COAL GEOLOGY
GEOSCIENCE INFORMATION SYSTEM
PILOT STUDY

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Open File Report 1989-03A
Alberta Geological Survey
Alberta Research Council
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>1</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>ii</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>iii</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Objectives</td>
<td>1</td>
</tr>
<tr>
<td>Methods</td>
<td>1</td>
</tr>
<tr>
<td>Design Philosophy</td>
<td>1</td>
</tr>
<tr>
<td>Processing</td>
<td>5</td>
</tr>
<tr>
<td>Hardware</td>
<td>5</td>
</tr>
<tr>
<td>Software</td>
<td>6</td>
</tr>
<tr>
<td>Techniques</td>
<td>8</td>
</tr>
<tr>
<td>Introduction to pcARC/INFO</td>
<td>8</td>
</tr>
<tr>
<td>Terminology</td>
<td>8</td>
</tr>
<tr>
<td>Procedures</td>
<td>9</td>
</tr>
<tr>
<td>Data Sources</td>
<td>23</td>
</tr>
<tr>
<td>Alberta Bureau of Mapping</td>
<td>23</td>
</tr>
<tr>
<td>Energy Resources Conservation Board</td>
<td>25</td>
</tr>
<tr>
<td>TransAlta Utilities</td>
<td>27</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
</tr>
<tr>
<td>Using the Pilot Demo</td>
<td>30</td>
</tr>
<tr>
<td>Starting the Demo</td>
<td>30</td>
</tr>
<tr>
<td>Level 1: Provincial Scale</td>
<td>30</td>
</tr>
<tr>
<td>Level 2: NTS 1:250 000 Scale Map Areas</td>
<td>32</td>
</tr>
<tr>
<td>Level 3: Subregional Study Areas</td>
<td>36</td>
</tr>
<tr>
<td>Level 4: Township and Mine Site Detailed Areas</td>
<td>39</td>
</tr>
<tr>
<td>Experience Gained From Study</td>
<td>50</td>
</tr>
<tr>
<td>Capabilities</td>
<td>50</td>
</tr>
<tr>
<td>Hardware</td>
<td>50</td>
</tr>
<tr>
<td>Software</td>
<td>50</td>
</tr>
<tr>
<td>Limitations</td>
<td>50</td>
</tr>
<tr>
<td>Hardware</td>
<td>50</td>
</tr>
<tr>
<td>Software</td>
<td>51</td>
</tr>
<tr>
<td>Manpower</td>
<td>51</td>
</tr>
<tr>
<td>System Documentation</td>
<td>51</td>
</tr>
<tr>
<td>ARC/INFO Files</td>
<td>51</td>
</tr>
<tr>
<td>MS-DOS File Directory Path</td>
<td>51</td>
</tr>
<tr>
<td>File Size and Occurrence</td>
<td>52</td>
</tr>
<tr>
<td>Simple Macro Language (SML) Files</td>
<td>55</td>
</tr>
<tr>
<td>Summary</td>
<td>55</td>
</tr>
<tr>
<td>Future Plans</td>
<td>55</td>
</tr>
<tr>
<td>References</td>
<td>56</td>
</tr>
</tbody>
</table>
FIGURES

Figure 1. The Coal GSIS demo menu system design ......................... 3
Figure 2. Data structure .................................. (in pocket) .......... 4
Figure 3. Township corners in UTM .................................. 22
Figure 4. Geographic reference map .................................. 28
Figure 5. Provincial coal quality query screen .................................. 29
Figure 6. Proximate and trace element data distribution .................. 31
Figure 7. Alberta Township Survey for NTS Sheet 83G .................. 33
Figure 8. Coal lease data for NTS Sheet 83G .......................... 34
Figure 9. Plotfile map of coal lease data; NTS Sheet 83G .......... 35
Figure 10. Oil and gas well 400 m buffers, Wabamun Area ............. 37
Figure 11. Coal/oil and gas resource development/conflict analysis .... 38
Figure 12. Wabamun Area; buffered wells with road network ......... 40
Figure 13. Southern Highvale oil and gas well distribution .............. 41
Figure 14. Southern Highvale isopach of Seam 1 ....................... 42
Figure 15. Township 50, Range 4, West of the 4th, isopach Seam 1 .... 43
Figure 16. Township 50, Range 4, West of the 4th, Well Status ....... 44
Figure 17. Highvale Area as received volatile matter Seam 3 .......... 45
Figure 18. Northern Highvale permit and licence data .................. 46
Figure 19. Northern Highvale geological map .......................... 47
Figure 20. Northern Highvale isopach map of coal Seam 1 ............ 48
Figure 21. Northern Highvale structure contour map of coal Seam 1 .... 49
Figure 22. Frequency plot of demo file size ............................ 54
APPENDICES
(Separate in ARC Open File Report 1989-03B)

Appendix 1. Coal GSIS demo system; starting the demo.
Appendix 2. ARC/INFO file types.
Appendix 3. Data available in coal GSIS at various levels.
Appendix 4. Coal GSIS demo system; file directory path listing.
Appendix 5. Coal GSIS demo system; file directory level 1 and 2.
Appendix 6. Coal GSIS demo system; file directory level 3 and 4.
Appendix 7. The simple macro language files menu system for the Coal GSIS demo.
List of Tables

Table 1. Hardware costs ............................................... 6
Table 2. Software costs .................................................. 8
Table 3. ABSM data ..................................................... 23
Table 4. ABSM coverages for demo .................................... 24
Table 5. File size statistics ............................................. 53
FOREWORD

During the last decade the computerization of geological data and new computer applications have revolutionized geological research. Substantial advances in spacial data storage, display and analysis have been realized in the municipal and non-renewable resource sectors, particularly in forestry. The new technology has been termed Geographic Information Systems (GIS). Worldwide, governmental organizations responsible for base mapping have changed from traditional methods to digital mapping techniques. The geological community, during the last five years, has joined the revolution and is only now discovering the potential and limitations of GIS technology. This pilot study was designed to explore GIS capabilities and limitations for geological research while producing a useful product that could be built upon.

