorporating embedded tables, plans and images.

If all the files forming the report components are greater than 100mb in size, the report must be broken down into files that are not greater than 100mb and must be submitted, via digital media.

Exceptions are large volumes of data (for example, seismic and other raw geophysical survey data). If file size precludes lodgement via QDEX, other appropriate media may be used, with preference to DVD or IBM 3590 tapes for seismic data.

Raw geophysical data (for example, wireline logs, seismic, airborne geophysics) is not lodged through QDEX; this is sent to the Geological Survey of Queensland (GSQ) or the Exploration Data Centre (EDC). Addresses for these two centres are available from the DNRME website at: https://www.dnrme.qld.gov.au/?contact=gsq.

Metadata describing the content and components of the report are entered via the QDEX web interface. Keywords, which are used to retrieve reports, can be added at this stage. A separate Lodgers’ User Guide is available to registered QDEX users under the QDEX ‘Help’ menu.

Small companies or individual exploration permit holders may not have ready access to the internet; possibly because the holder does not own a computer, or because the remoteness of the exploration permit prevents the holder from accessing the internet while exploring.

In such circumstances, the holder may apply to the DNRME chief executive for approval to lodge hard copy reports BEFORE the due date of the report and BEFORE the report is submitted. The holder must state the reasons for not being able to submit the report via QDEX. It is the department’s preference that all reports, where possible, be submitted via the QDEX system.

4. Digital Reports

The file formats for submission of reports and associated data are substantially those agreed to by the Government Geoscience Information Policy Advisory Committee (GGIPAC) and adopted by all States and Territories.

Report components (as opposed to associated data) must be submitted in the following formats:
4.1 Report component formats

Table 1 – Report component formats

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
<th>Format</th>
<th>Parameter</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>Includes documents, figures etc. normally provided in hardcopy</td>
<td>PDF#</td>
<td>Normal, embedded fonts, no security</td>
<td>.pdf</td>
</tr>
<tr>
<td>Tabular data*</td>
<td>Geochemistry, drill log data and surveying data</td>
<td>Delimited</td>
<td>Preferably TAB delimited</td>
<td>.txt</td>
</tr>
<tr>
<td>Spatial information</td>
<td>GIS file format</td>
<td>SHP TAB</td>
<td></td>
<td>.shp .tab</td>
</tr>
<tr>
<td>Maps, plans and figures</td>
<td>Geological maps, geochemical sample location maps, figures etc.</td>
<td>TIFF</td>
<td>TIFF- Monochrome (1bit) CCITT Group 4 format</td>
<td>.tif</td>
</tr>
<tr>
<td>Photographs (not included</td>
<td>Core photographs, aerial photographs etc.</td>
<td>JPEG</td>
<td>JPEG - True colour 24bit with a quality factor of around 90</td>
<td>.jpg</td>
</tr>
<tr>
<td>included in text)</td>
<td></td>
<td>PDF#</td>
<td></td>
<td>.pdf</td>
</tr>
</tbody>
</table>

#PDF files should be created from the original plot file where possible and a scaling factor included for plots greater than 1143mm in length. See separate Company report creation guide for guidance on creating PDF files (see ‘Help’ tab on QDEX home page).

*Where several related database files cover one theme (e.g. surveying data, drill logs, geochemistry, look-up tables etc.) please contact QdexSupport@dnrme.qld.gov.au for advice.

4.2 Text

The text component of the report should be provided in Adobe Acrobat Portable Document Format (PDF). This should include the title page, contents list, summary, introduction, body of text, results, conclusions, references and any embedded figures and tables.

The entire report can be submitted as a single PDF file if file size <100Mb and data types permit.

4.3 Tabular data

Tabular data (essentially point related data) should be submitted as tab delimited (preferred) or comma delimited American Standard Code for Integer Interchange (ASCII) files.

4.4 Spatial information

Spatial data must be provided in a standard GIS file format such as ESRI shape (*.SHP) file format or MapInfo tab (*.TAB) file format. Data may comprise linear, point, or polygonal features in GDA94 or GDA2020 datum with the projection and zone specified. The file must include metadata to describe its context, key attributes, and identity. Where files are composite sets all associated files must be submitted (e.g. shape files must be submitted as a *.SHP, *.SHX, *.DBF, *PRJ, and *XML file set as a minimum).

Maps and plans should be submitted as PDF, Joint Photographic Group (JPEG or JPG) or Tagged Image File (TIFF or TIF) files. Smaller graphics embedded in the text of the report can be included in the text PDF file. The colour and spatial data of the original map or plan should be maintained. Resolution should be 300 dpi or better.
Larger maps and plans should be submitted as JPEG or TIFF files. TIFF is preferred for line work; JPEG for work with subtle gradations of colour or shade.

TIFF files must be Monochrome (1bit) CCITT Group 4 format not striped TIFFS or 2d fax or any other type of TIFF image. If they are scanned they should be scanned at only 300 dpi.

JPG files are most commonly used for colour images and must be 300 dpi or better. JPEG files must be in the file format ‘JPEG File Interchange Format’ ‘True Colour 24bit’ with a JPEG Quality Factor of around 90.

4.5 Other data types

It is recognised that there are data types that will be associated with reports for which other formats other than PDF will be more appropriate. Data in the formats listed below will be accepted for submission to QDEX in a Zip file format (.zip) and associated with the component type called ‘Geoscience Data’. These other data types must not be used to replace the reporting, map and figure creation requirements. Zip files are not to be used for joining several PDF files (figures) in lieu of submitting them in separate components.

<table>
<thead>
<tr>
<th>Table 2 – Other Data types</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Type</strong></td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Geo-referenced polygons lines and points (primary datasets)</td>
</tr>
<tr>
<td>Geo-referenced polygons lines and points (derived datasets)</td>
</tr>
<tr>
<td>Geophysical Data (other than seismic)</td>
</tr>
<tr>
<td>Geophysical and other remotely sensed images</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Seismic data</td>
</tr>
<tr>
<td>Data Type</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Navigation data</td>
</tr>
<tr>
<td>Processed sections</td>
</tr>
</tbody>
</table>

Petrophysical and geophysical log data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Accepted File Formats</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
<td></td>
<td>DLIS</td>
<td>As defined by latest industry standard</td>
</tr>
<tr>
<td></td>
<td>Raw and processed wireline and MWD data</td>
<td>LIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LAS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASCII</td>
<td></td>
</tr>
<tr>
<td>Log plots &lt; A1 in physical length at full scale</td>
<td>PDF*</td>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Log plots &gt; A1 in physical length at full scale</td>
<td>PDF*</td>
<td>With scaling factor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GEOTIFF (colour)</td>
<td>300 dpi, 24 bit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>JPEG (Georeferenced)</td>
<td>300 dpi, Q=95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GIF</td>
<td>8 bit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EPS</td>
<td></td>
</tr>
<tr>
<td>Down-hole velocity data</td>
<td>Processed down-hole velocity data</td>
<td>SEG Y files</td>
<td></td>
</tr>
</tbody>
</table>

*PDF files should be created from the original plot file where possible and a scaling factor included for plots greater than 1143 mm in length.

#Where several related GIS files cover one project area, files should be submitted in a zip file containing all relevant files. ArcView project (.apr) and MapInfo project (.wor) files along with all related GIS files should be submitted in the zip file. Project files (.apr and .wor) should point to data sets on a relative path basis.

4.6 Naming of files

Files to be lodged in QDEX must not contain full stops, quotes or non-alphabetic characters.

For example this is an invalid file name:

geochemical.data “big one prospect” and drilling.pdf

The recommended file name would be:

geochem data big one prospect.pdf

It is good practice to keep file names all in lower case and short.

File names are assigned automatically by QDEX during the submission process. Where a report is to be submitted on portable media, via the off-line lodgement process, a list of the file names to be used will be provided as an attachment to an email at the completion of the on-line submission session. This file (named packing_slipxxxxx.txt) MUST accompany the report as a separate file on the digital media if you are using the off-line lodgement process in QDEX. You must rename all the files to conform to the naming convention defined in this ‘packing_slip’ before creating the digital media and sending to the Department. If you choose to follow the on-line lodgement process this file is not necessary and file renaming is not required.

Queensland Digital Exploration Reports System Reporting Guideline
Department of Natural Resources, Mines and Energy
September 2019
Version 9.00
4.7 Sending a digital media or hard copy of report

If you are lodging the report via the offline option available in QDEX, you will first need to complete the metadata record in QDEX and then copy the files, plus the ‘packing slip’ automatically emailed to you by QDEX, onto the digital media.

When the digital media has been prepared mail it to:
QDEX Support
Operations Support
Department of Natural Resources, Mines and Energy
PO Box 15216
City East QLD 4002 Australia

If the chief executive has approved for you to lodge a hard copy of a report, the report must also be mailed to the above address.

5. Publication of reports and data

Once any confidentiality period expires, DNRME may publish reports and data as follows:

- in a journal published by the department or under the Minister's authority
- in another publication considered appropriate by the chief executive
- on the DNRME web site on the internet
- in a publicly available database
- on a map that is made available to the public for inspection or purchase
- in digital or electronic form, including, for example, on a disc or tape
- by displaying it on a notice that is available to the public for inspection at:
  - the head office of DNRME
  - other places the chief executive considers appropriate
- by telling it to another person or presenting it to the person in a visual form.

6. Presentation of Maps and Plans

All maps, plans and illustrations must:

- use standard scales (1:500, 1:1 000, 1:2 000, 1:10 000, 1:25 000, 1:50 000,1:100 000)
- give an adequate legend, which must also show a reference including tenure number, tenure holder, and date
- show the Map Grid of Australia (MGA) (datum must be specified) and sufficient base information (i.e. geographic features) to relate the map to standard topographic maps
- large-scale maps must show local topographic and cultural features (homesteads, mine workings, prospects, bores, roads, peaks, names of streams, datum points, drill sites). Prospect or anomaly survey grids on small scale maps must be clearly related to such identifiable features
- show a north point (grid/true/magnetic north)
- show a graphic scale bar in metric units
- use metric measurements throughout
- have all rock units clearly annotated with industry standardised symbols and include a clear and comprehensive legend.
An index map (1:50 000 or 1:100 000) must be included to show the relation of all plans to each other and the tenure boundary, and the location and boundaries of the various exploration activities that are included in the report.

