

Government of Alberta 

Digital Geophysical Submission Specifications

*Dispositions & Technical Services Branch
Public Lands Division*

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1.0 Digital Geophysical Submission Specifications

1.1 Introduction

Dispositions & Technical Services Branch (DTSB) is developing a system to handle the administration and management of surface activities on Public Lands. This system is named ADEPT (Application, Disposition Processing and Tracking). The objective for ADEPT is to automate the application, referral, approval, mapping processes, and provide data to Resource Data Branch (RDB) for base map updates.

1.2 Overview

This document describes the specification for digital submission of geophysical preliminary applications, amendments and final plans by industry to DTSB. These specifications were jointly developed by DTSB and RDB of the Public Lands and Forests Division (PLD), Industry represented by members of the Canadian Association of Petroleum Producers (CAPP), the Small Energy Producers Association of Canada (SEPAC) and the Canadian Association of Geophysical Contractors (CAGC).

The submission specification is based on the data requirements of PLD for accepting and administrating geophysical activities in DTSB. The submission includes attributed lines, points, and associated files only.

The data prescribed in the specification is similar to the data currently being collected by industry (i.e., it is based on the SEGP-1 specifications currently used by industry). Data items and the submission content may vary or may be optional or mandatory depending on the stage of application. Refer to the Appendixes.

There is a choice of file formats for spatial data, including Relational Data Set (RDS), Environmental Systems Research Institute (ESRI) Shapefile and MapInfo Interchange File, for spatial data. RDS is a subset of the SEGP-1 format, a common industry format. It can be used at the preliminary or final stages. The RDS format can also be used for access and detour features as well as point features. **CAD formats are not supported due to the potential complexity of the data structures.**

The specifications do not include Metallic and Industrial Mineral Exploration (MME) or Vertical Seismic Profile (VSP) activities, therefore MME and VSP application must still be submitted manually. The digital requirements for these activities are currently under review.

2.0 Digital Submission Content

This section deals with the files required for submissions. The section describes each file and when the file forms part of a submission. The ADEPT system expects that for each stage (e.g. preliminary application, amendment or final plan) and spatial format (e.g. ArcView, MapInfo, RDS Submission), the files are compressed into a single ZIP file. Submission file size is restricted to a maximum of 8mb.

2.1 Content Requirement Matrix

The submission for each stage and format is illustrated in [Appendix A](#) Table 1. It is important that the spatial format be maintained within a submission. For example, if the submission is comprised of ArcView spatial files, then all the spatial files in the submission are ArcView files.

2.2 File Naming

2.2.1 Submission File

For preliminary submissions in which the geophysical activity number is unknown, the naming convention of the ZIP file incorporates the Exploration Seismic License number of the applicant. For amendment and final plan submissions, the geophysical activity number is used in the naming of the ZIP file. This naming is prefaced by “*p*”, “*a*” or “*f*”, with an underscore (“_”) separator, depending on the application type (*preliminary*, *amendment* or *final*). For example, an amendment for GEO990008, the ZIP file would be named “**a_GEO990008.zip**” or in the case of company X whose Exploration Seismic License number is 9999, a preliminary application would be named “**p_9999.zip**”.

2.2.2 Content Files

Within each compressed ZIP file, individual submission files are named with the ZIP file name appended with the file type separated by an underscore (“_”). Listed below are valid file types:

- Application Detail (*det*) – e.g. “**p_9999_det.csv**”
- Proof Notice of Intent (*int*) – e.g. “**p_9999_int.tif**”
- Program Plan (*img*) – e.g. “**f_geo990008_img.jpg**”
- Geophysical Field Report (*gfr*) – e.g. “**p_9999_gfr.doc**”
- Amendment Summary (*ams*) – e.g. “**a_geo990008_ams.doc**”
- Program Lines Spatial Data (*lin*) – e.g. “**f_geo990008_lin.shp**”
- Facility Spatial Data Point Features (*pnt*) – “**a_geo990008_pnt.shp**”
- Shot Points Spatial Data (*spf*) – “**f_geo990008_spf.shp**”
- Interim Final Declaration (*dec*) – “**d_geo990008_dec.doc**”

[Appendix A](#) Table 2 summarizes the Zip file contents and file naming conventions for each application type.

2.3 Submission Files

This section describes the files that are contained within the ZIP.

The layout of the submission files is detailed later in the document. The following rules apply to all files. The word “NULL” is blank. If your software automatically inserts a “0” or “0.0” into an empty numeric field, it will still be accepted.

The Program Application Details and RDS Spatial Data files must be structured as a comma delimited file (.csv). Field names should be in uppercase. Most spreadsheet software such as Lotus and Excel have the option to Save As with the csv extension. However, the same structure can be accomplished in a word-processing or text editor software such as WordPerfect, Notepad, or Microsoft Word. First, the data must follow the comma-delimited structure:

field name, value

field name, value, value

Secondly, the file is saved with the *txt* extension (*.txt*). Examples are provided in [Appendix E](#). The file extension must be renamed to the *csv* extension.

2.3.1 Program Application Details (*_det.*)

This file is required for preliminary, amendment and final plan applications. It replaces the application form and contains all the information normally found in the form. Values for all fields are not required for a preliminary or amended application. Each record in the file has the data item name, followed by a comma then followed by the value(s) as specified in [Appendix C](#) of the specifications. The applications details file (*det*) is always comma delimited having a *.csv* extension in the file name.

2.3.2 Program Plan (*_img.*)

An image of the program is required in the digital submission package. This file shows the intent of the application. It contains the information normally shown on a paper plan, such as the reference grid used, context information (topography, hydrography, forest cover polygons, existing cut lines, geo-administrative areas, etc.) and program information. Inclusion of this file is required for preliminary, amendments, and Final Plan applications.

The following image file formats are supported for the program plan (img). Bitmap is not supported due to concerns in large file sizes.

- jpg – JPEG – for color images between 256 and million color set to between 150 and 250 dpi (dots per inch)

It is recommended that the image file be resized to between 75% - 80% of its original size. This action will not degrade the details on the plan but will assist in reducing the image file size as well as the overall zip submission.

- tif – Tagged Image File Format (TIFF) group 4 format is limited to black and white images (no gray scale) at 300 dpi
- pdf – Adobe Acrobat – images are produced to the above standards and made into a pdf format file.

2.3.3 Geophysical Field Report (*_gfr.*)

This file can be in any format supported by MSWord2000. It is required for all preliminary applications and major amendments on Public Land. It is a textual description of the program with more detail than is available from the raw data in a submission. The Geophysical Field Report is located at srd.alberta.ca under Geophysical, Lands Forms.

2.3.4 Amendment Summary (*_ams.*)

This file can be in any format supported by MSWord 2000. This document is required for all amendments. This file contains a textual explanation of any changes or changes in line names. Begin the file with an explanation of the changes such as access changes, lines extended or relocated, energy changes, etc, then list the new line names with corresponding old-line names (new, old). It is suggested that the description include a to-and-from examination where applicable. Information is not expected on lines that have been shortened or deleted.

The following example illustrates the possible file content:

```
Description of changes line S22 moved Northeast 200 meters  
Line S19 changes from handcut to Low Impact  
Access to program changed from Highway 2 to Secondary road 40  
from a south direction
```

Line name changes
L100, A100
L200, A200
L300, A300

2.3.5 Program Lines (*_lin.*)

Program lines are recorded here. Values for all fields are not required for a preliminary, amendment or Final Plan applications. This file replaces the supplemental line width sheet for final plans. Refer to [Appendix D](#) of the specifications for field definitions and allowable values.