Discussions with our clients in industry, Alberta Energy and Forestry Lands and Wildlife indicated that available coal geology information is not being used extensively for Alberta coal development planning, resource planning, or in the administration of mineral agreements. Resource management in Alberta is mainly focused on surface constraints, particularly natural surface features, policies and plans. The Coal GIS demo demonstrates how geological and non-geological data can be queried, analysed and displayed by operators with or without computer and/or geological expertise.
ACKNOWLEDGMENTS

The Alberta Office of Coal Research and Technology (AOCRT), Alberta Energy (AE), and the Alberta Research Council (ARC) provided joint funding for all phases of this project. Heather Watson did most of the preliminary demo design, data input and provided training and expertise that was critical in the early stage of the project. Harry Lewis and David Wiley of the Energy Resources Conservation Board (ERCB) provided permit and lease data in digital format. TransAlta Utilities Corporation (TAU) provided maps and data on which many of the demo layers are based. Dennis Nikols and Greg Mandryk provided many useful comments on the design of the demo. Greg Mandryk also formatted data and contributed a major part of the section on future plans. Diane Goulet digitized some of the maps. Dale Fietz and Norman Chidambaram provided the file size statistics. Maureen Fitzgerald and Kathie Skogg helped prepare the final manuscript and the Graphics staff at the Alberta Research Council prepared a number of the black and white line drawings.

The manuscript was critically reviewed and constructive comments were provided by Dennis Nikols, Greg Mandryk and Dale Fietz. Peter McCabe (U.S. Geological Survey) helped with the initial project concept and design.
EXECUTIVE SUMMARY

As part of a GeoScience Information System (GSIS) pilot project a demo for coal-related information was developed at the Alberta Geological Survey. It should be stressed that the pilot project demo is the primary product of this project, not this compilation. This report is intended to provide an introduction to the pilot demo and provide support documentation for the project and the demo.

Management of information related to coal resources involves complex operations on tabular data bases and mapping systems. Traditionally, Data Base Management Systems (DBMS) and Mapping Systems were two distinct software packages. Tasks often involved complex transfers of files between systems. Geographic Information Systems (GIS) allow for functional graphics and analysis integration within one package and using one data base platform.

The system created during this study operates under the shell of pcARC/INFO. A menu system was created within the shell to allow for standard queries by geologists having no special training in computing systems. In addition to the above capabilities, the Coal Section's GSIS will provide a graphic query window for the Alberta Geological Survey's (AGS) Coal Data Base created in the INGRES relational database system residing on a VAX 780.

The GSIS system is designed on four levels of detail (figures 1 and 2):

Level One - 1:1000 000 scales include general coal information for the province of Alberta.

Level Two - 1:250 000 scale maps include the above noted information plus selected information on coal disposition, mine permits and on oil and gas well locations.
Level Three - in addition to information available on Level Two, selected subareas identify names of oil wells and mine permits; as well the 400 m development buffer zones have been identified for the oil wells.

Level Four - 1:5000 mine or township scale maps include detailed information concerning coal seam thickness (detailed contour maps), coal quality, overburden and stratigraphy for the areas.

On all levels, selected information may be linked (related) to the AGS's Coal Data Base by an index key item. The system has the capability of producing hard copy output in the form of high-quality color or black and white maps and/or reports from any combination of available data. The system will also produce new maps from existing information, and allows for the interactive composition of custom thematic maps to display geological information.

The demo illustrates how the GIS technology can serve as an exploration, research and information platform for the 1990's.
INTRODUCTION

OBJECTIVES

The Coal GeoScience Information System (GSIS) pilot project demo was developed to explore and demonstrate the capabilities and limitations of Geographic Information System (GIS) technology for support of coal geology research and coal resource management activities.

METHODS

DESIGN PHILOSOPHY

The design philosophy was based on developing a demo that demonstrated GIS capabilities while showing how coal (geological and non-geological) data could be stored, retrieved and analyzed in novel ways. In addition, the demo had to be easy to use, flexible and be of use toward developing an operational system.

Basic considerations included:

- the system must be capable of being expanded to a province-wide system;
- the area of focus for the pilot demo would centre on Townships 50 to 53, Ranges 3 to 5 West of the 5th. Meridian; the defined area contains major operating coal mines;
- the demo system must be interactive to both database and graphics;
- the demo interface must be simple, relatively transparent and appear seamless to the user;
- a large number of overlays (10 to 20) must be possible;
- the exchange formats with other mapping and graphics software such as CPS Radian, SURFACE II, INTERGRAPH and AUTOCAD must be possible;
- the final hardcopy and screen output must be, or approach, CAD
quality;
- the demo system hardware must be transportable and have a large file storage capacity.

The GSIS system was designed on four levels of detail (figures 1 and 2):

Level One - 1:1 000 000 scale maps include general coal information for the province of Alberta.

Level Two - 1:250 000 scale maps include the above information plus selected information on coal disposition, mine permits and oil wells.

Level Three - in addition to information available on Level Two, selected subareas identify names of oil wells and mine permits; as well the 400 m development buffer zones have been identified for the oil wells.

Level Four - 1:5000 mine or township scale maps include detailed information concerning coal seam thickness (detailed contour maps), coal quality, overburden and stratigraphy for the mining areas.

On all levels, selected information can be linked (related) to the AGS's Coal Data Base by an index key item.

The demo was designed to illustrate how GIS technology can serve as an exploration, research and information platform for the 1990's.
Figure 1. The Coal GSIS demo menu system design.
PROCESSING

Hardware (The Workstation)

The bulk of the project work was carried out on a MS-DOS 386 class microcomputer to establish the computing costs.

Some basic considerations included:

- the final hard copy and screen output must be, or approach, CAD quality;
- the system must be interactive to both the database and graphics;
- the processing can accommodate both raster and vector;
- the system must be transportable and have large storage capacity.

The chosen hardware allowed for a full examination of the pcARC/INFO software and exceeded the minimum requirements needed to run the software package. The selected COMPAQ 386/20 (Deskpro) micro-computer was configured with a 2Mb. RAM memory, a 80386 20 Mhz. microprocessor, a 5 1/4-inch 1.2Mb. floppy disk drive and a 300Mb. internal hard disk drive, which has an access time of less than 20ms. A 125Mb. internal tape back up which backs-up 5Mb. per minute; a 32 Kbytes high speed Cache memory controller, 1 parallel and 2 serial interface, and a 80387-20 math co-processor completes the computing and storage components of the workstation. The cost of the basic workstation totalled $19,940.00.

Additional hardware comprised the followings components:

- a Hewlett Packard PaintJet printer, costing $1,628.00; the printer can produce high (180 dots per inch) resolution color prints on standard 8.5 x 11 inch paper;
- a Calcomp 9100 digitizing table with a 44" x 60" maximum working space and a 16 button digitizer;
- a Calcomp drawing board, costing $3,500.00, the drawing board can emulate the Calcomp 2000 and has an 18" x 18" active area
and a 16 button digitizer;
- a NEC Multisync Plus monitor, costing $2,495.00; the monitor scans all frequencies between 21.8 kHz and 45 kHz; it has a horizontal resolution of 720 lines with 960 dots per line and has both TTL and Analog signal inputs; the diagonal display is 15" while the viewing area is 14";
- a Etherlink Plus adapter, costing $1,165.00, the adapter allows the Compaq to communicate with the host VAX/VMS computer more efficiently.