Plans and maps compiled from aerial photographs must state full details (for example, photo, run survey number etc).

In the event that any multi-client data used is protected by copyright laws that prevent inclusion of contour maps or imaged prints, a detailed interpretation plan must be submitted. Multi-client data are those which:

- are initiated as a non-exploration commercial enterprise
- are owned by a third party who has no exploration tenure; or
- result from a project advertised/marketed before flying as multi-client data,
- on termination of tenure, any additional data including navigational data/location data (e.g. photo mosaics with flight lines, aerial photos) may be required.

The results of downhole logging and supporting information are to be included with drilling data (see Section 7.4.5.4 Drilling Data).

If contractor’s reports giving the required details are to be submitted, these must be included as appendices to the report.

7. Common Reporting Contents

The following requirements must be included for every report type.

7.1 Title Page

All reports must include a title page containing the following information:

- report title with reference to:
  - resource authority type and number;
  - project name (if any);
  - report type;
  - reporting period.
- author(s)
- resource authority holder
- submitter of report
- date of report (DD MM YYYY) format.

7.2 Contents list

A contents list should be included that shows the structure of the report and lists all figures, appendices, loose plans etc.

7.3 Summary or abstract

A summary or abstract must be provided, which indicates metals/minerals/deposit type sought, main methods used, areas of interest, results and conclusions.

7.4 Introduction

The following information must be provided in an introduction to the report:
• tenure information - including date of grant, term and other important dates, joint venture arrangements and tenure assignments (if any) etc.
• for exploration permits, blocks and sub-blocks included in the tenure
• location map at 1:100 000 or larger scale, showing Map Grid of Australia (MGA) standard map sheet reference and major topographic and geographic features
• a general description of the area and access
• exploration rationale, the program undertaken and the exploration methods used
• results of literature searches.

7.5 Body of report
Report content is defined in sections 8.1, 9.1 or 10.1 of this document for each report type. Refer to the relevant report type to determine the type of information required to form the body of the report. If the report requires geological or geophysical data refer to sections 7.5.1 and 7.5.2.

7.5.1 Geological Data
Geological information including regional setting and results of geological mapping must be described. Geological maps must be clearly identified as either ‘fact’ maps or ‘interpretative’ maps. Data formats are defined in section 4.5 above.

All geological maps must be line drawings with graphical or alphabetical symbols for rock units and must show geographic features, local grid lines and the MGA. The datum must be specified.

Where a complicated system of abbreviations is used on geological ‘fact’ maps, an index must be included in the report. All maps must have a legend.

Geological information used on maps and in the text that is not the result of original work must be acknowledged.

Petrological descriptions must be appended to the report and sample locations shown on appropriate plans (or listed in drilling logs) or indicated by local grid co-ordinates and MGA or latitudes and longitudes. The datum must be specified.

7.5.2 Geophysical Data
Data formats are defined in section 4.5 above.

Geophysical data consists of three types:
• airborne surveys
• ground-based surveys; and
• down-hole surveys.

Geophysical data from these three types consists of:
• raw and processed located data (digital data)
• gridded data and images; and
• interpreted results (written report).

Reports of geophysical surveys, including results and interpretations of all geophysical surveys, are to be included as part of the standard reports, and must include:
• reference to the lodgement of the proforma and digital data, including date of submission
• an A4 or A3 plan showing the location of the survey (preferably on the standard 1:250 000 sheet)
• flight lines, traverse lines and stations presented on maps showing:
• MGA (datum specified) and geographic features (this data must be located and numbered at a reasonable scale, preferably on standard 1:25 000, 1:100 000 or 1:250 000 sheets); and
• significant cultural features which may affect the results (e.g. power lines).
• specifications of the survey including type and date of survey and survey parameters. Airborne geophysical survey specifications must include contractor, date flown, line orientation, line spacing, tie line spacing, mean height of terrain clearance, parameters recorded, instruments used etc.
• type and specification of all instruments/equipment used during the survey including:
  − type, design, power, unit of measurement, accuracy and mode of recording data (i.e. analogue or digital); and
  − any data recorded on terrain conditions, nature of ground, quality of electrical contacts, extent of drifts (these are provided so that another operator can extend or reinterpret the survey).
• a data acquisition report detailing the operations carried out and any processing
• text descriptions defining what constitutes an anomaly over background, and relating anomalies to geochemistry, geology and the results of drilling
• plans or sections showing processed data and interpretation at the same scales as the geological and geochemical plans
• for ground geophysical surveys, located (or reduced basic) data, with adequate ties to MGA tabulated in appendices. **The datum must be specified.** (Located data and field data, which have been processed to the stage where physical parameter values have readily perceived geographical locations)
• gravity data must include the station number, MGA co-ordinates (**specify datum**), AHD elevation, absolute observed gravity (**specify datum**), terrain correction, and must specify the methods and parameters used to calculate the Bouguer anomalies.

7.6. Bibliography
All reports should include a bibliography of other work, earlier reports cited etc.

7.7 Appendices
Include appendices as appropriate for the report type to provide the raw data or interpretations.

8. Reporting for Petroleum Resource Authorities
The type and frequency of statutory requirements for reporting, data submission and operational notification for ATPs, PLs and other petroleum authorities and licences are detailed in Part 3 of the Petroleum and Gas (General Provisions) Regulation 2017 (the Regulation). The provisions in each are essentially the same. What follows relates primarily to reports that are added to the QDEX database, although other reports may be required by the Regulation. Some petroleum and gas (P&G) reports are contained in the Petroleum and Gas Reporting Guideline, with the remaining P&G report requirements contained in this guideline. Refer to the table below.

**NOTE** that what follows is simplified and abbreviated from the relevant sections of the petroleum legislation and is intended as a guide only. If in any doubt as to meaning, refer to the legislation.
<table>
<thead>
<tr>
<th>Report Type</th>
<th>Relevant Provision:</th>
<th>Lodgement Due Date</th>
<th>Open Filing Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relinquishment Reports</td>
<td>Petroleum and Gas (General Provisions) Regulation 2017</td>
<td>Within six months after relinquishment</td>
<td>Immediately</td>
</tr>
<tr>
<td>Authority to Prospect</td>
<td>Petroleum and Gas (Production and Safety) Act 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relinquishment Reports</td>
<td>Section 21 - Regulation</td>
<td>Within six months after relinquishment</td>
<td>Immediately</td>
</tr>
<tr>
<td>Petroleum Lease</td>
<td>Section 545(b) - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relinquishment Reports</td>
<td>Section 22 - Regulation</td>
<td>Within six months after relinquishment</td>
<td>Immediately</td>
</tr>
<tr>
<td>Petroleum Lease</td>
<td>Section 545(b) - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of Authority report</td>
<td>Section 26 - Regulation</td>
<td>Within six months of end of authority/licence</td>
<td>Immediately</td>
</tr>
<tr>
<td>Data acquisition authority or survey licence</td>
<td>Section 546A(2) - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of Tenure report</td>
<td>Section 25 - Regulation</td>
<td>Six months after the tenure/authority ends</td>
<td>Immediately</td>
</tr>
<tr>
<td>Section 546 - Act</td>
<td>Within six months after each of its anniversary days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Reports</td>
<td>Section 13 - Regulation</td>
<td>Within two months after each of its anniversary days</td>
<td>Five years after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Petroleum Facility Licence</td>
<td>Section 552(2) - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Reports</td>
<td>Section 552(2) - Act</td>
<td>Within two months after each of its anniversary days</td>
<td>Five years after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Pipeline Licence</td>
<td>Section 13 - Regulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Reports</td>
<td>Section 552(2) - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petroleum Lease</td>
<td>Section 552A - Act</td>
<td>On or before 1 September each year</td>
<td>Five years after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Infrastructure Report</td>
<td>Section 552A - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surrender Reports</td>
<td>Section 552A - Act</td>
<td>Accompany surrender application for ATP administered under the Petroleum Act 1923</td>
<td>Immediately</td>
</tr>
<tr>
<td>Authority to Prospect</td>
<td>Section 21 - Regulation</td>
<td>“An authority to prospect cannot be surrendered”</td>
<td></td>
</tr>
<tr>
<td>Surrender Reports</td>
<td>Section 21 - Regulation</td>
<td>Accompany surrender application</td>
<td>Immediately</td>
</tr>
<tr>
<td>Petroleum Lease</td>
<td>Section 576(2) - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Note that a ‘surrender’ report for a petroleum lease that was administered under the Petroleum Act 1923, is an end of tenure report.</td>
<td>Accompany surrender application</td>
<td>Immediately</td>
<td></td>
</tr>
<tr>
<td>Surrender Reports</td>
<td>Section 23 - Regulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipeline Licence</td>
<td>Section 576(2) - Act</td>
<td>Accompany surrender application</td>
<td>Immediately</td>
</tr>
</tbody>
</table>