This is a 'spatial' file and depending on the format chosen, the number of files required may vary. [Appendix B](#) summarizes the technical specifications for ESRI Shape files, MapInfo Interchange files and Relational Data Set files.

2.3.6 Facilities Features (*_pnt.*)

Program Facilities are recorded here. Creek crossings should be coincident with lines but do not require explicit topological relationships. Values for all fields are not required for a preliminary, amendment or Final Plan applications. Refer to [Appendix D](#) of the document for field definitions and allowable values.

This is a 'spatial' file and depending on the format chosen, the number of files required may vary. [Appendix B](#) summarizes the technical specifications for ESRI Shape records, MapInfo Interchange, and RDS Files.

2.3.7 Shot Points Features (*_spf.*)

Shot Point features are recorded here. The shot point records and attributes are required for all Final Plan submissions. Shot points refer to the source locations only as indicated [in Appendix D](#).

This is the spatial file depending on the format chosen; the number of files required may vary. Refer to [Appendix B](#), which summarizes the technical specifications for ESRI Shape records, MapInfo Interchange, and RDS Files.

2.3.8 Other Files

- 1) Proof that Notice of Intent was submitted to the Counties, Municipal Districts, Municipality and Improvement Districts (*_int.*):

This file would include the letter and proof of submission, i.e., a scanned image of the fax sent, notification or courier shipment slip and the notice document. This file is required for all preliminary applications.

It is recommended to resize this document between 75% - 80% of its original size. This will assist in reducing the size of the file as well as the overall zip submission.

Bitmap is not supported because of large file sizes. The following image file formats are supported for the program plan (*img*):

- jpg – JPEG – for color images between 256 and million color set to between 150 and 250 dpi (dots per inch).
- tif – Tagged Image File Format (TIFF) group 4 format is limited to black and white images (no gray scale) at 300 dpi
- pdf - Adobe Acrobat – images are produced to the above standards and made into a pdf format file.

- 2) [Timber Damage Assessment Form](#) (*_tda.*):

This file can be in any format supported by MSWord97. It is required within 90 days of completion or with the Final Plan submission for all final applications on Green Area Public Land.

3) Interim Final Declaration Form (*_dec.*):

This file must be in MS Word 2003 or PDF format. It is required for an interim final declaration submission, which is required in the case that a time-lapse program has not been shot or amended for a given year.

4) Other Correspondence

These files must be in a format supported by MSWord 2000. The naming of the file should follow the naming indicated in this document. The naming should suggest the contents of the file for example a covering letter could be named as follows: *p_9999_covlet.doc*, *f_geo990099_covlet.doc*. Correspondence must only pertain with the submitted program and no other programs. If there is a need to send correspondence for other programs outside of an application submission, please contact the Geophysical and Gravel Unit.

3.0 Submission Delivery

The submission mechanism is standard e-mail. The sender is notified on the status of the submission successful or not. If the submission is unsuccessful, it is returned with the reason(s) for the failure (refer to The Procedures For Digital Geophysical Submission document). If the submission passes the validation, a message will be sent to the submitter indicating the submission was successful and in the case of a preliminary application, a geophysical activity number is indicated in the email response. Submission file size is restricted to a maximum of 8mb.

Notifications are always sent to the submitter's email address, care should be used when submitting from an email address other than what is generally used such as a personal email vs. company email addresses.

Subject line:

The submission ZIP file, created as per these specifications, must be attached to the message. The message subject must contain the keywords "**SUBMISSION**" and "**CLIENTID: ###-####-###**" where **###-####-###** (with or without dashes is acceptable) is the Land Status Automation System (LSAS) Client Number of the submitter. Uniform character case is not required but the keywords must be spelled correctly or the submission will be rejected. For example "Digital **SUBMISSION** for **CLIENTID: ###-####-###**".

The subject line must contain the keywords and valid format required for a submission. It can include the submitter data such as a company file number. ADEPT will return the complete subject line that was submitted. For example "<company file number> Digital **SUBMISSION** for **CLIENTID: ###-####-###**". Care should be taken on the additional data provided, as this portion of the submission is unprotected and not secure.

Email Security

The submission ZIP file may be encrypted if desired. However, encryption must be compatible with Pretty Good Privacy (PGP). The resulting zip file should be named with the extensions **.zip.pgp*. The submitter must provide PLD with their public key, to be held on file in confidence, for decrypting submissions. If encryption is not used then the submitter must provide PLD with a signed waiver to be held on file, absolving the Government of liability with respect to Internet security. If encryption is used but the public key is not found the submission will be unsuccessful. If encryption is not used but the waiver is not found, the submission will be unsuccessful.

Email Body

The automated process will ignore all other text in the email body of the submission. The email body needs to include the name and phone number of the submitter for contact as well as other information that would normally be contained within the Application form document. Do not include files pertaining to other geophysical activities in your submission.

Email Reply

Once a submission has been electronically submitted, wait for a confirmation receipt from ADEPT. Do not re-submit unless the e-mail address is incorrect or if the submission failed. If notification is not received in 24 hours, contact the ADEPT Support at (780) 427 - 3570.

Multiple Attachments

In the past ADEPT allowed only one attachment, with the advent of email, automated processes such as placement of communication disclaimers in the outgoing emails, there was a need to allow for multiple attachments. ADEPT will now permit additional attachments in the submission and only validate the submission if there is one zip file, keeping in mind that the size of the email may affect processing the submission.

Delivery Response

The delivery package from ADEPT will consist of the details file, the email body and a successful or unsuccessful validation file. This will reduce the file size being returned to the sender.

4.0 APPENDIX A – Submissions

Table 1 – Submission Matrix of Required Files

| Format | ARCVIEW | MAPINFO | RDS |
|--|--|---|--|
| Preliminary | Application Detail Program Plan Geophysical Field Report Notice of Intent Program Line shapes Program Line index Program Line attributes Facility shapes Facility index Facility attributes | Application Detail Program Plan Geophysical Field Report Notice of Intent Program Line shapes Program Line attributes Facility shapes Facility attributes | Application Detail Program Plan Geophysical Field Report Notice of Intent Program Line coordinates records Program Line attribute records Facility coordinates & attribute records |
| Amended | Application Detail Program Plan Geophysical Field Report Amendment Summary Program Line shapes Program Line index Program Line attributes Facility shapes Facility index Facility attributes | Application Detail Program Plan Geophysical Field Report Amendment Summary Program Line shapes Program Line attributes Facility shapes Facility attributes | Application Detail Program Plan Geophysical Field Report Amendment Summary Program Line coordinates records Program Line attribute records Facility coordinates & attribute records |
| Interim Final (Time-lapse programs) | Application Detail Program Plan Geophysical Field Report Amendment Summary Program Line shapes Program Line index Program Line attributes Facility shapes Facility index Facility attributes Shot points shapes Shot points index Shot points attributes | Application Detail Program Plan Geophysical Field Report Amendment Summary Program Line shapes Program Line attributes Facility shapes Facility attributes Shot Points shapes Shot Points attributes | Application Detail Program Plan Amendment Summary Program Line coordinates records Program Line attribute records Facility coordinates & attribute records Shot Points coordinates & attribute records |
| Interim Final Declaration (Time-lapse programs) | No geospatial vector data required | No geospatial vector data required | No geospatial vector data required |
| Final | Application Detail Program Plan Geophysical Field Report Amendment Summary Program Line shapes Program Line index Program Line attributes Facility shapes Facility index Facility attributes | Application Detail Program Plan Geophysical Field Report Amendment Summary Program Line shapes Program Line attributes Facility shapes Facility attributes Shot Points shapes Shot Points attributes | Application Detail Program Plan Amendment Summary Program Line coordinates records Program Line attribute records Facility coordinates & attribute records Shot Points coordinates & attribute records |