The total cost of the hardware was $28,728.00 (table 1.).

Table 1. Hardware costs.

<table>
<thead>
<tr>
<th>Components</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compaq Deskpro. 386/20</td>
<td>19,940.00</td>
</tr>
<tr>
<td>HP Paintjet Printer</td>
<td>1,628.00</td>
</tr>
<tr>
<td>Digitizing Table (Calcomp 9100)</td>
<td>on loan</td>
</tr>
<tr>
<td>NEC Multisync Plus monitor</td>
<td>2,495.00</td>
</tr>
<tr>
<td>Calcomp Drawing Board</td>
<td>3,500.00</td>
</tr>
<tr>
<td>Etherlink Plus Adapter</td>
<td>1,165.00</td>
</tr>
<tr>
<td>Total:</td>
<td>$28,728.00</td>
</tr>
</tbody>
</table>

Software

The software selected for the Coal GSIS coal pilot project demo was a package called pcARC/INFO which was obtained from Environmental Systems Research Institute (ESRI). One of the advantages of this software was its capability to download and upload data sets from/for other mini-based ARC/INFO systems in place at other Alberta government departments. The pcARC/INFO based system was purchased before ARC/INFO became available on the Alberta Research Council's mini-computers. In hindsight, pcARC/INFO would still have been purchased even if the mini system had been available. By using pcARC/INFO it was possible to maintain control of the system for experimentation and establish computing costs.
The basic pcARC/INFO software module is called the 'ARC/INFO STARTER KIT'. It provides basic functions such as digitizing, coordinate transformation and the reading of ASCII input files into the GIS system. The starter module costs $3,600.00. There are six pcARC/INFO options available, each of which cost $1,800.00; a description of their functions follows:

1. pcARCEdit provides the capability to edit any digital coverages in the system.
2. pcARCplot provides the capability to display maps on color graphics monitors and create high quality cartographic plots. pcARCplot also provides interactive query functions that allows users to display specific features.
3. PC INFO allows users to input and relate spatial data to the graphic coverages; PC INFO permits users to link databases to their graphic expression and further provides for import and export of databases in various formats.
4. pcGRIDCONVERSION provides the ability to exchange data between pcARC/INFO coverages and grid cell formats.
5. pcARC SIF (Standard Interchange Format) allows the file transfer between the pcARC/INFO and Intergraph; SIF is a command language written and used by Intergraph for ASCII transfer of design files.
6. pcOVERLAY provides advanced capabilities for manipulating and analyzing geographic information including polygon overlay, line- and point-in-polygon overlay, buffer creation, dissolve functionality and more - all based on a geo-relational topological data structure.
The total cost for the complete pcARC/INFO software used in the project was $14,400.00 (table 2).

Table 2. pcARC/INFO software cost.

<table>
<thead>
<tr>
<th>Options</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pcARC/INFO Starter Kit</td>
<td>3,600.00</td>
</tr>
<tr>
<td>pcARCedit</td>
<td>1,800.00</td>
</tr>
<tr>
<td>pcARCplot</td>
<td>1,800.00</td>
</tr>
<tr>
<td>PC INFO</td>
<td>1,800.00</td>
</tr>
<tr>
<td>pcARC SIF</td>
<td>1,800.00</td>
</tr>
<tr>
<td>pcGRIDCONVERSION</td>
<td>1,800.00</td>
</tr>
<tr>
<td>pcOVERLAY</td>
<td>1,800.00</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>$14,400.00</strong></td>
</tr>
</tbody>
</table>

The total cost of the hardware and software used in the pilot demo was $43,128.00.

TECHNIQUES

Introduction to pcARC/INFO

The following section documents the usage of the pcARC/INFO software and provides shortcuts to using the system. It is not intended to replace the ESRI manuals but rather, to be used with the manuals to determine how the pilot demo was constructed. It is not designed as a "cook book" for those unfamiliar with ARC/INFO but, as "shorthand" for the novice operator.

Terminology:

Point  - a single x, y coordinate pair that defines the location of a map feature.
Line   - a set of ordered points which are connected and represent a map feature.
Area   - a closed figure bounded by one or a series of line features that enclose a homogeneous area.
Coverage - a digital version of a map.
Polygons Coverage - coverage composed of polygon (area) features.
Line Coverage    - coverage composed of linear features.
Point Coverage - coverage composed of point features.
Network Coverage - coverage composed of both areas and line features.
Link Coverage - coverage composed of both point and line features.
Arc - line feature, the border of a polygon, or both in a coverage.
Polygon - area feature defined by the set of an area which comprise it's border and a label point within the polygon which is used to assign a USER-ID.
Label Point - point feature in a point coverage and polygon label point in a polygon coverage.

Each coverage has two components:

1. graphics
2. info files

- the graphics component allows you to draw the coverage to the screen (or send it to the plotter).
- the info files store attribute data for the features in the coverage.

(coverage).TIC - control points used for future coordinate transformation;
(coverage).BND - defines boundary of coverage (all features must fall within these limits);
(coverage).PAT - Point Attribute Table or Polygon Attribute Table (depending on the type of coverage);
(coverage).AAT - Arc Attribute Table - stores attributes of linear (arc) features;
(coverage).GAT - Graphics Attribute Table - stores detailed information about feature graphics.

Procedures:

1. Digitizing a map.

Possibly the single most important aspect of digitizing is determining a realistic degree of detail. In many cases it would either be impossible to digitize all of the features on a map or it would take an inordinate amount of time to do so. Prior to digitizing, it is advisable to decide exactly which features on the map that you wish to represent (those that best represent the trends or distribution of features on the map) and the procedure you might use to digitize the chosen features. By doing this you are basically charting a 'plan of attack'.

As a general rule, always digitize a line or a polygon
counterclockwise. If the contour lines of the map are too close together, use mapex * to zoom in on an area before digitizing in order to make sure that the contour lines that you digitize do not cross each other. Make sure that each line with "the same value" but in two different mapex * areas joins because it is a lot easier to clean the unwanted danglers than to join two unjoined lines. Use Vertex (1) to construct the line and node (2) to start a line and to end a line.

Getting Started.