For information about lodging the following reports – refer to the P&G Reporting Guideline 2018
<table>
<thead>
<tr>
<th>Report Type</th>
<th>Relevant Provision:</th>
<th>Lodgement Due Date</th>
<th>Open Filing Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Drilling Reports</td>
<td>Petroleum and Gas (General Provisions) Regulation 2017 Petroleum and Gas (Production and Safety) Act 2004</td>
<td>A copy of each daily drilling report must be lodged with the petroleum well or bore completion report lodged for the well.</td>
<td>For appraisal and exploration wells: two years after the day on which the report is required to be lodged For development well: five years after the day on which the report is required to be lodged</td>
</tr>
<tr>
<td>Note: It is no longer a requirement to lodge the daily drilling reports on a daily basis, however, the daily drilling reports for each well must be included in the relevant WCR as an appendix.)</td>
<td>Section 35 - Regulation</td>
<td>Within six months after the rig release day for the well or bore</td>
<td></td>
</tr>
<tr>
<td>Well Completion Reports</td>
<td>Section 36 - Regulation</td>
<td>Within six months after the rig release day for the well or bore</td>
<td>For appraisal and exploration wells: two years after the day on which the report is required to be lodged For development well: five years after the day on which the report is required to be lodged</td>
</tr>
<tr>
<td>Well/Bore Abandonment Reports</td>
<td>Section 37 - Regulation</td>
<td>Report must be lodged within two months after the day the plugging and abandoning of the well or bore is completed</td>
<td>For appraisal and exploration wells: two years after the day on which the report is required to be lodged For development wells: five years after the day on which the report is required to be lodged</td>
</tr>
<tr>
<td>Note: There is no requirement for a separate Well Abandonment report if the plugged and abandonment date is the same as the rig release date.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seismic Survey Reports</td>
<td>Section 38 - Regulation</td>
<td>Within 12 months after the completion day for the survey</td>
<td>Two years after the day on which the report is required to be lodged</td>
</tr>
<tr>
<td>Scientific or Technical Survey Reports</td>
<td>Section 39 - Regulation</td>
<td>Within six months after the completion day for the survey</td>
<td>Two years after the day on which the report is required to be lodged</td>
</tr>
<tr>
<td>Petroleum Production Reports – Petroleum Lease</td>
<td>Section 42 - Regulation</td>
<td>Within 40 business days after the six-month period ends</td>
<td>Six months after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Petroleum Reserves Reports Petroleum Lease and Authority to Prospect</td>
<td>Section 43 - Regulation</td>
<td>Within 40 business days after the six-month period ends</td>
<td>Six months after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Production Testing Reports Authority to Prospect</td>
<td>Section 44 - Regulation</td>
<td>Within 40 business days after the relevant testing period ends</td>
<td>Two years after the last day of the period to which the report relates</td>
</tr>
</tbody>
</table>
8.1 Report Types

The various report types and their requirements which should be included in the body of the report are listed below:

8.1.1 ATP – Relinquishment Report

If the area of an ATP is relinquished its holder must, within six months after the relinquishment date, lodge a report containing the following:

- a description of the authorised activities for the tenure carried out in that part, and the results of the activities
- tenue information (for the definition of ‘tenure information’ see below)
- general area information (for the definition of ‘general area information’ see below)
- the geological model of the relinquished part of the area of the authority, and an assessment of the potential for petroleum discovery in the area
- a summary of the results of all authorised activities carried out in the relinquished area since the authority took effect, and the conclusions drawn by the holder based on the results
- an index of all reports lodged, as required under the 2004 Act or 1923 Act, in relation to the authorised activities carried out in the relinquished area or surrendered area
- the hazard information for the report (described below)
- the volume of petroleum or water produced from each petroleum well or bore in the relinquished area for each year since the authority took effect
- if a petroleum well in the relinquished area has produced petroleum from a coal seam since the authority took effect, all data or other information held by the holder that, in the holder’s reasonable opinion, may help a person to identify in the future any remaining areas of potential free gas that may have been created by removing water from the seam and producing gas from it
- the reason the holder has relinquished the area.

General area information means:
• spatial information showing the area of the ATP immediately before the relinquishment, and the relinquished part of the area of the ATP
• spatial information showing the location in the relinquished area of:
  – each petroleum well and bore drilled under the ATP; and
  – each seismic line used for a seismic survey carried out under the ATP.
• spatial information showing the seismic horizons (seismic reflectors) in the relinquished area
• spatial information showing the leads and prospects in the relinquished area
• a general description of the topographical features of the previous ATP area and the relinquished area, including, for example, access to the areas.

Tenure information means:
• the day the ATP was granted
• the day the relinquishment takes effect
• the period of the work program for the ATP
• the blocks or sub-blocks comprising the relinquished part of the area of the ATP.

Hazard information means:
• a summary of all significant hazards to future safe and efficient mining of coal created under the ATP that, under section 706 of the 2004 Act, or under its Regulation, are required to be reported
• for each hazard mentioned in the summary, a reference to the report that contains details of the hazard
• for any other hazard, or potential hazard, created under the ATP to future safe and efficient mining of coal or oil shale in the area of the ATP:
  – the nature of the hazard or potential hazard
  – the way in which the hazard or potential hazard was created
  – the location of the hazard or potential hazard
  – measures taken to prevent or reduce the hazard or potential hazard to mitigate its effects.

8.1.2 ATP – Surrender Report
A surrender report for an ATP only applies to an ATP that was administered solely under the 1923 Act prior to its surrender.

Note that a ‘surrender’ report for an ATP that was administered under the 2004 Act, is an end of tenure report (if all of the area of the ATP is relinquished) or a relinquishment report (if a voluntary or statutory relinquishment of part of the area of the ATP occurs).

A surrender report for an ATP that was administered under the 1923 Act, must accompany the approved surrender form and contain the following:
• a description of the authorised activities for the tenure carried out in that part, and the results of the activities
• tenure information (for the definition of ‘tenure information’ see below)
• general area information (for the definition of ‘general area information’ see below)
• the geological model of the surrendered area of the ATP and an assessment of the potential for petroleum discovery in the area
• a summary of the results of all authorised activities for the ATP carried out in the surrendered area since the ATP took effect and the conclusions drawn by the holder based on the results
• an index of all reports lodged in relation to the authorised activities carried out in the surrendered area

hazard information (for the definition of ‘hazard information’ see below)

• information about the volume and location of all petroleum and water produced under the authority from natural underground reservoirs in the surrendered area since the ATP took effect

• if a well in the surrendered area has produced petroleum from a coal seam since the ATP took effect, all data or other information held by the holder that, in the holder’s reasonable opinion, may help a person to identify in the future any remaining areas of potential free gas that may have been created by removing water from the seam and producing gas from it

• the reason the holder has applied to surrender the ATP.

General area information means:

• a location map showing the area of the ATP immediately before the surrender, and the surrendered part of the area of the ATP

• a map showing the location in the surrendered area of:
  – each petroleum well and bore drilled under the ATP; and
  – each seismic line used for a seismic survey carried out under the ATP.

• a structure contour map showing the seismic horizons (seismic reflectors) in the surrendered area

• a map showing the leads and prospects in the surrendered area

• a general description of the topographical features of the previous ATP area and the surrendered area, including, for example, access to the areas.

Tenure information means:

• the last day of the current term of the ATP

• the period of the work program for the ATP

• the blocks or sub-blocks comprising the surrendered part of the ATP.

Hazard information means:

• a summary of all significant hazards to future safe and efficient mining of coal created under the ATP that, under section 706 of the 2004 Act or under the Regulation, are required to be reported

• for each hazard mentioned in the summary, a reference to the report that contains details of the hazard

• for any other hazard, or potential hazard, created under the ATP to future safe and efficient mining of coal or oil shale in the area of the ATP:
  – the nature of the hazard or potential hazard
  – the way in which the hazard or potential hazard was created
  – the location of the hazard or potential hazard
  – measures taken to prevent or reduce the hazard or potential hazard to mitigate its effects.

8.1.3 Petroleum Lease – Relinquishment Report

If part of the area of a petroleum lease (PL) is relinquished its holder must, within six months after the date of the relinquishment, lodge a report containing the following:

• tenure information (for the definition of ‘tenure information’ see below)

• general area information (for the definition of ‘general area information’ see below)
• if petroleum or a prescribed storage gas has been stored in a natural underground reservoir in the relinquished part of the area of the lease since the lease took effect, the methods used to store petroleum or gas in, or produce it from, the reservoir
• the volume and type of prescribed storage gases stored in each natural underground reservoir in the relinquished area when the relinquishment takes effect
• the volume of petroleum or gas stored in natural underground reservoirs in the relinquished area since the lease took effect
• the geological model of the natural underground reservoirs in the relinquished area
• the extraction methods used to produce petroleum or gas in the relinquished area under the lease
• the volume of petroleum or water produced under the lease from each petroleum well in the relinquished area for each year since the lease took effect
• a summary of the results of all authorised carried out in the relinquished area since the lease took effect and the conclusions drawn by the holder based on the results
• an index of all reports lodged, as required under the Act, in relation to the authorized activities carried out in the relinquished area
  
  hazard information (for the definition of ‘hazard information’ see below)
• if a petroleum well in the relinquished area has produced petroleum from a coal seam since the lease took effect, all data or other information held by the holder that, in the holder’s reasonable opinion, may help a person to identify in the future any remaining areas of potential free gas that may have been created by removing water from the seam and producing gas from it
• the reason the holder has relinquished the area.

General area information means:

• a location map showing the area of the PL immediately before the relinquishment, and the relinquished part of the area of the PL
• a map showing the location in the relinquished area of
  – each petroleum well and bore drilled under the PL
  – each seismic line used for a seismic survey carried out under the PL
• a structure contour map showing the seismic horizons (seismic reflectors) in the relinquished area
• a map showing the leads and prospects in the relinquished area
• a general description of the topographical features of the previous PL area and the relinquished area, including, for example, access to the areas.

Tenure information means:

• the day the lease was granted
• the day the relinquishment or partial relinquishment was effected
• the period of the development program for the lease
• the blocks or sub-blocks comprising the relinquished part of the area of the lease.

Hazard information means:

• a summary of all significant hazards to future safe and efficient mining of coal created under the PL that, under section 706 of the 2004 Act or under the Regulation, are required to be reported
• for each hazard mentioned in the summary, a reference to the report that contains details of the hazard
• for any other hazard, or potential hazard, created under the PL to future safe and efficient mining of coal or oil shale in the area of the PL
  – the nature of the hazard or potential hazard
  – the way in which the hazard or potential hazard was created
  – the location of the hazard or potential hazard
• measures taken to prevent or reduce the hazard or potential hazard to mitigate its effects.

8.1.4 Petroleum Lease – Surrender Report

A surrender report for a PL only applies to a PL that was administered under the 2004 Act prior to its surrender.