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| | | | |
|--|---|--|--|
| | Shot points shapes Shot points index Shot points attributes | | |
|--|---|--|--|

4.1 File Naming Summary

Table 2 – File Basename Summary

| Application Type | Submission File | Content |
|---|--|--|
| PRELIMINARY | p_*.zip – where “_*” = license number of applicant (e.g.: <i>p_1234.zip</i>) | p_1234_det.* p_1234_img.* p_1234_gfr.* p_1234_lin.* p_1234_pnt.* p_1234_int.* |
| AMENDMENT | a_*.zip – where “_*” = complete file number of program (e.g.: <i>a_geo020468.zip</i>) | a_geo020468_det.* a_geo020468_img.* a_geo020468_gfr.* a_geo020468_ams.* a_geo020468_lin.* a_geo020468_pnt.* |
| INTERIM FINAL (TIME-LAPSE PROGRAMS) | f_*.zip – where “_*” = complete file number of program (e.g.: <i>f_geo020468.zip</i>) | f_geo020468_det.* f_geo020468_img.* f_geo020468_ams.* f_geo020468_lin.* f_geo020468_pnt.* f_geo020468_spf.* |
| INTERIM FINAL DECLARATION (TIME-LAPSE PROGRAMS) | f_*.zip – where “_*” = complete file number of program (e.g.: <i>f_geo020468.zip</i>) | d_geo020468_det.* d_geo020468_dec.* |
| FINAL PLAN | f_*.zip – where “_*” = complete file number of program (e.g.: <i>f_geo020468.zip</i>) | f_geo020468_det.* f_geo020468_img.* f_geo020468_ams.* f_geo020468_lin.* f_geo020468_pnt.* f_geo020468_spf.* |

4.2 Submission Content

4.2.1 Preliminary Application

All the files associated with a preliminary application are prefixed with “p_”. The Exploration Seismic License number of the applicant forms the basis of the file naming convention. (e.g. *p_9999.zip*)

4.2.2 Amendment Application

All the files associated with an amendment application are prefixed with “a_”. The geophysical program activity number forms the basis of the file naming. (e.g. *a_geo010000.zip*)

An amendment is any change to a program in terms of line relocations, extension, or additions not covered by a field authorized Temporary Field Approval (TFA) from PLD.

4.2.3 Interim Final

All the files associated with an interim final application are prefixed with “f_”. The geophysical program activity number forms the basis of the file naming. (e.g. *f_geo010000.zip*)

An interim final is a short-term final submitted for time-lapse programs as they are shot or amended.

4.2.4 Interim Final Declaration

All the files associated with an interim final declaration are prefixed with “d_”. The geophysical program activity number forms the basis of the file naming convention. (e.g. *f_geo010000.zip*)

An interim final declaration submission is required in the case that a time-lapse program has not been shot or amended for a given year.

4.2.5 Final Plan

All the files associated with a final plan are prefixed with “f_”. The geophysical program activity number forms the basis of the file naming convention. (e.g. *f_geo010000.zip*)

5.0 Appendix B – Spatial Data Format

5.1 ArcView Shapefile Format

The shapefile format is the native format of Environmental Systems Research Institute’s (ESRI) ArcView product. Shape records store both geometry and attributes for features. A shape records consists of three files:

Shape records (geometry) are stored in the *.shp* file. This is the main file.

Attribute records are stored in the *.dbf* file. This is a dBase file.

An index to each shape is stored in the *.shx* file.

These extensions are added to the basename of the file and must all reside in the same directory. Each feature in the main file has a corresponding entry in the index file. There is also a one-to-one relationship between the shape records and attribute records, based on the record number. Attribute records must be in the same order as records in the main file. Shape records can support point, line and area features. However, shape records can contain only one type of geometry lines or points.

5.2 MapInfo Interchange Format

MapInfo Interchange Format (MIF) is an American Standard Code for Information Interchange (ASCII) format used by the MapInfo product for input and export. MIF files store both feature geometry and attributes. A MIF file consists of two physical files, having the following file name extensions:

Shape records (geometry) are stored in the *.mif* file.

Delimited attribute records are stored in the *.mid* file.

These extensions are added to the basename of the file and must all reside in the same directory. Each feature in the *.mif* file has a corresponding attribute record in the *.mid* file.

5.3 Relational Data Set (Data Subset of SEGP–1)

The data in the Relational Data Set (RDS) file is part of the SEGP–1 file, which the Geophysical industry currently uses. Like the SEGP–1, the RDS are ASCII files that can be read and transformed into a spatial format. However, the data in the RDS files must follow a defined pattern where fields are separated by commas. The RDS files are used to store feature coordinates and attributes.

The RDS easily supports point features within a single file. The location of a point is described with a x, y coordinate. Therefore, each row in a comma-separated file can contain both coordinates and the attributes required to define a feature. This file can have a file name extension of *.csv*.

A linear feature is made up of an ordered set of coordinates, where each coordinate is a vertex on the line. Relational data sets require files:

Ordered sets of coordinates are stored in the *.csv* file

Delimited attribute records are stored in the *.att*, file.

These extensions are added to the basename of the file and must all reside in the same directory. Each ordered set of coordinates in the *.csv* file corresponds to one record in the attribute file. Attribute records must be in the same order as records in the coordinate file.

Table 3. Spatial Data Files

| | Geometry | Attribute | Index |
|---------|-----------------|------------------|--------------|
| ArcView | .shp | .dbf | .shx |
| MapInfo | .mif | .mid | |

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| | Geometry | Attribute | Index |
|--------------|-----------------|------------------|--------------|
| RDS (lines) | .csv | .att | |
| RDS (points) | .csv | | |

6.0 Appendix C – Program Application Details (*_det.*)

This file is required for preliminary, amendment and final plan applications. The file contains metadata for the entire submission. Values for all fields are not required for all application stages (preliminary, amendment, final). Each record in the file has the data item name followed by a comma followed by the value(s) as specified in Table 4.

Field names must be in uppercase.

When entering an individual’s name start with the last name followed by a comma, space and enter the first name. If you are using spreadsheet software such as Microsoft Excel, place the last name in one column and the first name in the next column.

The Details file should not contain any quotes. Extra commas that may occur when you Save As to a .csv format are acceptable.

If the UTM and/or Datum fields are not filled in the details file the submission would fail and the spatial data cannot be confirmed for error or emissions. In other word, the error file submitted back to the client from ADEPT will not contain all the possible errors in the submission.