1. Turn on machine (conditioner, drive, monitor and digitizer).
2. When system is "up" go to work area, i.e., CD Coal Work or whatever.
3. Place Info disk in drive.
4. Access Arc/Info by typing 'ARC' [enter].
5. To begin digitizing a coverage type 'ADS (coverage name)' [enter]
   - if this is a new coverage try to choose a name that is representative of that coverage, i.e. 1503 was the name chosen for the coverage representing the 150pach map of seam 3.
6. Register TICS.
   - type '01A' and any number on the spot you select for your tic location
   - type '02A' and any number - at 2nd tic location
   - type '03A' and any number - at 3rd tic location
   - type '04A' and any number - at 4th tic location
   - type '0A' to stop entering tics
   - NB - must have a minimum of 4 tics
     - use section corners as tic locations
     - circle them in pencil on the map

If using a pre-existing coverage, you must digitize TICS that were used in the initial digitizing of the coverage (they will be circled in pencil on the map and should always be a section corner).

RMS error must be less than 0.003; if higher then the locations must be re-digitized.

Once TICS are entered and the RMS is satisfactory the main menu should appear.

7. Set edit distance (search tolerance) - press '8' (options menu), press '3', press '1', then enter an edit distance through keyboard (the distance is usually 0.05).

8. Set snap distance (distance to which points on arcs will snap) from main menu:
   - press '5', press '1'
   - enter distance usually (0.001) using keyboard.

Set weed tolerance distance in options menu to be the same as the snap distance.
   - press '5', press '1'
   - enter distance (0.001) using keyboard.
   - press '9' to return to main menu.
*if you are editing a pre-existing coverage set the snap (SD) and edit
distances (ED) once you have windowed (zoomed in on) the area which you
want to edit.
*if you cannot select arcs the machine continues to beep; if arcs won't
snap the edit and snap distances are usually too small; reset the edit
and snap distances.

9. Digitizing - Arc Coverage
   at the main menu press '1', this brings up a sub-menu for the
   addition of arc features.
   (i) set auto increment to '0' - enter '600A' with
digitizer
   (ii) set user - ID to whatever value you want by pressing
       '3' and
       entering the value followed by the letter 'A'
       At this point you should digitize all arcs that you want to have
       that - ID.
       e.g. in digitizing a contour map, all lines representing the 150'
       foot-value contour would have the same ID eg 150.

       Try to assign the ID by its contour number because it is unique and
       representative.

2. 'CLEAN'ing the coverage.
   - this creates nodes at intersections
   - creates attribute table (PAT)
   - always clean the coverage to a different name thus preserving
     the original data
   - use a relatively small dangle and a very small fuzzy tolerance
     (unless you are very aware of what cleaning might do to the
     coverage) e.g. [ARC] clean cov1 cov2 0.05 0 [enter]
     command input | output | dangle | fuzzy
     coverage | coverage | length | tolerance

3. 'BUILD'ing the coverage with the line option.
   e.g. [ARC] Build cov2 line [enter]
   - creates an ARC attribute table (AAT) for the arcs in the
     coverage

4. 'TRANSFORM'ing the coverage.
   - enables you to change the coordinate space of a coverage, i.e.
     from inches (as digitized) to UTM coordinate
   i)  [ARC] copycov cov2 cov3 [enter] - this makes a copy of
       cov2 and calls it cov3
   ii) Tape INFO or TABLES - (username in TABLES or INFO is
        ARC)
       - must have an INFO disk in A: drive to invoke INFO
   iii) Select cov3.tic [enter] - the file you wish to work on
        Reselect $recno = 0 [enter]
Calc XTIC = (corresponding UTM easting value) [enter]
Calc YTIC = (corresponding UTM northing value) [enter]
Nsel [enter]
Reselect $recno = 2 [enter]
Calc XTIC = (corresponding UTM easting value) [enter]
Calc YTIC = (corresponding UTM northing value) [enter]
Nsel [enter]
*repeat for $recno=3 and $recno=4 and so on.

Once all the TIC values have been calculated,
ASEL - selects all records in the table
LIST - lists the information
Ensure the values are correct.
Type Q STOP - exit INFO or TABLES

iv) [ARC] TRANSFORM cov2 cov3 [enter]

5. Incorporating a Boundary * this is not needed in all cases.
   [ARC]:ARCEDIT [enter] (* only if the coverage needs the boundary for editing)
     : display4 [enter] - sets display to monitor
     : editc cov3 [enter] - edit coverage is cov3
     : drawenv ARC [enter] - these features that you wish to have appear on the screen
     : draw - [enter] draws the features in the Drawenvironment
     : editf ARC [enter] - sets the features that you wish to alter to Arcs
     : get (coverage name that contains the boundary) [enter]
       - will bring to cov3 all of the current edit feature elements (ARCS) in the boundary coverage
     : save [enter] - save the changes that you have made to cov3
     : Q [enter] - exits ARCEDIT and returns to ARC

6. [ARC] Clean cov3 cov4 0.05 0 [enter]

7. [ARC] Nodeerr cov4 dangles [enter] - lists all of the dangles in cov4
   In order to correct these dangles:

   - [ARC] arcedit [enter]
   - [ARC] display 4 [enter]
   - [ARC] editc cov4 [enter]
   - [ARC] drawer ARC NODE DANGLE [enter]
   - [ARC] draw [enter] - those features in the Drawenvironment should appear in
     ARCs and dangling nodes - dangles will have red boxes around them
   - [ARC] editf ARC [enter]
   - [ARC] sel many [enter], selection menu will come up, place cursor on the dangle that you want to select and enter 1; the dangle will flash; repeat the selection until all dangles are chosen; enter 9 to quit
   - [ARC] setdrawsymbol 2 (red) [enter]
   - [ARC] drawsel [enter] (all the selected dangles should turn red)
   - [ARC] delete - to delete all dangles
- [ARC] save [enter]
- [ARC] quit [enter]

NOTES:

To set edit distance

- [ARC] ED [enter] - cursor will appear
  - set using arrow key
  - point registration by setting any key or spacebar

To set snap distance

- [ARC] SD [enter]
  - set in a similar fashion as edit distance (as above)

To zoom

- [ARC] Mapex* [enter]
  - cursor will appear - use to set lower left (ll) and upper right (ur) corners of the rea (box) that you wish to enlarge
  - use arrow key to position cursor and any key to register points

- [ARC] DRAW [enter]
  - will show only the defined area in an enlarged state

*this procedure can be done a number of times

To get out of a zoom (to return to full screen view)

- [ARC] Mapex cov 4 [enter] coverage name
- [ARC] Draw [enter]