Note that a ‘surrender’ report for a PL, that was administered under the 1923 Act is an end of tenure report (if all of the area of the PL is surrendered) or a relinquishment report (if part of the area of the PL is surrendered).

A surrender report for a PL that was administered pursuant to the 2004 Act prior to its surrender must accompany the approved surrender form and contain the following:

• the date the lease was granted
• a description of, and map showing, the area proposed to be surrendered area under the lease, including access to the area
• a description of the methods used to produce or recover petroleum or a prescribed storage gas from, or store petroleum or gas in, natural underground reservoirs in the surrendered area
• the volume of petroleum produced, and the volume of prescribed storage gases recovered, from each natural underground reservoir in the surrendered area for each year since the lease took effect
• the volume of petroleum or gas stored in natural underground reservoirs in the surrendered area when the surrender takes effect
• a description of the geological features of the natural underground reservoirs in the surrendered area from which petroleum was produced, or a prescribed storage gas recovered under the lease; or in which petroleum or gas was stored under the lease
• an index of all reports lodged, as required under the Act, in relation to the authorised activities carried out in the surrendered area
  • hazard information (for the definition of ‘hazard information’ see below)
• if a petroleum well in the surrendered area has produced petroleum from a coal seam since the lease took effect, all data or other information held by the holder that, in the holder’s reasonable opinion, may help a person to identify in the future any remaining areas of potential free gas that may have been created by removing water from the seam and producing gas from it
• a map showing the location in the surrendered area of each petroleum well and bore drilled under the lease, and each seismic line used for a seismic survey carried out under the lease
• structure contour maps of the seismic horizons (seismic reflectors) in the surrendered area;
• a map showing the leads and prospects in the surrendered area
• the reason the holder has applied to surrender the part of the area of the lease.

Hazard information means:

• a summary of all significant hazards to future safe and efficient mining of coal created under the PL that, under section 706 of the 2004 Act or under the Regulation, are required to be reported
• for each hazard mentioned in the summary, a reference to the report that contains details of the hazard
• for any other hazard, or potential hazard, created under the PL to future safe and efficient mining of coal or oil shale in the area of the PL:
  − the nature of the hazard or potential hazard
  − the way in which the hazard or potential hazard was created
  − the location of the hazard or potential hazard
  − measures taken to prevent or reduce the hazard or potential hazard to mitigate its effects.

8.1.5 End of Authority Report

If a petroleum tenure (that is, an ATP or a PL) or water monitoring authority ends, the person who held the tenure immediately before it ended must, within six months, lodge a report which includes the following:

• a summary of all authorised activities for the tenure that have been carried out since it took effect
• a summary of the results of the activities
• an index of all reports lodged, as required under the 2004 Act and the 1923 Act and their Regulations, in relation to the activities
• a summary of all significant hazards created to future safe and efficient mining that are required to be reported under these Acts or their Regulations
• for each hazard mentioned in the summary a reference to the report that contains details of the hazard
• information about the amount and location of all petroleum and water produced from the area of the tenure
• any information related to information that may help the understanding of the amount and location of any remaining petroleum (including areas of ‘free gas’) and water from reservoirs produced
• any information required to be reported under the 2004 Act and the 1923 Act and their Regulations that has not been previously reported
• any other information prescribed under a regulation that has not already been included in a relinquishment report or surrender report lodged for the tenure.

8.1.6 Water Monitoring Authority

A holder of a water monitoring authority must, within two months of each of the water monitoring authority’s anniversary dates (that is, the anniversary of the day the authority took effect), lodge an annual report for the previous 12 months. An annual report for a water monitoring authority must contain the following:

• the authorised activities for the authority carried out during the reporting period
• a statement of the authorised activities proposed to be carried out under the authority for the next 12 month period
• an index of all reports, lodged under the 2004 Act and the 1923 Act and their Regulations, by the holder during the reporting period in relation to the authority.

8.1.7 Petroleum Facility Licence or Pipeline Licence – Annual Report

A holder of one of these licences must, within two months of the anniversary date of the licence (that is, the anniversary of the day the licence took effect), lodge an annual report for the previous 12 months. An annual report for a petroleum facility licence or pipeline licence must contain the following:

• the authorised activities for the licence carried out during the reporting period
• a statement of the authorised activities proposed to be carried out under the licence for the next 12 month period.

### 8.1.8 Pipeline Licence – Surrender Report

A report to accompany a surrender application for all or part of the area of a pipeline licence must contain the following:

- a summary of the methods used to decommission the pipeline
- the date the licence was granted, its term, a description of the area (the surrendered area) that is the subject of the application; and
- a description of, and map showing, the location of the pipeline in the surrendered area, including access to the pipeline.

### 8.1.9 Data Acquisition Authority or Survey Licence Report

The person who held the data acquisition authority or survey licence immediately before it ended must lodge an end of authority/licence report within six months after the end of the authority or licence. This report must contain the following:

- the authorised activities for the authority or licence carried out during the reporting period
- an index of all reports lodged under the 2004 Act by the holder during the reporting period in relation to the authority or licence.

### 8.1.10 Infrastructure Report for Petroleum Lease

A PL holder must lodge an infrastructure report for the preceding financial year (1 July to 30 June) by 1 September each year.

The report must contain:

- a description of the authorised activities for the lease carried out in the area of the petroleum lease in the financial year; and
- details of infrastructure and work constructed in the area of the PL in the financial year, including the location of the infrastructure and works.

### 9. Reporting for Geothermal Resource Authorities

The type and frequency of statutory requirements for reporting, data submission and operational notification for EPGs and GLs are detailed in Chapter 5, Part 1 of the Geothermal Energy Regulation 2012 (for authorities administered under Geothermal Energy Act 2010). What follows relates primarily to reports that are added to the QDEX database, although other reports may be required by the Geothermal Energy Regulation 2012.

NOTE that what follows is simplified and abbreviated from the relevant sections of the geothermal legislation and is intended as a guide only. If in any doubt as to meaning, refer to the legislation.

#### Table 4 – Geothermal report types, lodgement requirements and open filing details

<table>
<thead>
<tr>
<th>Report Type</th>
<th>Relevant Provision:</th>
<th>Lodgement Due Date</th>
<th>Open Filing Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relinquishment Reports</td>
<td>Section 15 - Regulation Section 190 - Act</td>
<td>Six months after relinquishment</td>
<td>Immediately</td>
</tr>
<tr>
<td>Report Type</td>
<td>Relevant Provision:</td>
<td>Lodgement Due Date</td>
<td>Open Filing Due Date</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>End of Tenure Reports</td>
<td>Section 16 - Regulation</td>
<td>Six months after the tenure/authority ends</td>
<td>Immediately</td>
</tr>
<tr>
<td></td>
<td>Section 191 - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Drilling Reports</td>
<td>Section 17 - Regulation</td>
<td>5pm following working day</td>
<td>Appraisal and exploration wells: two years from lodgement due date Development wells: five years from lodgement due date</td>
</tr>
<tr>
<td>(Note: not entered into QDEX)</td>
<td>Section 191 - Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well Completion Reports</td>
<td>Section 20 - Regulation</td>
<td>Within six months after the rig release day</td>
<td>Appraisal and exploration well: two years from lodgement due date Development wells: five years from lodgement due date</td>
</tr>
<tr>
<td>Well Abandonment Reports</td>
<td>Section 29 - Regulation</td>
<td>For a well that is plugged and abandoned before the rig release day for the well - with the well completion report for the well (within six months after the rig release day); or otherwise - within two months after the completion day.</td>
<td>Appraisal and exploration wells: two years from lodgement due date Development wells: five years from lodgement due date</td>
</tr>
<tr>
<td>Annual Geothermal Reserves Reports</td>
<td>Section 35 - Regulation</td>
<td>Within 40 business days after the last day of each year for the tenure</td>
<td>Six months after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Production Testing Reports Geothermal Permit</td>
<td>Section 36 - Regulation</td>
<td>Within 40 business days after the testing period ends</td>
<td>Two years after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Production Testing Reports Geothermal Lease</td>
<td>Section 36 - Regulation</td>
<td>Within 40 business days after the testing period ends</td>
<td>Five years after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Injection Testing Reports</td>
<td>Section 39 - Regulation</td>
<td>Within 40 business days after the injection testing period ends</td>
<td></td>
</tr>
<tr>
<td>Production Reports</td>
<td>Section 42 - Regulation</td>
<td>Within 40 business days after the end of each year for the tenure</td>
<td>Six months after the last day of the period to which the report relates</td>
</tr>
<tr>
<td>Injection Reports</td>
<td>Section 43 - Regulation</td>
<td>Within 40 business days after the end of each year for the tenure</td>
<td></td>
</tr>
<tr>
<td>Hydraulic Fracturing Activities Completion Reports</td>
<td>Section 44 - Regulation</td>
<td>Within two months after completion of the activities</td>
<td>Five years after lodgement due date</td>
</tr>
<tr>
<td>Surrender Report for Geothermal Tenures</td>
<td>Section 49 - Regulation</td>
<td>Accompany surrender application for a geothermal tenure administered under the Geothermal Energy Act 2010</td>
<td>Immediately</td>
</tr>
<tr>
<td>Geophysical Survey Reports</td>
<td>Section 50 - Regulation</td>
<td>Within six months after the completion day for the survey</td>
<td>Two years after lodgement due date</td>
</tr>
</tbody>
</table>
### 9.1 Report Types

The various report types and their requirements which should be included in the body of the report are listed below:

#### 9.1.1 Relinquishment Report

If the area of a geothermal tenure is relinquished its holder must, within six months after the relinquishment date, lodge a report containing the following:

- a description of the authorised activities for the tenure carried out in that part, and the results of the activities
- *tenure information* (for the definition of ‘tenure information’ see below)
- *general area information* (for the definition of ‘general area information’ see below)
- the geological model of the relinquished part of the area of the tenure, and an assessment of the potential for geothermal discovery in the area
- a summary of the results of all authorised activities carried out in the relinquished area since the tenure took effect, and the conclusions drawn by the holder based on the results
- an index of all reports lodged, as required under the Act, in relation to the authorised activities carried out in the relinquished area
- *hazard information* (for the definition of ‘hazard information’ see below)
- the volume of geothermal energy water produced from each geothermal well or bore in the relinquished area for each year since the tenure took effect
- the reason the holder has relinquished the area.