6.1 Program Detail Layout And Definitions

Table 4 – Program Detail File Record Layout

| Field Name | Valid Values | Validation |
|-------------------|--|--|
| PROSPECT | Free text | - Required for preliminary application, amendments and final plan. - Confirmation check * |
| LICENSEE | Free Text | - Required for preliminary application, amendments and final plan. |
| LICENSEE_ID | ###-####-### | - Required for preliminary application, amendments and final plan. - Must be a valid combination. - Confirmation check * |
| LICENSE_NO | Valid License # | |
| PROGRAM | GEO010000 | - Required for amendments and final plan. Null otherwise |
| ENERGY_SOURCES | D – Dynamite V – Vibroseis A – Air Gun P – Pea Shooter O – Other | - Required for preliminary application, amendments and final plan. - Confirmation check * |
| SHOT_ON_WATERBODY | Y – Yes N – No. | - Required for preliminary application, amendments and final plan. - Confirmation check * |

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| Field Name | Valid Values | Validation |
|-------------------------------|---|--|
| EQUIPMENT | T – Tracked W – Wheeled H – Helicopter M – Boat B – Buggy L – Low Ground Pressure (LGP) O – Other | - Required for preliminary application, amendments and final plan. - Confirmation check * |
| PERMITTEE | Text | - Required on final plan or as soon as known |
| PERMITTEE_ID | ###-####-### | - Required on final plan or as soon as known - Must be a valid combination. - Confirmation check * |
| PERMIT_NO | Valid Permit # | |
| CONSULTANT_NAME | Text | - Required for preliminary application, amendments and final plan. |
| CONSULTANT_ID | ###-####-### | - Required for preliminary application, amendments and final plan. |
| NUMBER_OF_SITES | Integer | - Required on final plan for programs utilizing the heliportable method. |
| AVG_SIZE_OF_SITES | Decimal | - Required on final plan for programs utilizing the heliportable method. |
| UTM_ZONE | 11 – Zone 11 12 – Zone 12 G – Geographic. | - Required for preliminary application, amendments and final plan. |
| DATUM | 27 – NAD27 83 – NAD83 | - Required for preliminary application, amendments and final plan. |
| ATS_VERSION | Decimal (5 including decimal) M – Master file | - Required for preliminary application, amendments and final plan |
| PUR_DATE | Date (YYYYMMDD) | - Required when ATS_VERSION = M |
| SURVEY_METHODS | Text | - Optional |
| HORIZONTAL_TAKEOFF | Text | - Optional |
| HORIZONTAL_TAKEOFF_DESCRIPTOR | Text | - Optional |
| HORIZONTAL_TAKEOFF_NORTHING | Decimal | - Optional |
| HORIZONTAL_TAKEOFF_EASTING | Decimal | - Optional |
| COORDINATE_QUALITY | Integer | - Optional |

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| Field Name | Valid Values | Validation |
|---------------|------------------------------|---|
| TIME_LAPSE | Text: Y or N (for Yes or No) | - Required for preliminary application, amendments, interim finals, and final plan. |
| DECLARATION | Text: Y or N (for Yes or No) | - Required for preliminary application, amendments, interim finals, and final plan. |
| INTERIM_FINAL | Text: Y or N (for Yes or No) | - Required for preliminary application, amendments, interim finals, and final plan. |

Table 5 – Program Detail File Record Layout Definitions

| | |
|----------------------|--|
| * CONFIRMATION CHECK | The information provided in the submission is compared against the information stored in the current version. Differences between the information will be identified for manual validation. This will not prevent the program from being accepted and processed. |
| PROSPECT | Name designated by the company that is unique for the fiscal year. |
| LICENSEE | The holder of the exploration program license under which the program of exploration is conducted. |
| LICENSEE_ID | LSAS client ID of the Program Licensee. |
| LICENSE_NO | Unique number assigned to the program licensee. |
| PROGRAM | A number assigned upon receipt of an application for an exploration program (activity number). |
| ENERGY_SOURCES | Any force, equipment or motion, used to generate seismic sound waves for the purpose of determining subsurface geology. |
| SHOT_ON_WATERBODY | An indication of whether or not, all or part of the program will be or has been shot on a waterbody. |
| EQUIPMENT | The classification of vehicles used to transport energy generation instruments, equipment, or personnel on a program. The vehicles are categorized as to what ground contact they are mounted on and/or special mechanical features. |
| PERMITTEE | The principal holder of the program permit who operates or authorizes the operation of the exploration equipment used in the conduct of the program of exploration. |
| PERMITTEE_ID | LSAS client ID of the Program Permittee |
| PERMIT_NO | Unique number of assigned to the Program permittee. |
| CONSULTANT_NAME | Name of consulting organization making the submission. |
| CONSULTANT_ID | LSAS client ID of the consulting organization |
| NUMBER_OF_SITES | The total number of landing sites in a program, utilized by the heliportable method. These do not include helipads identified in the point features. |
| AVG_SIZE_OF_SITES | The average diameter of the landing sites. The size of an existing or natural opening is 0 and is included in the average for TDA |

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| | |
|-------------------------------|---|
| | purposes. The number supplied should be to a maximum of three decimal places. |
| UTM_ZONE | UTM Zone number for all spatial files in the program. |
| DATUM | Reference Datum for all spatial files in the program. |
| ATS_VERSION | The ATS version used to compile the submitted data. Refer to Appendix F . For those using the Master file supply the date purchased. |
| PUR_DATE | The date that the ATS master file was purchased |
| SURVEY_METHODS | Survey Methods used. |
| HORIZONTAL_TAKEOFF | Type of entity used as origin of coordinates. May be ASCM, cadastral mapping point, DGPS correction provider, ATS corner, existing shot point identifier, wellsite corner, and topographic map feature. |
| HORIZONTAL_TAKEOFF_DESCRIPTOR | Actual entity used as origin of coordinates. May be ASCM number, cadastral mapsheet number and point number, and name of DGPS correction provider, ATS identifier, seismic program line and shot point identifier, wellsite corner legal identifier, mapsheet number and description of feature. |
| HORIZONTAL_TAKEOFF_NORTHING | UTM northing for horizontal takeoff. |
| HORIZONTAL_TAKEOFF_EASTING | UTM easting for horizontal takeoff. |
| COORDINATE_QUALITY | Absolute positional accuracy in meters. |
| DYNAMITE | Any use of nitroglycerine based compounds to generate seismic sound waves. The dynamite may be buried in drilled shot holes or laid out on the surface. |
| VIBROSEIS | Any instrument that vibrates along the surface for the purpose of generating seismic waves. |
| AIR GUN | An instrument that generates seismic waves by forcing a blast of compressed air onto the ground surface or into a waterbody. The term is synonymous to mud gun. |
| PEA SHOOTER | Any instrument used to generate seismic waves by repetitively dropping heavy weights onto the surface. |
| OTHER ENERGY SOURCE | Any method of generating seismic waves that does not fit into any of the above categories. |
| TRACKED | A vehicle mounted on a continuous belt that supports the weight of the vehicle and causes it to be propelled along the ground. |
| WHEELED | A vehicle mounted on wheels. |
| HELICOPTER | An aircraft whose lift is derived from the aerodynamic forces acting on one or more powered rotors turning about the vertical axes. |
| BOAT | A vessel for travel on water. |
| LOW GROUND PRESSURE (LGP) | Any wheel mounted or track mounted vehicle where the tracks or tires are made extra wide or in a specific manner to minimize the |