Selection of features

*make sure you have a reasonable edit distance
*make sure that you have the correct edit feature

- [ARC] select
  - allows the selection of a single feature
- [ARC] select all
  - select all of the current edit feature elements
- [ARC] select many
  - allows the selection of one or more features (if you select the wrong feature first, this command allow you to continue selecting features in the area - using the 'NEXT' option - until you select the correct feature)

To draw selected set in another colour

- [ARC] setdrawsymbol (colour)

Line colour symbols

1. white(black) 6. light blue 11. vibrant green
2. red 7. magenta 12. vibrant blue
3. green 8. dark grey 13. olive
4. blue 9. light grey 14. light blue (vibrant)
5. yellow 10. pink 15. violet

- [ARC]Drawsel - will draw the currently selected set of features
using the currently selected symbols

To remove features from the selected set
Unselect - enable the removal of one feature from the currently selected set
Unselect many - enables the removal of one or more features from the currently selected set

To select the currently unselected set
[ARC]Nsel - selects the currently unselected features e.g.
there are 70 features in a coverage; using select many,
you select 20 features (they are the currently selected set); if you issue the Nsel command at this point, the previously unselected set (consisting of 50 arcs) becomes the selected set and the previously selected set becomes the unselected set

To add features to the selected set
[ARC] Ase1 - stands for all select
- will select all elements of the current edit features in the coverage
[ARC] Ase1 one - will add one element to the currently selected set
[ARC] Ase1 many - allows the addition of one or more elements to the selected set

8. [ARC] Build cov4 - builds coverage with 'poly' default option
Build cov4 line - builds coverage with 'line' option
Build cov4 point - builds coverage with 'point' option

9. Check to make sure that there are no node errors
i.e. [ARC] nodeerr cor4 dangies [enter]
- when all nodeerrors (dangles) have been removed, proceed to step 10

10. [ARC] additem cov4.AAT cov4.AAT level 4 5 B
command input output item input output item
cor cor name width width type

[ARC] additem cov4.AAT cov4.AAT value 8 9 N 2 [enter]

- by issuing these commands, you are adding two new items to the arc attribute table (AAT) of the cov4

11. [ARC] Build cov4 line [enter] - this includes the added items in the info files (topology) of cov4

12. Update/calc values for .AAT
(cov4.AAT)

cov4 # Cov4-ID level value
1 325 4 this table represents the last
4 items in the cov4.AAT info
2 300 file after step 11
This table was built by determining the minimum and maximum values of the arcs that were digitized and assigning 'levels' to them.

<table>
<thead>
<tr>
<th>Level</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.00</td>
</tr>
<tr>
<td>2</td>
<td>3.25</td>
</tr>
<tr>
<td>3</td>
<td>3.50</td>
</tr>
<tr>
<td>4</td>
<td>3.75</td>
</tr>
<tr>
<td>5</td>
<td>4.0</td>
</tr>
<tr>
<td>6</td>
<td>4.25</td>
</tr>
<tr>
<td>7</td>
<td>4.50</td>
</tr>
<tr>
<td>8</td>
<td>4.75</td>
</tr>
<tr>
<td>9</td>
<td>5.0</td>
</tr>
</tbody>
</table>

In order to enter this information into the INFO table you can, in this case, enter the following command:

```[Command] Resel cov4-ID = 300 [enter]```

```[Command] calc value = cov4-ID/100 [enter]```

```[Command] Nsel [enter]```

```[Command] list - you should see the value column has been fit in and has the correct map values - i.e. the decimals are in the correct place```

In order to determine 'levels' for the data you do the following:

```[Command] Resel value = 3.0 [enter] - will reselect all arcs with values = 3.0```

```[Command] calc level = 1 [enter]```

```[Command] Nsel [enter]```

```[Command] Resel value = 3.25 [enter]```

```[Command] calc level = 2 [enter]```

```[Command] Nsel```

- repeat for all values and levels

At this stage, all records should have levels and values.

To change ARC-ID's (still in the INFO mode)

```[Command] Sel cov4.AAT (or Asel) the remaining arcs in the cov4) [enter]```

```[Command] calc cov4-ID = cov4-ID +100 [enter]```

```[Command] calc cov4-ED = cov4 # [enter]```

```[Command] Q stop [enter]```

- your INFO tables should now be completed (for as far as we have gone)

13. In order for ARC/INFO to realize that you have changed ARC-IDS in INFO, you must enter the following command:

```[ARC] idedit cov4 line [enter]```

- if you do not use this command to update, the ARC-ID's of the ARC/INFO becomes confused and does not correct attributes for arcs

14. Now check and make sure that all arcs have the correct values in ARCPLOT