**General area information means:**

- a location map showing the area of the geothermal tenure immediately before the relinquishment, and the relinquished part of the area of the geothermal tenure
- a map showing the location in the relinquished area of:
  - each geothermal well drilled under the tenure; and
  - each seismic line used for a seismic survey carried out under the tenure
- a structure contour map showing the seismic horizons (seismic reflectors) in the relinquished area
- a map showing the leads and prospects in the relinquished area
- a general description of the topographical features of the previous tenure area and the relinquished area, including, for example, access to the areas.

**Tenure information means:**
• the day the geothermal tenure was granted
• the day the relinquishment takes effect
• the period of the work program for the tenure
• the blocks or sub-blocks comprising the relinquished part of the area of the tenure.

Hazard information means:

• a summary of all significant hazards to future safe and efficient exploration and production of geothermal energy under the tenure that, under section 706 of the 2004 Act or under the Regulation, are required to be reported
• for each hazard mentioned in the summary, a reference to the report that contains details of the hazard.

9.1.2 End of Tenure Report

Within six months after a geothermal tenure ends, the person who held the tenure immediately before it ended, must give the chief executive a report that includes all of the following for the geothermal tenure:

• the tenure information
• the general area information
• a description of the geological model for the geothermal reservoirs in the area of the tenure
• a summary of all authorized activities for the tenure carried out for the tenure since it took effect
• a summary of the results of the activities
• an analysis of the conclusions drawn from the results of the authorized activities carried out in the area since the tenure took effect
• an index of all reports given as required under the Geothermal Energy Act 2010 for the activities
• a summary of all significant hazards created to future safe and efficient mining that under the P&G Act safety provisions, are required to be reported by the person
• for each hazard mentioned in the summary, a reference to the report containing details of the hazard
• any information required to be reported under the Geothermal Energy Act 2010 that has not been previously reported
• an estimate of the total mass flow of geothermal fluid produced from each geothermal well in the area for each year since the tenure took effect
• other information prescribed under a regulation.

The general area information, for an end of tenure report for a geothermal tenure, means each of the following:

• a map showing:
  – the location of the area of the tenure; and
  – the location in the area of the tenure of all:
    ▪ geothermal wells drilled under the tenure;
    ▪ seismic lines used to carry out seismic surveys of the area of the tenure and the range of the numbered stations on each line; and
    ▪ sites used to carry out geophysical surveys, other than seismic surveys.
• a structure contour map of:
- the seismic horizons (seismic reflectors) in the area of the tenure; and
- values measured during geophysical surveys, other than seismic surveys, in the area of the
  tenure;
- a general description of the topographical features of the area of the tenure, including, for
  example, access to the areas.

Tenure information, for an end of tenure report for a geothermal tenure, means each of the following:

- the day the tenure was granted
- the period of the work program or development plan for the tenure.

9.2.3 Daily Drilling Report

A geothermal tenure holder must, for each day on which drilling of a geothermal well is carried out in
the area of the geothermal tenure, give the chief executive a report about the drilling of the well not
later than 5:00pm on the next business day after the day’s drilling.

The daily drilling report must include the following information on its first page:

- the type and number of the geothermal tenure
- the name and postal address of the operator of the geothermal well
- the identifying name of the well
- the name of the geothermal tenure holder
- a map showing the location of the well
- the name of the author of the report
- the name of the person submitting the report
- the date of the report, in day-month-year format.

The daily drilling report must include the following details about the drilling of the geothermal well:

- the well’s depth in metres at the end of the day
- the type of drilling rig used to drill the well
- the bit record for the well
- the drilling fluids and additives used during the day's drilling
- a summary of the drilling operations carried out during the day’s drilling
- diagrams showing the hole sizes of the well at the end of the day’s drilling
- the depth in metres of the top and bottom of any geothermal feature intervals identified in the well
during the day’s drilling
- a description of:
  - all surveys, test and measurements carried out during the day’s drilling including the
    results of the surveys, tests or maintenance;
  - all cores or cutting samples taken during the day’s drilling;
  - all casing and cementing activities carried out during the day’s drilling; and
- all surface observations made about the geothermal feature intervals identified in the well during
  the day’s drilling.

9.1.4 Well Completion Report

A geothermal tenure holder, must, within six months after the rig release day for a geothermal well,
give the chief executive, a report about the completion of the well.
The well completion report must include the following information on its first page:

- the type and number of the geothermal tenure
- the name and postal address of the operator of the geothermal well
- the identifying name of the well
- the name of the geothermal tenure holder
- a map showing the location of the well
- the name of the author of the report
- the name of the person submitting the report
- the date of the report, in day-month-year format.

The well completion report must include the following details about the drilling of the geothermal well:

- the well’s total depth in metres
- the type of drilling rig used to drill the well
- the bit record for the well
- the drilling fluids and additives used to drill the well
- the ground level in metres for the well
- the kelly bushing level in metres for the well
- diagrams showing the hole sizes of the well
- information about the path of the well
- the day drilling of the well started
- the day the total depth of the well was reached
- the rig release day for the well
- a description of:
  - the alteration type of the rock surrounding the well;
  - the stratigraphy of the rock layers that the well intersects;
  - each geological sample taken during the drilling of the well; and
  - all surveys, tests and measurements carried out during the drilling of the well including the results of the surveys, tests and measurements.
- the depth in metres of the location of each sample taken from the well.

The well completion report must include the following details about the casing and other equipment, including prescribed equipment, inserted into the geothermal well:

- the features of the casing and equipment, including, for example:
  - the size and type of casing and equipment
  - the characteristics of the casing and equipment that may cause a hazard
  - diagrams showing the location of the casing and equipment
  - the location of all perforations made to the casing of the well
  - the depth in metres of the top and bottom of each perforation interval made to the well.

The well completion report must include the following details about all squeeze cementing or cement plugging carried out in the geothermal well:
• the type of cement and additives used in the well
• the depth in metres of the top and bottom of each cemented interval in the well
• any losses of cement caused by seepage in voids or permeable strata in the well
• the method, materials and volume of cement used to cement the voids
• the method used to overcome losses of cement.

If stimulation of the geothermal well was carried out during the drilling of the well, the well completion report must include the following details:

• the depth in metres of the top and bottom of the geothermal feature intervals in the well over which stimulation was carried out
• a description of the equipment used to carry out the stimulation
• the rig release day for the well
• a description of:
  − the alteration type of the rock surrounding the well
  − the stratigraphy of the rock layers that the well intersects
  − each geological sample taken during the drilling of the well
  − all surveys, tests and measurements carried out during the drilling of the well including the results of the surveys, tests and measurements
  − the depth in metres of the location of each sample taken from the well.

The well completion report must include the following details about the casing and other equipment, including prescribed equipment, inserted into the geothermal well:

• the features of the casing and equipment, including, for example:
  − the size and type of casing and equipment;
  − the characteristics of the casing and equipment that may cause a hazard;
  − for the chemicals and other additives used in the fracturing fluid used to carry out the stimulation, the concentration of the chemicals and additives with time;
  − a copy of all records made about the stimulation by the person who carried it out;
  − any other details about the stimulation that are reasonably necessary to make a future assessment of the impact of the stimulation on the safety of the well.

The well completion report must also include the following information about the geothermal well:

• an assessment of:
  − the geothermal production potential of the well
  − the impacts the well may have on the future management of the geothermal reservoirs in the area of the geothermal tenure
  − the data obtained from geophysical (or wireline) logs run in the well
  − the status of the well on the rig release day for the well
  − identification of the geothermal feature intervals in the well that have the potential to produce geothermal energy
  − a description of the geological model for the well
  − the geothermal tenure holder’s reasons for choosing the location of the well.

The well completion report must be accompanied by the following:
• a digital image of all core or cutting samples taken from the geothermal well
• a copy of:
  − the well card for the well
  − the well’s drilling program
  − a schematic diagram of the wellhead installed in the well after its completion
  − a description of the geological model for the area of the geothermal tenure
  − a pie chart showing the time distribution of all drilling operations carried out for the well
  − a graph of the actual drilling time compared to the initial drilling program for the well
  − the raw data from each geophysical (or wireline) logs run in the well
  − a digital image of the graphic representations of the raw data.

If the geothermal well is a directional well, the well completion report must also state the position of:
• the stratigraphic units that the well intersects
• the bottom of the well
• any other geothermal wells that intersect the directional well.

The position must be express in relation to:
• the total vertical depth in metres of the well
• the horizontal plane of the well.

If the well is plugged and abandoned before the rig release day for the well, the report must be accompanied by a well abandonment report for the well.

9.1.5 Well Abandonment Report

If a geothermal well is plugged and abandoned, the geothermal tenure holder must give the chief executive a report about the abandonment of the well:
• for a well that is plugged and abandoned before the rig release day for the well, with the well completion report for the well, or
• otherwise within two months after the completion day.

The well abandonment report must include the following information on its first page:

• the type and number of the geothermal tenure
• the name and postal address of the operator of the geothermal well
• the identifying name of the well
• the name of the geothermal tenure holder
• the name of the author of the report
• the name of the person submitting the report
• the date of the report, in day-month-year format.

The well abandonment report must include the following details about the drilling of the geothermal well:
• the well’s depth in metres
• the type of drilling rig used to drill the well
• the bit record for the well
• the drilling fluids and additives used to drill the well
• the position at the top and bottom, and the thickness of any of the following intersected by the well:
  – an alteration zone;
  – a geothermal reservoir;
  – an aquifer;
  – diagrams showing the hole sizes of the well.

The position at the top and bottom must be identified in relation to:

• for a directional well:
  – the total vertical depth in metres of the well
  – the horizontal plane of the well or the depth in metres.