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| | |
|-----------------|--|
| | PSI ground pressure exerted by the vehicle |
| OTHER EQUIPMENT | Types of equipment that does not fit into any of the above categories. |
| TIME_LAPSE | Specify whether the program is a 4d/time-lapse program or not. |
| INTERIM_FINAL | Specify whether your submission is an Interim Final submission (associated with time-lapse programs) or not. A value of 'Y' indicates a time-lapse program interim final application. A value of 'N' indicates all other cases: a time-lapse application, a time-lapse final, as well as a non-time-lapse program in any part of its cycle, etc. |
| DECLARATION | Document required for time-lapse programs that have not been shot or amended for a given year. |

The following example illustrates the file content for a preliminary application.

```

PROSPECT,The Big Project,
LICENSEE,Company ABC Limited,
LICENSEE_ID, 8004521001,
LICENSE_NO,9999,
PROGRAM,
ENERGY_SOURCES,d,a,
SHOT_ON_WATERBODY,N,
EQUIPMENT,t,h,
PERMITTEE,the little permittee company,
PERMITTEE_ID,8009999001,
PERMIT_NO,12345,
CONSULTANT_NAME,Let's Consult Company,
CONSULTANT_ID,888-1212-224,
NUMBER_OF_SITES,
AVG_SIZE_OF_SITES,
UTM_ZONE,11,
DATUM,83,
ATS_VERSION, 2.6
PUR_DATE,,
SURVEY_METHODS,
HORIZONTAL TAKEOFF,
HORIZONTAL TAKEOFF_DESCRIPTOR,
HORIZONTAL TAKEOFF_NORTHING,
HORIZONTAL TAKEOFF_EASTING,
COORDINATE_QUALITY,
TIME_LAPSE, N,
INTERIM_FINAL, N,
DECLARATION, N,

```

It should be noted that the following items are not currently required by regulation but are used as submission parameters and data quality indicators. They are required in order to load and properly integrate the submission into the spatial databases.

- SURVEY_METHODS
- HORIZONTAL TAKEOFF
- HORIZONTAL TAKEOFF_DESCRIPTOR
- HORIZONTAL TAKEOFF_NORTHING
- HORIZONTAL TAKEOFF_EASTING
- COORDINATE_QUALITY

7.0 Appendix D – Spatial Data Files

The positions of proposed seismic lines contained in preliminary or amended application submissions are approximate. Their final location in the field will be governed by actual positions of infrastructure, existing seismic lines, roads, and other features. To determine the usefulness of the spatial data for future PLD purposes, the final horizontal coordinates for the spatial data contained in the vector file could be accompanied. This information identifies the origin and estimated reliability of the horizontal coordinates. The data must be submitted in Geographic or Universal Transverse Mercator (UTM) projection in either NAD 27 or NAD83.

For any submission of spatial files in the RDS format does not need decimal points for coordinate values. When loading the spatial data, ADEPT inserts decimal points into the coordinates. The algorithm used is as follows. Make sure that this works with your system.

The following is for RDS only:

For UTM, the loader inserts a decimal place between the 6th and 7th number for the x-coordinate and between the 7th and 8th number for the y coordinate.

1,123456.78,1234567.8

For Geographic, the loader expects the coordinates in DegreesMinutesSeconds (DMS) and converts them to Decimal Degrees. For example 130°5'30" is submitted as

1360530

Additionally, all the directional letters (e.g. “N” and “W”) must be removed from the X and Y coordinate field values.

7.1 Program Lines (*_lin.*)

Program lines are recorded here. Values for all fields are not required for all application stages (preliminary, amendment, and final plan). This file replaces the supplemental line width sheet for final plans. Field names must be in uppercase.

Line ID must be a unique value. Lines are broken up by a unique set of attribute values. Each line object in the spatial data file is referenced by *ID* to a record in the textual attribute file. The textual attribute records are defined in Table 6.

Additionally, seismic, access, and detour lines associated with a program are also recorded here.

7.1.1 Program Line Attribute File Record Layout

Table 6 – Program Line Attribute File Record Layout

| Field Name | Data Type | Valid Values | Validation |
|------------|--------------|---|--|
| ID | Integer (10) | Any number | Required for all features |
| LINE_NAME | String (16) | Free text | Required for all seismic features Optional for non seismic features |
| LINE_TYPE | String (1) | S – Source R – Receiver C – Combination D – Detour B – Disposed Access A – Additional Access | Required for all features. |

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| Field Name | Data Type | Valid Values | Validation |
|------------|---------------|--|---|
| CLEARING | String (1) | N – New Clearing E – Existing Clearing X – No Clearing <i>Null for disposed access only</i> | Required for all features, disposed access is null. |
| METHOD | String (1) | S – Survey Line of Sight L – Low Impact C – Conventional Z – Minimal Impact <i>Null for disposed access only</i> | Required for all features, disposed access is null. |
| CUT_TYPE | String (1) | H – Hand Cut M – Mechanical Cut <i>Null for disposed access, existing clearings and no clearings</i> | Required for New clearing (N) features. Disposed access. Existing clearings (E) and No Clearing (X) are null. |
| WIDTH | Decimal (8,1) | Any number | Required for all features. Disposed access and minimal impact (Z) features are 0. |
| OFFSET | Decimal (8,1) | Any number | Required on final plan for Low Impact Seismic (L) features, other features are 0. |
| RD_ALLCE | String (1) | R – Road Allowance <i>Null if not in road allowance</i> | Required for seismic features within surveyed road allowance, not for road allowance crossings. |
| HELI_DRILL | String(1) | H – Heliportable Drill site <i>Null if no drill sites on line</i> | Required for seismic line which contain Heliportable drill sites |
| CHANGE | String (1) | N – New E – Extension M – Move A – Attribute change <i>Null if no change</i> | Required for seismic features, which are new or have changed. Null when a feature has not changed. For preliminary all lines are new. |
| COMMENTS | String (80) | Free Text | Optional |

7.1.2 Program Lines Definitions

Table 7 – Program Line Attribute File Record Layout Definitions

| | |
|-----------|---|
| ID | Unique record identifier. It is usually system generated. |
| LINE_NAME | An alphanumeric string assigned by the company, which uniquely identifies each seismic line in a program. |
| LINE_TYPE | Describes the function or purpose of a feature. |
| CLEARING | The state of a proposed line, which determines whether or not the vegetative cover will have to be removed. |
| METHOD | The technique to be used on the line. |
| CUT_TYPE | An indication of how a new line will be cleared. |
| WIDTH | Width of line in meters. |