```[enter]```

```[ARC] arcplot [enter]```
[ARC] display 4 [enter]
[ARC] mapex cov4 [enter]
[ARC] resel cov4 line value = 3.0
(or level=1) [enter]

[ARC] linec 2
[ARC] arcs cov4
[ARC] clearsel

[ARC] resel cov4 line value = 3.25 [enter]
[ARC] linec 3
[ARC] arcs cov4
[ARC] clearsel

15. [ARC] createlabels cov4 - [enter] this places label points in each of the polygons in cov4 at one time
- label may also be added in ADS or ARCEdit
but the 'createlabels' command may save some time and effort

16. [ARC] addition cov4.pat cov4.PAT class 4 5 B [enter]
[ARC] addition cov4.pat cov4.PAT cvalue 8 9 C [enter]
[ARC] addition cov4.pat cov4.PAT vmax 8 9 N 2 [enter]
- this adds 3 items to the .PAT (Polygon Attribute Table) of the cov4

17. [ARC] build cov4 [enter] - builds cov4 with polygon default option
- it is necessary to build topology after entering
'create labels' and 'additem' commands

18. Correcting labelerrors
- go into ARCEdit, type drawenv arc label and editf label, and see
if each label point corresponds to a polygon on the hardcopy map
- if a label point appears where there is no polygon on the hardcopy map, a sliver polygon exists in the digitized map -
correct this whenever it occurs

19. [ARC] build cov4 [enter] - after correcting the labelerrors
- this step isn't necessary if there were no labelerrors to correct

20. Update/calc values for the .PAT
Construct a table as below

<table>
<thead>
<tr>
<th>Class</th>
<th>Cvalue</th>
<th>Vmax</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&lt;3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>2</td>
<td>&lt;3.25</td>
<td>3.25</td>
</tr>
<tr>
<td>3</td>
<td>&lt;3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>4</td>
<td>&lt;3.75</td>
<td>3.75</td>
</tr>
<tr>
<td>5</td>
<td>&lt;4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>6</td>
<td>&lt;4.25</td>
<td>4.25</td>
</tr>
<tr>
<td>7</td>
<td>&lt;4.50</td>
<td>4.50</td>
</tr>
<tr>
<td>8</td>
<td>&lt;4.75</td>
<td>4.75</td>
</tr>
<tr>
<td>9</td>
<td>&lt;5.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

- this will enable you to clarify the polygon
- in order to assign classes to the .PAT, go into
  [ARC]arcedit [enter]
  display 4 [enter]
  editc cov4 [enter]
  drawenw ARC LABEL [enter]
  draw [enter]
  editf label [enter]
- select each label and use the 'calc' command to assign the
correct 'class' for the polygon (from the above table in
conjunction with the hard copy map)

N.B. Before you start assigning classes to polygons, you should select
all labelpoints and calculate their class to =0. By doing this,
when you assign classes to label points individually and redraw,
you can easily determine which label points don't have a class =0
(i.e. the ones for which you have assigned the correct class).
This is achieved by using the setdrawsymbol and drawsel commands.

21. After assigning 'class' as in arcedit - exit and build cov4 line
enter INFO or TABLES and assign appropriate values to cvalue and
vmax
  i.e. sel cov4.pat [enter]
  list - the table should have the 'class' item filled in for all but
the first polygon
  resel class = 1 [enter]
  calc vmax = 3.0 [enter]
  move '<3.0' to cvalue [enter]
  nsel [enter]
  resel class = 2 [enter]
  calc vmax = 3.2 [enter]
  move '<3.2' to cvalue [enter]
  etc.

22. Arcplot - check to make sure that all polygons have the value
(class) that they should have by comparing it with the hardcopy map.

Map Composite

Arcplot [enter] - Display4 [enter]
1. Pagesize 20 20 - define the actual pagesize [enter]
2. Map [coverage] - a new name for the plot file [enter]
3. Mapex [old coverage] - coverages that will be used for the map
   composite [enter]
4. Box 0 0 20 20 - draw a box [enter]
5. mbegin - to Section all elements into 1 Section [enter]
6. Mapangle (+ or - n degree) [enter]
7. Arc [old coverage] [enter]
8. Resel [coverage] polys class=1 [enter]  colour all class=1
9. Polygonshades [coverage] 2 [enter]  with red
10. Clearsel [enter] etc.
11. Mend - finish Sectioning [enter]
12. Mfit - to specify the size of the map (may not be necessary) [enter]
13. Mmove - to reposition the map [enter]
14. Mfresh - will draw all elements 1 by 1 [enter]
15. text size 0.2 0.2 [enter] specify the size of text, decide
16. move x y or move * [enter] where to put the text and enter
17. text 'anything' [enter] the actual text

N.B. Msel - to select a map element which will be moved or deleted
Mdelete - to delete a specified or the latest map element

To overlay a second map during the map compositing
1. Mapex [coverage1] [coverage2] [enter]
2. Mapangle -0.5 [enter] - make sure that the new coverage has the same
   angle as the old coverage
3. Arcs [coverage] [enter]
4. Mfit [enter] - if it is too big

To create a legend
1. Quite from the map compositing
2. NE - enter into the Norton Editor
3. filename.key - use .key as an extention for legend file
4. .42 [enter] - the period (.) tells the computer that the following
   number is not text. 42 is the symbol number
5. text [enter] - texts for the symbol
6. etc.
7. F3 + E (to exit and save)
   or F3 + Q (to exit and not save)

To plot the legend
1. Arcplot [enter] - display 4 [enter]
2. use the same pagesize as the map which you are adding the legend
3. Map [coverage name] - the name of the map [enter]
4. textsize [width] [height] [enter]
5. keyposition * - lets you specify the position [enter]
6. keybox 0.2 0.2 - most frequently used sizes [enter]
7. keyseparation 0.15 0.15 - most frequently used spaces [enter]
8. keyshade filename.key (to shade the box) [enter]
9. quit [enter]

To plot a completed coverage
1. get into Norton Editor (NE)
2. filename .sml [enter]

   For Calcomp plotter
3. display 1039 [enter]
4. filename.plt - create a plot file for the calcomp [enter]
5. pagesize - use the same pagesize as the coverage has [enter]
6. maplimit [enter] - use the same maplimit as the coverage if it has
   one. Specify only when the coverage has one.
7. plot [coverage file] - map composite file
8. map [enter]
9. Q [enter]
10. arcplot [enter]
11. &run filename.sml [enter]
12. draw filename.plt - to draw plot on screen [enter]
13. plot (to plot on calcomp) [enter]