The well abandonment report must include the following details about the casing and other equipment, including prescribed equipment, inserted into the geothermal well:

• the features of the casing and equipment, including, for example:
  – the size and type of casing and equipment; and
  – the characteristics of the casing and equipment that may cause a hazard
• diagrams showing the location of the casing and equipment
• the location of all perforations made to the casing of the well
• the depth in metres of the top and bottom of each perforation interval made to the casings.

The well abandonment report must include the following details about all squeeze cementing or cement plugging carried out in the geothermal well:

• type and cement and additives used in the well
• the depth in metres of the top and bottom of each cemented interval in the well
• any losses of cement caused by seepage in voids or permeable state in the well
• the method, materials and volume of cement used to cement the voids
• the method used to overcome losses of cement.

The well abandonment report must include the following information about the geothermal well:

• a description of:
  – all surveys, tests and measurements carried out during the drilling of the well including the results of the surveys, test and measurements
  – any other procedures used to abandon the well.
• If stimulation of the well was carried out before it was plugged and abandoned:
  – the depth in metres of the top and bottom of the intervals in the well over which the stimulation was carried out
  – a description of the equipment used to carry out the stimulation
  – a copy of any record made about the stimulation by the person who carried it out
  – any other details about the stimulation that would help a person to make a future assessment of the impact of the stimulation on the safety of the well
• any other details of the activities undertaken in relation to drilling, plugging and abandoning the well that would help a person in making an assessment of the potential risks to the safe and efficient operation of the well in the future

• a summary and history of the well

• a map showing the location of the well

• the day the completion report for the well was given to the chief executive.

**9.1.6 Annual Geothermal Reserves Report**

A geothermal tenure holder must, within 40 business days after the last day of each year for the tenure, give the chief executive a report about geothermal reserves for the tenure. The annual reserves report must include the following information in a form the chief executive considers appropriate:

• the type and number of the geothermal tenure

• for each geothermal reservoir in the area of the geothermal tenure:
  – the location, and estimated amount, of all proven and probable geothermal reserves identified on the first day and the last day of the year
  – details of all material changes to the proven and probable geothermal reserves for the year.

**9.1.7 Production Testing Report**

If production testing of a geothermal well is carried out under a geothermal tenure, the geothermal tenure holder must, within 40 business days after the production testing period ends, give the chief executive a report about the testing for the period. The production testing report must include each of the following on its first page:

• the type and number of the geothermal tenure

• the identifying name of the geothermal well

• identification of:
  – each geothermal reservoir in the area of the geothermal tenure identified by the production testing during the production testing period
  – the geological units that produced geothermal fluid in the area of the tenure during the production testing period
  – the geological units in the area of the tenure that were injected with disposal during the production testing period

• details of the wellhead pressure of the geothermal well measured during the production testing period.

The production testing report must include the following information about the production testing:

• the duration of the testing

• the type of testing methods used during the testing

• the specifications of the equipment used during the testing

• for any geothermal fluid produced during the testing:
  – the value of the specific enthalpy of the fluid
  – details of all changes to the specific enthalpy of the fluid
  – details of the chemistry of the fluid.

• details of:
− the air-lifting program, if any, used to stimulate the well during the testing
− all downhole surveys (pressure, temperature and spinner) undertaken during the testing
− the calculations made of the well’s productivity index, including the methods used to calculate the productivity index during testing
− the location of any major and secondary feed zones made in the geothermal well during the testing
− the wellhead pressure of the well’s throttled discharges during the testing
− the output characteristics of the geothermal well expressed as a function of the wellhead pressure of the well during the testing
− any wellbore simulation modeling carried out during the testing.

• an estimate of the total mass flow of any geothermal fluid produced during the testing
• an estimate of the mass flow rate of all brine and steam separated during the testing
• changes in the steam separation pressure values during the testing.

9.1.8 Injection Testing Report
If injection testing of a geothermal well is carried out under a geothermal tenure, the geothermal tenure holder must, within 40 business days after the injection testing period ends, give the chief executive a report about the testing for the period. The injection testing report must include each of the following on its first page:

• the type and number of the geothermal tenure
• the identifying name of the geothermal well
• identification of the geological units that were injected with water or disposal during the injection testing period
• the wellhead pressure of the geothermal well measured during the injection testing period.

The injection testing report must include the following information about the injection testing:

• the duration of the testing
• the types of testing methods used during the testing
• the specifications of the equipment used during the testing
• for water or disposal injected during the testing:
  − the temperature of the water or disposal; and
  − the chemistry of the water or disposal
• details of:
  − all downhole surveys (pressure, temperature and spinner) undertaken during the testing
  − the calculations made of the geothermal well’s injectivity index, including the methods used to calculate the injectivity index, during the testing
  − any changes in the wellhead pressure of the well measured during the testing
  − any wellbore simulation modelling carried out during the testing.

9.1.9 Production Report
A geothermal tenure holder must, within 40 business days after the end of each year for the geothermal tenure, give the chief executive a production report for the period for each geothermal well under the tenure. The production report must include all of the following information:
• the type and number of the geothermal tenure
• the identifying name of each geothermal well in the area of the tenure
• identification of:
  – each geothermal reservoir in the area of the tenure
  – each geological unit in the area of the tenure that produced geothermal fluid during the period
• the total number of geothermal wells in the area of the tenure that produced geothermal fluid during the period
• the total mass flow of any geothermal fluid produced from a geothermal well in the area of the tenure during the period
• for any electrical and thermal energy produced in the area of the tenure during the period:
  – the total amount of electrical and thermal energy
  – the total amount of the electrical and thermal energy that was used for internal consumption during the period
• the total amount of the geothermal fluid released into the environment during the production of electrical and thermal energy in the period and the reasons for its release
• for each geothermal well that produced geothermal fluid during the period, the following details about the well:
  – any changes in the wellhead pressure of the well during the period
  – any scaling and corrosion problems met with during the period and the preventative measures taken to reduce the scaling and corrosion
  – The following details about any geothermal fluid taken from the well:
    • changes in the chemistry or chemical composition of the fluid during the period
    • changes to the fluid specific enthalpy of the fluid during the period.

9.1.10 Injection Report

A geothermal tenure holder, must, within 40 business days after the end of each year for the geothermal tenure, give the chief executive an injection report for the period for each geothermal well under the tenures. The injection report must include all of the following information:

• the type and number of the geothermal tenure
• the identifying name of each geothermal well in the area of the tenure
• identification of:
  – each geothermal reservoir in the area of the geothermal tenure
  – each geological unit in the area of the tenure that was injected with water or disposal during the period
• the total mass flow of:
  – all water or disposal injected into each geothermal well in the area of the tenure during the period
  – disposal reinjected into each geothermal well in the area of the tenure during the period
• the following details about each geothermal well in the area of the tenure that was injected with water or disposal during the period:
  – any changes in the wellhead pressure of the well during the period
any scaling and corrosion problems met with in the well during the period and the preventative measure taken to reduce the scaling and corrosion.

9.1.11 Hydraulic Fracturing Activities Completion Report

If a geothermal tenure holder completes hydraulic fracturing activities in the area of the geothermal tenure after the tenure takes effect, the holder must, within two months after completion of the activities, give the chief executive a report about the activities. The hydraulic fracturing activities completion report must include the following information on its first page:

- the type and number of the geothermal tenure
- the name and postal address of the person who carried out the hydraulic fracturing activities
- the identifying name of each geothermal well subject to the activities
- the day the activities for each well started
- the day the activities for each well ended
- the name of the author of the report
- the name of the persons submitting the report
- the date of the report, in day-month-year format.

The hydraulic fracturing activities completion report must include the following information about the hydraulic fracturing activities:

- an identification of each method of hydraulic fracturing activity carried out
- the depth in metres of the top and bottom of:
  - each interval of the geothermal well over which the activities were carried out
  - each geological interval in the well over which the activities were carried out and the name of each geological interval
- a summary of the operations carried out at each stage of the activities, including the volume and type of chemicals used at each stage
- an assessment of the impact of the activities on the future management of each geothermal reservoir in the area of the geothermal tenure
- for each stage of the activities — a graphic representation of the following:
  - the casing pressure with time
  - the calculated bottom hole pressure with time
  - the calculated bottom hole concentration with time
  - the rate at which hydraulic fracturing fluid was pumped into the geothermal well with time
  - the concentration of liquid chemicals and other additives used in the hydraulic fracturing fluid with time
  - the maximum surface treatment pressure reached during each stage of the activities
  - the estimated targeted fracture pressure for the activities carried out over each geological interval in the well.

The hydraulic fracturing activities completion report must include details of each of the following:

- the equipment used to perform and monitor the hydraulic fracturing activities
- the diagnostic techniques used to monitor the activities
- if known:
− all geological connections between a geological interval in a geothermal well over which the activities were carried out and an aquifer
− the distance between a geological interval in a geothermal well over which the activities were carried out and an aquifer
− the total mass flow of hydraulic fracturing fluid, in tonnes, used in each geothermal well during each stage of the activities
− if a known event relating to the hydraulic fracturing activities has caused material environmental harm, or serious environmental harm.

The hydraulic fracturing activities completion report must be accompanied by a document stating the following about the hydraulic fracturing fluid used to carry out the activities:

• the composition of the hydraulic fracturing fluid
• the quantity of each component of the fluid in kilograms, litres or tonnes (as appropriate)
• the concentration of each component in the fluid
• the name of all chemical compounds in the fluid.