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| | |
|----------------------|--|
| OFFSET | Average offset, in meters, from the centerline of an approved program line to the centerline of the cleared line. |
| RD_ALLCE | The right-of-way of a highway or public road and any other right-of-way established or surveyed under the <i>Surveys Act</i> . |
| HELI_DRILL | The objective of heliportable seismic is to use hand cut lines only for geophone placement, hand drills/heli-drills for shot holes, with helicopters to transport men, drills, recorders (where necessary) and cables to required locations. Both Natural and hand cut helipads are utilized. Heliportable seismic is not substitute mitigation for continuing activity in wildlife areas where timing restrictions may apply. |
| CHANGE | Description of the nature of change of a feature. |
| COMMENTS | Notes specific to the feature. |
| SOURCE | A line on which energy source points are established for the purpose of generating seismic waves. No geophones are placed along the line. |
| RECEIVER | A line used in a program solely for the purpose of stringing geophones. No source points are permitted on the line. |
| COMBINATION | A line on which energy source points and geophone cables are located. |
| DETOUR | Any deviation from an approved program line for accesses purposes owing to terrain. When detours are used, the continuation of the original line is approved as being an approved line type (LIS or conventional) that is hand cut. |
| DISPOSED ACCESS | This is access that is under the care and control of a third party. Examples are access under a disposition (e.g., Licence of Occupation), a public road, a surveyed road allowance, or a portion that may cross private land. In some cases consent is required and/or a road use agreement. Examples are consent is required for private land, and consent and/or a road use agreement are required from the disposition holder. |
| ADDITIONAL ACCESS | This is access on vacant public land that is usually existing (e.g., cutlines, trails), that requires approval from the department. This will be the only access that is approved with the plan. |
| NEW CLEARING | The removal of any forest growth, as defined in the Forest Act, 2 meters or greater in height and/or any reforested or regenerated areas. Changes in clearing that are less than 100m are not required for this submission. |
| EXISTING CLEARING | The removal of any forest growth less than 2 meters in height or where there is a visible linear disturbance pattern, e.g. cutline or trail. Changes in clearing that are less than 100m are not required for this submission. |
| NO CLEARING | Where there is no surface disturbance or ‘minimal impact’, as defined in the Exploration Regulation, on the land such are native prairies, range land, cultivated land or water bodies. Changes in clearing that are less than 100m are not required for this submission. |
| SURVEY LINE OF SIGHT | A survey line of sight is generally seen as a requirement for the industry to locate shot points, etc. Its use is widespread and associated in some manner with most lines cut. The primary purpose, however, is to provide line of sight between stations, and thus should be kept to a minimum width of 0.5 meters. |
| LOW IMPACT SEISMIC | The objective of low impact seismic (also referred to as the “path of least resistance”) is to create a narrow, continuously meandering line. This method reduces the line of sight to less than 200 m, avoids larger standing trees (meandering avoidance), and leaves the soil and ground cover generally undisturbed. The line |

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| | |
|----------------|--|
| | <p>width can range from 1.0–4.5 m, and be a hand or mechanically cut line.</p> <p>Note: Conventional (straight) lines with a 200 m line-of-sight pattern are not LIS lines.</p> <p>Line cutting will vary with forest cover and density, terrain, line requirements and other factors. The average line width cannot exceed 4.5 m, and maximum line width cannot exceed 5 m. Generally line cutting will include several of the following:</p> <p>Average line construction width of 4.5 m (meandering) or less, depending on the width applied for.</p> <p>200 m maximum line of sight for wildlife reasons (see section 3.11.3).</p> <p>Avoidance of standing timber.</p> <p>Minimal disturbance of ground cover.</p> <p>Note: In dense timber stands where LIS is not possible, conventional line types are permitted providing line of sight blockage is in place every 200 m.</p> |
| CONVENTIONAL | <p>A conventional seismic line is a straight line that can either be hand or mechanically cut, and ranges in width from 1.0–6.0 m. The maximum width cannot exceed 6.0 m. A “Survey Line of Sight” is not considered a conventional line.</p> <p>For wildlife purposes, the maximum line of sight must not exceed 200 m in length. A mechanically cut conventional line provides little protection for timber and wildlife, so its use in the Green Area is somewhat restricted with the exception of muskeg areas and dense cover types.</p> <p>Note: Where possible, the same soil and ground cover protection used for LIS is to be used with conventional lines.</p> |
| MINIMAL IMPACT | <p>Minimal impact lines are those lines where no forest growth is cut other than to create a walking trail for foot access. There is no cutting of standing trees and little if any cutting of shrubs. May include Existing lines.</p> |
| HAND CUT | <p>No mechanical equipment, other than a chainsaw, may be used to cut the line</p> |
| MECHANICAL CUT | <p>The line has been or will be cut by some type of mechanical equipment. Examples include a dozer and a hydro-axe.</p> |

7.1.3 Program Lines RDS Spatial File Record Layout

This is applicable to RDS submissions only as spatial data is created automatically for MapInfo and shapefiles. The coordinates to create the seismic, access, and detour lines associated with a program are recorded here.

Table 8 – Program Line RDS Coordinates File Record Layout

| Field Name | Data Type | Valid Values | Validation |
|-------------------|------------------|---------------------|---|
| ID | Integer (10) | Any number | - Required for all features |
| LINE_NAME** | String (16) | Free text | |
| STATION_NO** | Integer (10) | Any Number | - |
| X_COORD | Integer | Any number | - Required for all features in a RDS submission only. |
| Y_COORD | Integer | Any number | - Required for all features in a RDS submission only. |
| Z_COORD** | Number | Any number | - |

Table 9 – Program Line RDS Spatial File Record Layout Definitions

| | |
|---------|--|
| ID | Unique record identifier from the Program Line Attribute File. It is usually system generated. |
| X_COORD | A co-ordinate whose value is determined by measuring parallel to an x-axis. |
| Y_COORD | A co-ordinate whose value is determined by measuring parallel to an y-axis. |

** The identified fields were included for easier conversion of the RDS file. No values need to be supplied although a placeholder is required. The values for these fields will be ignored during the loading process as shown on the following example:

```
1,,, 4991957,6055811,0.0  
1,,,4992952,6055811,1.5  
2,,,4991957,6056811,0.0  
2,,,4991099,6057214,0.0  
...
```

7.2 Facility Features (*_pnt.*)

Point features other than shot points are recorded here. Creek crossings should be coincident with lines but do not require explicit topological relationships. Values for all fields are not required for all application stages (preliminary, amendment, final).

Watercourse crossings, campsites, and other non-linear parts of a seismic program not connected to exploration activity.

7.2.1 Program Facility Coordinates/Attribute File Record Layout

Table 10 – Program Facility Coordinates/Attribute File Record Layout

| Field Name | Data Type | Valid Values | Validation |
|------------|--------------|---|--|
| ID | Integer (10) | Any number | - Required for all features. |
| X_COORD | Integer | Any number | - Required for all features in a RDS submission only. |
| Y_COORD | Integer | Any number | - Required for all features in a RDS submission only. |
| FACILITY | String (1) | X – Watercourse Crossing C – Campsite S – Staging Area H – Helipad | - Required for all features. |
| CLEARING | String (1) | N – New E – Existing X – No Clearing <i>Null for watercourse crossing.</i> | - Required for campsite, staging area and helipad. Null for watercourse crossing |
| CROSSING | String (1) | 1 – Snow and/or ice fill 2 – Strapped or cabled log fill 3 – Ford type crossing 4 – Log crossing 5 – Portable free span bridge 6 – Existing bridge 7 – Other 8 – Non-mechanical crossing <i>Null if not watercourse crossing.</i> | - Required for watercourse crossing. Null otherwise. |
| COMMENTS | String (80) | Free text | - Optional |

7.2.2 Program Facility Coordinates/Attribute File Record Layout Definitions

Table 11 – Program Facility Coordinates/Attribute File Record Layout

| | |
|---------|--|
| ID | Unique record identifier. It is usually system generated. |
| X_COORD | A coordinate whose value is determined by measuring parallel to an x-axis. |
| Y_COORD | A coordinate whose value is determined by measuring parallel to an y-axis. |