For the PaintJet printer

3. display 1 [enter]
4. pagesize - same size as the coverage [enter]
5. maplimit - specify only when the coverage has one [enter]
6. plot [coverage file] - the map composite file [enter]
7. map [enter]
8. quit [enter]
9. arcplot [enter]
10. @filename.sml [enter]

To define and to clean dangles

1. <ARC> clean test2 test 3 0.05 0 [enter]
2. <ARC> nodeerr test3 dangles [enter]
3. <ARC> arcedit [enter]
4. display4 [enter]
5. editc test3 [enter]
6. drawenv arc node dangle [enter]
7. draw [enter]
8. mapex * [enter] - zoom in (only if there are too many dangles in one area)
9. ed (edit distance) use the narrow keys [enter]
10. SD (snap distance) use the narrow keys [enter]
11. setdrawsymbol 1 (black on paper - white on monitor) [enter]
    2 (red) [enter]
    3 (green) [enter]
    4 (blue) [enter]
12. editF arc [enter]
13. selmany [enter]

N.B. if you select a wrong line or dangle, use (2) "next" to correct it.
    unsel - to unselect the wrong dangles or lines
14. drawsel - to highlight your selection (dangles)
15. delete - to delete the dangles

To transfer coverages from the mainframe ARC/INFO to the pcARC/INFO

Part 1

1. sign on the mainframe ARC/INFO
2. select coverage to be transferred
3. convert coverage to the interchange file using: export cover [input file] [inter_file] N (no compress) [enter]
4. quit from the ARC node
5. enter into kermit
6. send [inter_file] [enter]
7. enter the name of the received file
8. insert disc into A driver - use this only when your PC doesn’t connect to the mainframe
9. get out of kermit and return to DOS
10. copy file to drive A at the Xtalk mode

Part 2

1. insert disc into the PC which has the pcARC/INFO
2. use the import command at the ARC node import cover a:/filename output filename [enter]

Transforming ASCII, SDF, 20/20, DIF and SYLK files into INFO files

1. create an empty INFO file using Define at the INFO mode define name.dat (see page 4-9 to 3-11 of the PC INFO user's guide)
2. at the INFO node type: (see 5-9 to 5-11 of the INFO exchange)
   (a) select name.DAT (an empty file - template) [enter]
   (b) import 'sample.1' dif [enter]
   (c) list (name.DAT should have new records now) [enter]

Joining polygons with databases imported from different systems

1. at ARC node type
   [in_file]          [join_file]          [out_file]
   joinitem coverage.PAT (or AAT) name.DAT (above) coverage.PAT
   (or AAT) [relate_item] [start_item]

N.B. The field width of the relate_item must be the same in both
      [in_file] and [join_file]

2. enter TABLES to check the PAT or AAT file of the new coverage

Transforming a coverage from 10 TM to 6 TM

1. make sure all tics will fall in the same 6th zone. If they don't, which means they are too far apart, delete the old tics at the <arcedit> and add 4 new ones. If you need reference area/point from another coverage, use <get> filename to bring it in.
2. to delete tics
   <arcedit> editf tics [enter]
   <arcedit> sel all [enter]
   <arcedit> delete [enter]
3. to add new tics
   <arcedit> add [enter]
4. position the cursor at the right place and enter 1
5. repeat step 4 until all 4 or more tics are entered
6. enter 9 to quit adding tics
7. if you have brought in a coverage as reference for your new tics, use command 'removeback' to remove it before quitting the session
8. get into Titan’s [coalgis.chao]
   - sign on to Titan and enter coldata at user's name
   - ask Mandryk or Chao for password
   - set def [.chao] [enter]
- R driver - a program that will convert your 10 TM to lat, long [enter]
- R lat - 6 TM - a program that will convert lat, long to 6 TM [enter]
- type for1.dat to view the result

9. get back to ARC/INFO
10. copycov coverage1 coverage2 [enter]
11. tables ARC [enter]
12. sel coverage2.tic [enter]
13. resel Srecno = 1 [enter]
14. calc XTIC = new 5 tm easting [enter]
15. calc XTIC = new 6 tm northing [enter]
16. nsel [enter]
17. repeat step 13 to 16 until all new coordinates are entered [enter]
18. Q stop [enter]
19. transform coverage1 coverage2 [enter]
## TOWNSHIP CORNERS IN UTM

Figure 3. Township corners in UTM.
DATA SOURCES

ALBERTA BUREAU OF MAPPING

The digital base map information was obtained from the Alberta Bureau of Survey and Mapping (ABSM). The information is from digitized NTS 1:250 000 and 1:1 000 000 scale maps. The base information is accurate and diverse (tables 3 and 4) providing an excellent base of information. The information forms a major part of the pilot demo (figure 2 and appendix 3). The ability of the GIS software to use reliable locational information such as the Alberta Township Survey (ATS) township corners (figure 3) as templates for new maps was advantageous in developing the demo.

Table 3.

ALBERTA BUREAU OF MAPPING DATA*

<table>
<thead>
<tr>
<th>Level</th>
<th>Coverage</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ATS</td>
<td>Township Boundaries</td>
</tr>
<tr>
<td>2</td>
<td>ATS</td>
<td>Unsurveyed Township Boundaries</td>
</tr>
<tr>
<td>4</td>
<td>ATS</td>
<td>Section Boundaries</td>
</tr>
<tr>
<td>5</td>
<td>SET</td>
<td>Metis Settlement</td>
</tr>
<tr>
<td>6</td>
<td>SET</td>
<td>Indian Reserves</td>
</tr>
<tr>
<td>8</td>
<td>SET</td>
<td>City Boundaries</td>
</tr>
<tr>
<td>15</td>
<td>SET</td>
<td>Provincial Park Boundaries</td>
</tr>
<tr>
<td>20</td>
<td>RIV</td>
<td>Double Line River - Perennial River</td>
</tr>
<tr>
<td>23</td>
<td>RIV</td>
<td>Single Line River - Perennial River</td>
</tr>
<tr>
<td>24</td>
<td>RIV</td>
<td>Perennial River - Tributary</td>
</tr>
<tr>
<td>25</td>
<td>RIV</td>
<td>Perennial River - Minor Tributary</td>
</tr>
<tr>
<td>26</td>
<td>LAK</td>
<td>Lake Shorelines</td>
</tr>
<tr>
<td>27</td>
<td>LAK</td>
<td>Lake Shorelines - Intermittent</td>
</tr>
<tr>
<td>30</td>
<td>HWY</td>
<td>Paved Prime Highway</td>
</tr>
<tr>
<td>31</td>
<td>HWY</td>
<td>Paved Secondary Road</td>
</tr>
<tr>
<td>32</td>
<td>HWY</td>
<td>Dual Highway - Paved</td>
</tr>
<tr>
<td>33</td>
<td>HWY</td>
<td>Gravel - Secondary Road</td>
</tr>
<tr>
<td>35</td>
<td>HWY</td>
<td>Improved Road</td>
</tr>
<tr>
<td>36</td>
<td>HWY</td>
<td>Unimproved Road</td>