9.1.12 Surrender Report

A surrender report for a geothermal tenure, must accompany the approved surrender form and contain the following:

• the day the geothermal tenure was granted
• a description of, and a map showing, the area that is being surrendered, a description or map of access points to the area
• a description of the methods used to produce geothermal energy in the surrendered area
• an estimate of:
  − the amount of geothermal energy produced from each geothermal well in the surrendered area for each year since the geothermal tenure took effect
  − the volume of water or disposal injected into each injection well in the surrendered area
• a description of the geological features of the proven and probable geothermal reserves in the surrendered area from which geothermal energy was produced
• an index of all reports given to the chief executive under the Geothermal Energy Act 2010, about all authorized activities carried out in the surrendered area
• a hazard information report for the surrendered area
• an annual reserves report for the surrendered area for the period starting on the day after the period covered by the last annual reserve report was given for the geothermal tenure and ending on the day the surrender report is given to the Minister
• the reason the geothermal tenure holder has applied to surrender all or part of the tenure’s area
• a map showing the location, in the surrendered area, of:
  − the geothermal wells drilled under the geothermal tenure
  − the seismic lines used to carry out seismic surveys of the area of the geothermal tenure and the range of the numbered sites on each line
  − the sites used for carrying out geophysical surveys, other than seismic surveys
  − a structure contour map prepared for the surrendered area showing:
    ▪ the seismic horizons (seismic reflectors) in the surrendered area
values as measured during geophysical surveys carried out for the surrendered area.

9.1.13 Geophysical Survey Report

If a geothermal tenure holder carries out a geophysical survey of the area of the tenure or reprocesses raw data obtained from a survey, the holder must, within six months after the day the survey is completed, give the chief executive a report about the survey. The geophysical survey must include the following information about the geophysical survey:

- a description of:
  - the location of the area surveyed
  - the type of survey carried out
  - how the raw data obtained from the survey was processed
  - each method used to acquire the raw data from the survey, including the equipment used to acquire the data and the techniques and equipment used to record and test the data
  - a map showing the location of the sites used to carry out the geophysics survey
  - if the report is not accompanied by files for the area surveyed in digital form, details of:
    - the interpreted data for the area surveyed
    - the isopach map and depth to basement map obtained from the survey
  - a summary of the geology of the area surveyed
  - a summary of the objectives of the survey
  - details about the activities carried out for the survey, including the days the activities were carried out
  - an interpretation of the reprocessed data obtained from the survey
  - an index of all previous geophysical surveys, of the same type as the survey for which the report was given, carried out under the tenure, and a summary of the survey results.

The geophysical survey report must be accompanied by each of the following in digital form:

- the raw data obtained from the survey
- the records made as the raw data was recorded (commonly known as the observer’s logs)
- the location of the area surveyed, including the coordinates and evaluation of each site used to carry out the geophysical survey
- the processed and reprocessed data obtained from the survey
- a graphical representation of the processed or reprocessed data
- if an activity for the survey was carried out by a contractor of the geothermal tenure holder, a copy of all reports given to the tenure holder by the contractor about the activity.

9.1.14 Scientific or Technical Survey Report

If a geothermal tenure holder carries out a scientific or technical survey of the area of the tenure or reprocesses raw data obtained from a survey, the tenure holder must, within six months after the day the survey is completed, give the chief executive a report about the survey.

The scientific or technical survey must include the following information:

- a description of:
  - the location of the area surveyed
- the type of survey carried out
- how the raw data obtained from the survey was processed
- each method used to acquire the raw data from the survey, including the equipment used to acquire the data and the techniques and equipment used to record and test the data.

- a summary of the geology of the area surveyed
- a summary of the objectives of the survey
- details of the activities, carried out for the survey, including the days the activities were carried out
- an interpretation of the processed or reprocessed data obtained from the survey
- details of all measurements made or samples taken during the survey
- an index of all previous scientific or technical surveys, of the same type as the survey for which the report is given, carried out under the tenure, and a summary of the survey results
- each of the following in digital form:
  - the raw data obtained from the survey
  - the processed or reprocessed data obtained from the survey.


The type and frequency of statutory requirements for reporting, data submission and operational notification for GHG Permits and GHG Leases are detailed in Part 4 of the Greenhouse Gas Storage Regulation 2010 (for authorities administered under Greenhouse Gas Storage Act 2009). What follows relates primarily to reports that are added to the QDEX database, although other reports may be required by the Regulation.

NOTE: That what follows is simplified and abbreviated from the relevant sections of the greenhouse gas legislation and is intended as a guide only. If in any doubt as to meaning, refer to the legislation.

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<tr>
<td>Report Type</td>
<td>Relevant Provision:</td>
<td>Lodgement Due Date</td>
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<td>#Within two months after each of its anniversary days</td>
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</table>
10.1 Report Types

The various report types are listed below.

10.1.1 Relinquishment Report

If the area of a GHG tenure is relinquished its holder must, within six months after the relinquishment date, lodge a report containing the following:

- a description of the authorised activities for the tenure carried out in that part, and the results of the activities
- tenure information (for the definition of ‘tenure information’ see below)
- general area information (for the definition of ‘general area information’ see below)
- the geological model of the relinquished part of the area of the tenure, and an assessment of the potential for GHG discovery in the area
- a summary of the results of all authorised activities carried out in the relinquished area since the tenure took effect, and the conclusions drawn by the holder based on the results
- an index of all reports lodged, as required under the Act, in relation to the authorised activities carried out in the relinquished area
- hazard information (for the definition of ‘hazard information’ see below)
- the volume of GHG water produced from each geothermal well or bore in the relinquished area for each year since the tenure took effect
- the reason the holder has relinquished the area.

General area information means:

- a location map showing the area of the GHG tenure immediately before the relinquishment, and the relinquished part of the area of the GHG tenure
- a map showing the location in the relinquished area of:
  - each g GHG well drilled under the tenure
  - each seismic line used for a seismic survey carried out under the tenure
- a structure contour map showing the seismic horizons (seismic reflectors) in the relinquished area
- a map showing the leads and prospects in the relinquished area
- a general description of the topographical features of the previous tenure area and the relinquished area, including, for example, access to the areas.

Tenure information means:

- the day the GHG tenure was granted
- the day the relinquishment takes effect
- the period of the work program for the tenure
- the blocks or sub-blocks comprising the relinquished part of the area of the tenure

Hazard information means:
• a summary of all significant hazards to future safe and efficient exploration and production of GHG under the tenure that, under section 706 of the 2004 Act or under the Regulation, are required to be reported
• for each hazard mentioned in the summary, a reference to the report that contains details of the hazard.

10.1.2 End of Tenure report
Within six months after a GHG tenure ends, the person who held the tenure immediately before it ended, must give the chief executive a report that includes all of the following for the GHG tenure:
• the tenure information
• the general area information
• a description of the geological model for the GHG reservoirs in the area of the tenure
• a summary of all authorized activities for the tenure carried out for the tenure since it took effect
• a summary of the results of the activities
• an analysis of the conclusions drawn from the results of the authorized activities carried out in the area since the tenure took effect
• an index of all reports given as required under the Greenhouse Gas Storage Act 2009 for the activities
• a summary of all significant hazards created to future safe and efficient mining that under the P&G Act safety provisions, are required to be reported by the person
• for each hazard mentioned in the summary, a reference to the report containing details of the hazard
• any information required to be reported under the Greenhouse Gas Storage Act 2009 that has not been previously reported
• an estimate of the total mass flow of geothermal fluid produced from each GHG well in the area for each year since the tenure took effect
• other information prescribed under a regulation.

The general area information, for an end of tenure report for a GHG tenure, means each of the following:
• a map showing:
  − the location of the area of the tenure
  − the location in the area of the tenure of all:
    ▪ GHG wells drilled under the tenure
    ▪ seismic lines used to carry out seismic surveys of the area of the tenure and the range of the numbered stations on each line
    ▪ sites used to carry out geophysical surveys, other than seismic surveys.
• a structure contour map of:
  − the seismic horizons (seismic reflectors) in the area of the tenure
  − values measured during geophysical surveys, other than seismic surveys, in the area of the tenure
• a general description of the topographical features of the area of the tenure, including, for example, access to the areas.
Tenure information, for an end of tenure report for a GHG tenure, means each of the following:

- the day the tenure was granted
- the period of the work program or development plan for the tenure.

### 10.1.3 Surrender Report

A surrender report for a GHG tenure, must accompany the approved surrender form and contain the following:

- the day the GHG tenure was granted
- a description of, and a map showing, the area that is being surrendered, a description or map of access points to the area
- a description of the methods used to produce GHG in the surrendered area
- an estimate of:
  - the amount of GHG produced from each GHG well in the surrendered area for each year since the GHG tenure took effect; and
  - the volume of water or disposal injected into each injection well in the surrendered area.
- a description of the geological features of the proven and probable GHG reserves in the surrendered area from which GHG was produced
- an index of all reports given to the chief executive under the Greenhouse Gas Storage Act 2009, about all authorized activities carried out in the surrendered area
- a hazard information report for the surrendered area
- the reason the GHG tenure holder has applied to surrender all or part of the tenure’s area
- a map showing the location, in the surrendered area, of:
  - the GHG wells drilled under the geothermal tenure;
  - the seismic lines used to carry out seismic surveys of the area of the GHG tenure and the range of the numbered sites on each line; and
  - a structure contour map prepared for the surrendered area showing:
    - the seismic horizons (seismic reflectors) in the surrendered area
    - values as measured during geophysical surveys carried out for the surrendered area.

### 10.1.4 Daily Drilling Report

A GHG tenure holder must, for each day on which drilling of a geothermal well is carried out in the area of the GHG tenure, give the chief executive a report about the drilling of the well not later than 5:00pm on the next business day after the day’s drilling.

The daily drilling report must contain each of the following for the drilling carried out during the day:

- the identifying name of the well
- the tenure holder’s name and the tenure under which the well was drilled
- the type of drilling rig used
- a summary of the drilling operations carried out
- the depth in metres of the well at the end of the day’s drilling
- the size and type of drill bit used
- the drilling fluids and additives used
• the size and depth in metres of any casing inserted in the well
• the depth in metres of the top and bottom of each cemented interval in the well
• the results of any deviation surveys carried out in the well
• a description of any drill stem tests or other tests carried out in the well
• the type of any perforations in the well and the depth in metres of the top and bottom of the perforated intervals
• details of any squeeze cementing or cement plugging carried out
• a description of any cores or cutting samples taken.

10.1.5 Well Completion Report
A GHG tenure holder must, for each day on which drilling of a geothermal well is carried out in the area of the GHG tenure, give the chief executive a report about the drilling of the well not later than 5:00pm on the next business day after the day's drilling.