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| | |
|-----------------------------|--|
| FACILITY | The non-linear parts of a seismic program not connected to exploration activity. |
| CLEARING | The state of a proposed line, which determines whether or not the vegetative cover will have to be removed. |
| CROSSING | Type of watercourse crossing. |
| COMMENTS | Notes specific to the feature. |
| WATERCOURSE CROSSING | Any point where a seismic line or access trail crosses a watercourse where it is proposed that vehicles will be allowed to cross. |
| CAMP SITE | A location where a company proposed to bring in, construct temporary or use existing accommodations to house crew members. |
| STAGING AREA | A site where a company will use as a jumping off point to pick up crew members and equipment from whence they will be transported to the job site. |
| HELIPAD | A new clearing or an existing clearing where a helicopter will be landed. |
| NEW CLEARING | The removal of any forest growth 2 meters or greater in height and/or any reforested or regenerated areas. |
| EXISTING CLEARING | The removal of any forest growth less than 2 meters in height |
| NO CLEARING | Where there is no surface disturbance or 'minimal impact', as defined in the Exploration Regulation, on the land such as native prairies, range land and cultivated land. Changes in clearing that are less than 100m are not required for this submission. |
| SNOW AND/OR ICE FILL | A crossing constructed across a watercourse to provide vehicular access. The crossing is constructed primarily of snow and ice material and must be free of any dirt or dirt cap. Logs may be used for load bearing purposes; however, these logs should be free of any branches or roots. |
| STRAPPED OR CABLED LOG FILL | A crossing constructed to provide vehicular access across a watercourse. The crossing consists of logs strapped together, either by chains or straps and placed in the watercourse so that vehicles can travel across them. |
| FORD TYPE CROSSING | A crossing location on a watercourse where vehicles are driven through the watercourse with no crossing structure being required. |
| LOG CROSSING | A lightweight span bridge made to carry ATV or pedestrian traffic only. Heavy logs are laid down parallel to the stream and lighter logs are placed across them to span the creek. |
| PORTABLE/FREE SPAN BRIDGE | A crossing constructed of wood or steel consisting of a stringer running from one side of the watercourse to the other; which may or may not have support structures constructed to carry weight. This includes native timber bridges, bailey bridges, etc. |
| EXISTING BRIDGE | Any bridge which is presently constructed and able to be used for vehicular crossing of a watercourse. |
| NON MECHANICAL CROSSING | A crossing on foot by individuals. No vehicle or equipment of any type can be used (e.g., ATVs). |
| OTHER CROSSING | Any crossing type that cannot be categorized as belonging to the defined crossing types. |

7.3 Program Shot Points (*_spf.*)

This file is required in the Final Plan submission. It contains the source locations of the shot points for the program area.

Table 12 – Shot Point Coordinates/Attribute File Record Layout

| Field Name | Data Type | Valid Values | Validation |
|-------------------|------------------|---------------------|---|
| ID | Integer (10) | Any number | - Required for all features |
| LINE_NAME | String (16) | Free text | - Required for all features. |
| SHOTPOINT | Integer (8) | Any number | - Required for all features. |
| X_COORD | Integer | Any number | - Required for all features in a RDS submission only. |
| Y_COORD | Integer | Any number | - Required for all features in a RDS submission only. |

Table 13 – Shot Point Coordinates/Attribute File Record Layout Definitions

| | |
|-----------|---|
| ID | Unique record identifier. It is usually system generated. |
| LINE_NAME | An alphanumeric string assigned by the company, which uniquely identifies each seismic line in a program. |
| SHOTPOINT | The unique number of the shot point. |
| X_COORD | A co-ordinate whose value is determined by measuring parallel to an x-axis. |
| Y_COORD | A co-ordinate whose value is determined by measuring parallel to an y-axis. |

8.0 Appendix E – Examples

8.1 Preliminary

Detail File saved as p_9999_det.csv

```
PROSPECT,The Big Project,
LICENSEE,Company ABC Limited,
LICENSEE_ID, 8881212001,
LICENSE_NO,9999,
PROGRAM,,
ENERGY_SOURCES,d,a,
SHOT_ON_WATERBODY,Y,
EQUIPMENT,t,h,
PERMITTEE,the little permittee company,
PERMITTEE_ID,8009999001
PERMIT_NO,12345,
CONSULTANT_NAME,Let's Consult Company,
CONSULTANT_ID,888-1212-224,
NUMBER_OF_SITES,,
AVG_SIZE_OF_SITE,,
UTM_ZONE,11,
DATUM,83,
ATS_VERSION,2.6
PUR_DATE,,
SURVEY_METHODS,,
HORIZONTAL_TAKEOFF,,
HORIZONTAL_TAKEOFF_DESCRIPTOR,,
HORIZONTAL_TAKEOFF_NORTHING,,
HORIZONTAL_TAKEOFF_EASTING,,
COORDINATE_QUALITY,,
TIME_LAPSE, N,
INTERIM_FINAL, N,
DECLARATION, N,
```

8.2 Amendment

Detail File saved as a_geo010001_det.csv

```
PROSPECT,The Big Project,
LICENSEE,Company ABC Limited,
LICENSEE_ID, 8881212001,
LICENSE_NO,9999,
PROGRAM,GEO010001,
ENERGY_SOURCES,d,a,
SHOT_ON_WATERBODY,N,
EQUIPMENT,t,h,
PERMITTEE,the little permittee company,
PERMITTEE_ID,8009999001
PERMIT_NO,12345,
CONSULTANT_NAME,Let's Consult Company,
CONSULTANT_ID,888-1212-224,
NUMBER_OF_SITES,,
AVG_SIZE_OF_SITE,,
UTM_ZONE,11,
DATUM,83,
ATS_VERSION,2.6
PUR_DATE,,
SURVEY_METHODS,,
HORIZONTAL_TAKEOFF,,
```

HORIZONTAL_TAKEOFF_DESCRIPTOR, ,
HORIZONTAL_TAKEOFF_NORTHING, ,
HORIZONTAL_TAKEOFF_EASTING, ,
COORDINATE_QUALITY, ,
TIME_LAPSE, N,
INTERIM_FINAL, N,
DECLARATION, N,

8.3 Interim Final Plan

Detail File saved as f_geo010001_det.csv

PROSPECT,The Big Project TL,
LICENSEE,Company ABC Limited,
LICENSEE_ID, 8881212001,
LICENSE_NO,9999,
PROGRAM,GEO010001,
ENERGY_SOURCES,d,a,
SHOT_ON_WATERBODY,N,
EQUIPMENT,t,h,
PERMITTEE,the little permittee company,
PERMITTEE_ID,8009999001
PERMIT_NO,12345,
CONSULTANT_NAME,doe, john,
CONSULTANT_ID,888-1212-224,
NUMBER_OF_SITES,0,
AVG_SIZE_OF_SITE,0,
UTM_ZONE,11,
DATUM,83,
ATS_VERSION,M
PUR_DATE,20011125,
SURVEY_METHODS, ,
HORIZONTAL_TAKEOFF, ,
HORIZONTAL_TAKEOFF_DESCRIPTOR, ,
HORIZONTAL_TAKEOFF_NORTHING, ,
HORIZONTAL_TAKEOFF_EASTING, ,
COORDINATE_QUALITY, ,
TIME_LAPSE, Y,
INTERIM_FINAL, Y,
DECLARATION, N,