The daily drilling report must contain each of the following for the drilling carried out during the day:

• the identifying name of the well
• the tenure holder's name and the tenure under which the well was drilled
• the type of drilling rig used
• a summary of the drilling operations carried out
• the depth in metres of the well at the end of the day's drilling
• the size and type of drill bit used
• the drilling fluids and additives used
• the size and depth in metres of any casing inserted in the well
• the depth in metres of the top and bottom of each cemented interval in the well
• the results of any deviation surveys carried out in the well
• a description of any drill stem tests or other tests carried out in the well
• the type of any perforations in the well and the depth in metres of the top and bottom of the perforated intervals
• details of any squeeze cementing or cement plugging carried out
• a description of any cores or cutting samples taken.

10.1.6 Well Abandonment Report
If a GHG well is plugged and abandoned, the GHG tenure holder for the well must give the chief executive a report about the abandonment of the well - for a well that is plugged and abandoned before the rig release day for the well, with the well completion report for the well or within two months after the completion day.

The well abandonment report must include each of the following details:

• the type and number of the GHG tenure
• the name and postal address of the operator of the GHG well
• the identifying name of the well
• the name of the GHG tenure holder
• the name of the author of the report
• the name of the person submitting the report
• the date of the report, in day-month-year format
• a summary and history of the well, including a location map and the date on which a well completion report for the well was given to the chief executive.

The well abandonment report must include the following details about the drilling of the GHG well:

• the total depth in metres
• the position at the top and bottom, and the thickness, of any of the following intersected by the well:
  − a coal seam
  − a natural underground reservoir under the P&G Act
  − an aquifer.
• the depth in metres of any perforations in the casing of the well
• the type of drilling rig used to drill the well
• all surveys and measurements made in the well, including any detailed interpretation of a survey or measurement
• for the completion or abandonment of the well, each of the following:
  − details of the casing and equipment installed in the well, with diagrams showing their major dimensions and features of the casing and equipment
  − a full description of all equipment, including prescribed equipment, retained in the well, including, for example, the size and nature of the equipment and any features of the equipment that may cause a hazard to underground mining operations
  − the surveyed location of any prescribed equipment
  − the method of the cementing operations carried out in or on the well, including, for example, the location and type of plugs, the intervals covered, the volume and type of cement used, any losses of cement due to voids or permeable strata, and the methods used to overcome losses of cement
  − the method, materials and volume of cement used to cement voids
  − a description of any other abandonment procedures used for the well
  − any other details of the activities carried out in the drilling, completing or plugging and abandoning the well, and an assessment of their possible impacts, that would assist a person in making an assessment of potential risks to safe and efficient underground mining.

The position at the top and bottom of the coal seam, natural underground reservoir or aquifer must be expressed using:

• for a directional well:
  − the total vertical depth in metres
  − the horizontal plane or the depth in metres.

The position at the top and bottom must be identified in relation to:

• for a directional well:
  − the total vertical depth in metres of the well
  − the horizontal plane of the well or the depth in metres.
The well abandonment report must include the following details about the casing and other equipment, including prescribed equipment, inserted into the geothermal well:

- the features of the casing and equipment, including, for example:
  - the size and type of casing and equipment
  - the characteristics of the casing and equipment that may cause a hazard.
- diagrams showing the location of the casing and equipment
- the location of all perforations made to the casing of the well
- the depth in metres of the top and bottom of each perforation interval made to the casings.

The well abandonment report must include the following details about all squeeze cementing or cement plugging carried out in the geothermal well:

- the type and cement and additives used in the well
- the depth in metres of the top and bottom of each cemented interval in the well
- any losses of cement caused by seepage in voids or permeable state in the well
- the method, materials and volume of cement used to cement the voids
- the method used to overcome losses of cement.

The well abandonment report must include the following information about the geothermal well:

- a description of:
  - all surveys, tests and measurements carried out during the drilling of the well including the results of the surveys, test and measurements
  - any other procedures used to abandon the well
- if stimulation of the well was carried out before it was plugged and abandoned:
  - the depth in metres of the top and bottom of the intervals in the well over which the stimulation was carried out
  - a description of the equipment used to carry out the stimulation
  - a copy of any record made about the stimulation by the person who carried it out
  - any other details about the stimulation that would help a person to make a future assessment of the impact of the stimulation on the safety of the well
- any other details of the activities undertaken in relation to drilling, plugging and abandoning the well that would help a person in making an assessment of the potential risks to the safe and efficient operation of the well in the future
- a summary and history of the well
- a map showing the location of the well
- the day the completion report for the well was given to the chief executive.

10.1.7 Seismic Survey Report

If a GHG tenure holder carries out a seismic survey of the area of the tenure or reprocesses raw data obtained from a survey, the holder must, within 12 months after the day the survey is completed, give the chief executive a report about the survey. The seismic survey must include the following information about the geophysical survey:

- a description of:
  - a description of the location of the area surveyed
- a geological summary of the area surveyed
- an index of previous seismic surveys carried out under the authority within the area and a summary of the results of the surveys
- the objectives of the survey
- the activities carried out for the survey, including, for example, details of the seismic lines used and the days on which the activities were carried out
- a description of each method used to acquire raw data, including:
  - the equipment used for positioning, surveying, navigation or other purposes
  - the techniques and equipment used for recording and testing the data
  - a description of how the raw data was processed or reprocessed
  - an evaluation of the processed or reprocessed data, including an interpretation of the seismic horizons (seismic reflectors) and any leads or prospects identified from the data
  - a map showing the location of the seismic lines used for the survey
- if the report is not accompanied by grid files for the area surveyed in digital form:
  - structure contour maps of seismic horizons (seismic reflectors) in the area surveyed
  - maps of the area showing variations in the thickness of stratigraphic units (isopach maps).

The report must be accompanied, in digital form, by each of the following:
- the raw data obtained from the survey and the record made as the data was recorded (commonly known as the ‘observer’s logs’)
- a list of the seismic lines used and the range of the numbered stations on each line
- the surveyed location, including the elevation, of each seismic source and receiver point
- the processed or reprocessed data derived from each seismic line used for the survey
- a graphical representation of the date
- if an activity for the survey was carried out by a contractor of the authority holder, a copy of any report given to the holder by the contractor for the activity.

10.1.8 Scientific or Technical Survey Report

If a GHG tenure holder carries out a scientific or technical survey of the area of the tenure or reprocesses raw data obtained from a survey, the tenure holder must, within six months after the day the survey is completed, give the chief executive a report about the survey.

The scientific or technical survey must include the following information:
- a description of:
  - the location of the area surveyed; and
  - the type of survey carried out; and
  - how the raw data obtained from the survey was processed; and
  - each method used to acquire the raw data from the survey, including the equipment used to acquire the data and the techniques and equipment used to record and test the data;
− a summary of the geology of the area surveyed;
− a summary of the objectives of the survey;
− details of the activities, carried out for the survey, including the days the activities were carried out;
− an interpretation of the processed or reprocessed data obtained from the survey;
− details of all measurements made or samples taken during the survey;
− an index of all previous scientific or technical surveys, of the same type as the survey for which the report is given, carried out under the tenure, and a summary of the survey results;
− each of the following in digital form:
  ▪ the raw data obtained from the survey;
  ▪ the processed or reprocessed data obtained from the survey.

10.1.9 GHG Storage Injection Testing Report

If GHG storage injection testing for an underground geological formation or structure is carried out under a GHG tenure, the GHG tenure holder must, within 40 business days after the GHG storage injection testing period ends, give the chief executive a report about the testing for the period. The report must contain each of the following:

• the type and number of the tenure
• the identifying name of the GHG well used for the testing and the type of perforations in the GHG well and the depth in metres of the top and bottom of the perforated intervals; and the choke size used for the well
• an identification of each geological formation or structure into which a GHG stream or water was injected as part of the testing
• the duration of the testing
• details of the substance injected, including:
  − whether the substance is composed of GHG stream or water
  − if a GHG stream was injected – information about the composition of the GHG stream
  − the volume of the substance injected
  − the rate at which the substance was injected
• the observation migration pathway of the substance following injection
• the operations and techniques being used to monitor and verify the behaviour of the substance injected
• an assessment of risks to public health or the environment associated with the testing
• how the risks are being mitigated.

10.1.10 GHG Stream Storage Capacity Report

A GHG tenure holder must, within 40 business days after the last day of a six month period for the tenure, give the chief executive a GHG Stream Storage Capacity Report for the tenure for the period.

The report must contain each of the following:

• the type and number of the GHG tenure
• the identifying name of each GHG storage reservoir in which there is available capacity to store a GHG stream
• the estimated volume of storage capacity in each GHG storage reservoir within the area of the tenure worked out on the first day and last day of the period.

10.1.11 GHG Stream Storage Injection Report
A GHG lease holder must, within 40 business days after the last day of a six month period for the lease, give the chief executive a GHG stream storage injection report for the period.

The report must contain each of the following:

• the number of the lease
• an identification of each GHG stream storage site into which a GHG stream or water was injected under the lease for the six month period
• the volume of GHG stream injected into each GHG storage site within the area of the lease for the six month period
• for each GHG storage reservoir into which a GHG stream is injected under the lease—the number of GHG wells injecting a GHG storage stream into the reservoir
• the operations and techniques being used to monitor and verify the behaviour of the GHG streams injected into each GHG storage reservoir
• an assessment of whether there is a risk of a serious situation arising for any GHG stream storage site under the lease
• an assessment of any risks to public health or the environment associated with GHG stream storage under the lease
• how any risks are being mitigated.

10.1.12 Monitoring Report
A GHG lease holder must give each relevant chief executive a monitoring report for the 12 months that ended on the last anniversary day within two months after each of its anniversary days.

A monitoring report is a report about the expected migration pathway or pathways of GHG streams during and after injection into GHG storage reservoirs under the GHG lease.
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| **Related documents** | Petroleum and Gas Reporting Guideline  
Mineral and Coal Reporting Guideline |
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