8.4 Interim Final Declaration

Detail File saved as d_geo010001_det.csv

PROSPECT,The Big Project TL,
LICENSEE,Company ABC Limited,
LICENSEE_ID, 8881212001,
LICENSE_NO,9999,
PROGRAM,GEO010001,
ENERGY_SOURCES,d,a,
SHOT_ON_WATERBODY,N,
EQUIPMENT,t,h,
PERMITTEE,the little permittee company,
PERMITTEE_ID,8009999001
PERMIT_NO,12345,
CONSULTANT_NAME,doe, john,
CONSULTANT_ID,888-1212-224,
NUMBER_OF_SITES,0,
AVG_SIZE_OF_SITE,0,

UTM_ZONE, 11,
DATUM, 83,
ATS_VERSION, M
PUR_DATE, 20011125,
SURVEY_METHODS, ,
HORIZONTAL_TAKEOFF, ,
HORIZONTAL_TAKEOFF_DESCRIPTOR, ,
HORIZONTAL_TAKEOFF_NORTHING, ,
HORIZONTAL_TAKEOFF_EASTING, ,
COORDINATE_QUALITY, ,
TIME_LAPSE, Y,
INTERIM_FINAL, Y,
DECLARATION, Y,

8.5 Final Plan

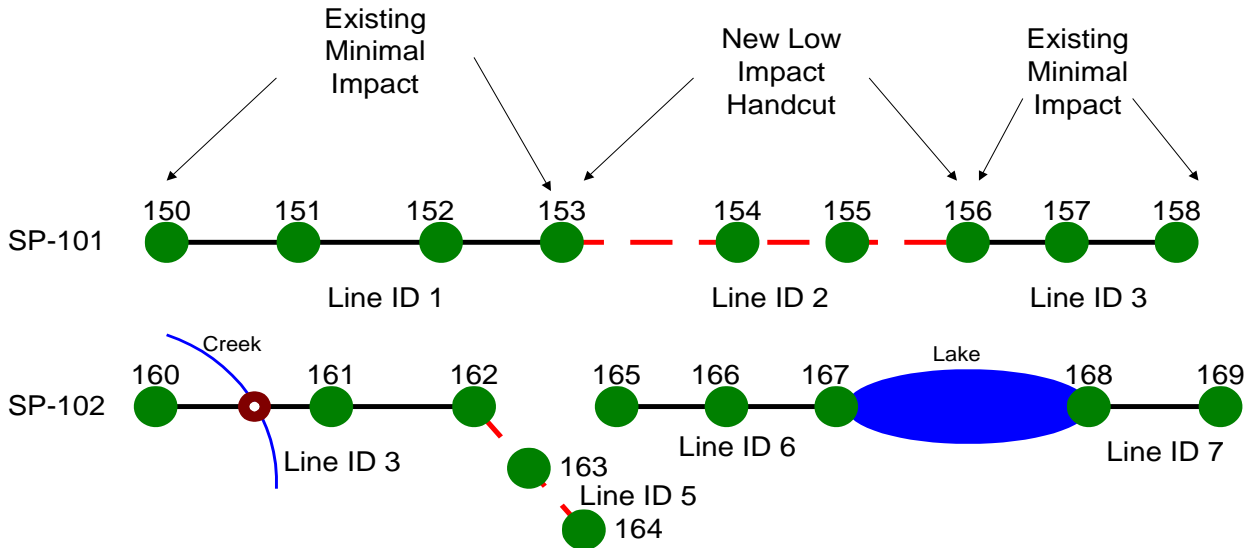
Detail File saved as f_geo010001_det.csv

PROSPECT, The Big Project,
LICENSEE, Company ABC Limited,
LICENSEE_ID, 8881212001,
LICENSE_NO, 9999,
PROGRAM, GEO010001,
ENERGY_SOURCES, d, a,
SHOT_ON_WATERBODY, N,
EQUIPMENT, t, h,
PERMITTEE, the little permittee company,
PERMITTEE_ID, 8009999001
PERMIT_NO, 12345,
CONSULTANT_NAME, doe, john,
CONSULTANT_ID, 888-1212-224,
NUMBER_OF_SITES, 0,
AVG_SIZE_OF_SITE, 0,
UTM_ZONE, 11,
DATUM, 83,
ATS_VERSION, M
PUR_DATE, 20011125,
SURVEY_METHODS, ,
HORIZONTAL_TAKEOFF, ,
HORIZONTAL_TAKEOFF_DESCRIPTOR, ,
HORIZONTAL_TAKEOFF_NORTHING, ,
HORIZONTAL_TAKEOFF_EASTING, ,
COORDINATE_QUALITY, ,
TIME_LAPSE, N,
INTERIM_FINAL, N,
DECLARATION, N,

8.6 Relational Data Set

8.6.1 Example

Relational Data Set Preliminary Spatial Files



RDS Coordinates Files

```

1,SP-101,150,483500,6054800,650.2
1,SP-101,151,483600,6054800.7,750
1,SP-101,152,483700,6054800,605
1,SP-101,153,483800.7,6054800,600.5
2,SP-101,153,483800.7,6054800,600.5
2,SP-101,154,483900,6054800.8,620
2,SP-101,155,484000,6054800,633
2,SP-101,156,484100.8,6054800,625
3,SP-101,156,484100.8,6054800,625
3,SP-101,157,484200,6054800,600
3,SP-101,158,484300.3,6054800,575
4,SP-102,160,483500,6054500,575
4,SP-102,161,483650,6054500,575
4,SP-102,162,483750,6054500,585
5,SP-102,162,483750,6054500,585
5,SP-102,163,483766.7,6054450,575
5,SP-102,164,483825.7,6054400,560
6,SP-102,165,483855.7,6054500,520
6,SP-102,166,483900,6054500,490
6,SP-102,167,484000,6054500,450
7,SP-102,168,484250,6054500,450
7,SP-102,169,484350.3,6054500,500
    
```

RDS Attribute File

```

0001,SP-101,C,E,Z,,0.5,,R,,N
0002,SP-101,C,N,L,H,0.5,0.05,R,,N
0003,SP-101,C,E,Z,,0.5,,R,,N
0004,SP-102,C,E,Z,,0.5,,R,,N
0005,SP-102,C,N,L,H,0.5,0.05,R,,N
0006,SP-102,C,E,Z,,0.5,,R,,N
0007,SP-102,C,E,Z,,0.5,,R,,N
    
```

RDS Coordinates/Attribute File

```

1,483599,6054500,X,N,8,no water in creek
    
```

9.0 Appendix F - ATS Versions

ATS versions and their associated dates.

Master ATS NAD83 - March 31/1998 (requires purchased date)

PATS Version **3.2** NAD27 / NAD83 - December 1995

Historical PATS Version **3.1** NAD27 - February 1994

Historical PATS Version **2.6** NAD27 - March 1991

Historical PATS Version **2.5** NAD27 - January 1990

Historical PATS Version **2.4** NAD27 - May 1989

Historical PATS Version **2.3** NAD27 - February 1988

Historical PATS Version **2.2** NAD27 - November 1986

Historical PATS Version **2.1** NAD27 - May 1986

1977 Theoretical Version **1.0** NAD27

NOTE:

The Master ATS file is dynamic and not versioned. A purchase date is required.