</tr>
<tr>
<td>37</td>
<td>HWY</td>
<td>Truck Trail/Cart Track</td>
</tr>
<tr>
<td>39</td>
<td>SET</td>
<td>Railway</td>
</tr>
<tr>
<td>40</td>
<td>MDB</td>
<td>Municipal Boundaries (Counties)</td>
</tr>
<tr>
<td>50</td>
<td>ATS</td>
<td>Map Boundaries</td>
</tr>
<tr>
<td>51</td>
<td>ATS</td>
<td>Marks indicating 50,000 NTS Units</td>
</tr>
</tbody>
</table>

*Note: Levels were received from ABSM without documentation; features were derived from NTS map sheets and may be in error.
Table 4.

<table>
<thead>
<tr>
<th>Level</th>
<th># of Records</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1939</td>
<td>Township Boundaries</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>Unsurveyed Township Boundaries</td>
</tr>
<tr>
<td>4</td>
<td>8915</td>
<td>Section Boundaries</td>
</tr>
<tr>
<td>50</td>
<td>620</td>
<td>Map Boundaries</td>
</tr>
<tr>
<td>51</td>
<td>32</td>
<td>Marks indicating every 50,000 NTS units on easting &amp; northing - i.e. 600000E, 650000E 5900000MN, 5950000MN</td>
</tr>
</tbody>
</table>

**MQB Coverage**

<table>
<thead>
<tr>
<th>Level</th>
<th># of Records</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>164</td>
<td>Municipal Boundaries (Counties)</td>
</tr>
</tbody>
</table>

**SET Coverage**

<table>
<thead>
<tr>
<th>Level</th>
<th># of Records</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>27</td>
<td>Lac Ste. Anne Settlement - HBC Reserve (Metis Settlement?)</td>
</tr>
<tr>
<td>6</td>
<td>49</td>
<td>Indian Reserves</td>
</tr>
<tr>
<td>8</td>
<td>49</td>
<td>City Boundaries (?)</td>
</tr>
<tr>
<td>15</td>
<td>59</td>
<td>Provincial Park</td>
</tr>
<tr>
<td>39</td>
<td>249</td>
<td>Railway</td>
</tr>
</tbody>
</table>

**HWY Coverage**

<table>
<thead>
<tr>
<th>Level</th>
<th># of Records</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>384</td>
<td>Road - all-weather, hard surface, 2 lanes Paved, Prime Highway</td>
</tr>
<tr>
<td>31</td>
<td>3</td>
<td>Paved Secondary Road</td>
</tr>
<tr>
<td>32</td>
<td>10</td>
<td>Dual Highway - Paved</td>
</tr>
<tr>
<td>33</td>
<td>115</td>
<td>Gravel, Prime Highway</td>
</tr>
<tr>
<td>34</td>
<td>311</td>
<td>Gravel, Secondary Road</td>
</tr>
<tr>
<td>35</td>
<td>2591</td>
<td>Improved Road</td>
</tr>
<tr>
<td>36</td>
<td>1858</td>
<td>Unimproved Road</td>
</tr>
<tr>
<td>37</td>
<td>869</td>
<td>Truck Trail/Cart Track</td>
</tr>
</tbody>
</table>

**RIV Coverage**

<table>
<thead>
<tr>
<th>Level</th>
<th># of Records</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>180</td>
<td>Double Line River - Perennial River</td>
</tr>
<tr>
<td>23</td>
<td>5</td>
<td>Perennial River - Single Line River</td>
</tr>
<tr>
<td>24</td>
<td>1391</td>
<td>Perennial River - Tributaries</td>
</tr>
<tr>
<td>25</td>
<td>1115</td>
<td>Perennial Minor Tributaries</td>
</tr>
</tbody>
</table>

**LAK Coverage**

<table>
<thead>
<tr>
<th>Level</th>
<th># of Records</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>632</td>
<td>Lake Shorelines</td>
</tr>
<tr>
<td>27</td>
<td>132</td>
<td>Lake Shorelines - Intermittent</td>
</tr>
</tbody>
</table>
Conversion of ABSM Supplied SIF/ASCII to Arc Format (UTM Co-ordinates)

1. SIFARC Conversion
   SIFARC (Filename)(Output Coverage) 1006720 Line
2. Build (coverage) line
3. Copycov (coverage) (coverage)1
4. Info
   Select Cov1.TIC
   Calc XTIC = XTIC + 2147483647.000
   Calc YTIC = YTIC + 7147483647.000
   Calc XTIC = XTIC (+)1000
   Calc YTIC = YTIC (+)1000
5. Transform (coverage) (coverage)1
6. Build (coverage)1 Line
7. Renamcov (coverage)1 (coverage)2
8. Additem (coverage)2.AAT (coverage)2.AAT Level 45B
9. Build (coverage)2 Good Line
10. Info
    Sel (coverage)2.AAT
    Rel (coverage)2.GAT by (coverage)2# with Link
    Calc Level = $1 Level
11. Kill (coverage)All

ENERGY RESOURCES CONSERVATION BOARD (ERCB)

Two types of ERCB data were used for the demo; the coal permit and coal mine graphic files; and the oil and gas well locations from the ERCB well data file. The two types of data were transformed and imported to pcARC/INFO using a number of small custom formatting programs written in fortran. When the data files were in a format that pcARC/INFO could recognize they were coverted to coverages.

Format of the ERCB Data

The data is provided in three standard VAX/VMS files on tape at 6250 bpi. The file names, in the order that they appear on the tape are cmg.out, bs2.out and cb1.out. The files contain variable length records with a maximum record length of 313 bytes. The format of the records in these files is described in the following section.

1. LINE

   1.1 CODE cc 01-04 I4 The code for LINE records is "3".
   1.2 LEVEL cc 05-07 I3 Level or data type number of graphic element
   1.3 LINE CODE cc 08-10 I3 Line code of graphic element
   1.4 START X CO-ORD cc 11-21 F11.3 Meters
   1.5 START Y CO-ORD cc 22-32 F11.3 Meters
   1.6 STOP X CO-ORD cc 33-43 F11.3 Meters
   1.7 STOP Y CO-ORD cc 44-54 F11.3 Meters

2. ARC

   2.1 CODE cc 01-04 I4 The code for ARC records is "16".
2.2 LEVEL cc 05-07 I3 Level or data type number of graphic element
2.3 LINE CODE cc 08-10 I3 Line code of graphic element
2.4 START X CO-ORD cc 11-21 F11.3 Meters
2.5 START Y CO-ORD cc 22-32 F11.3 Meters
2.6 START ANGLE cc 33-40 F8.3 Degrees
2.7 SWEEP ANGLE cc 41-48 F8.3 Degrees
2.8 RADIUS cc 49-59 F11.3 Meters

3. TEXT
3.1 CODE cc 01-04 I4 The code for TEXT records is "17".
3.2 LEVEL cc 05-07 I3 Level or data type number of graphic element
3.3 LINE CODE cc 08-10 I3 Line code of graphic element
3.4 START X CC-ORD cc 11-21 F11.3 Meters
3.5 START Y CC-ORD cc 22-32 F11.3 Meters
3.6 TEXT ANGLE cc 33-40 F8.3 Degrees
3.7 TEXT HEIGHT cc 41-47 F7.3 Meters
3.8 TEXT WIDTH cc 48-54 F7.3 Meters
3.9 NUMBER OF CHARS cc 55-57 I3 Maximum value is 80
3.10 FILLER cc 58 X
3.11 TEXT cc 59-138 80A1 This is a varying length record.

4. SYMBOL (CADAstral)
4.1 CODE cc 01-04 I4 The code for symbol records is "2".
4.2 LEVEL cc 05-07 I3 Level or data type number of graphic element
4.3 LINE CODE cc 08-10 I3 Line code of graphic element
4.4 START X CC-ORD cc 11-21 F11.3 Meters
4.5 START Y CC-ORD cc 22-32 F11.3 Meters

5. NON-GRAphIC DATABASE ELEMENTS
5.1 CODE cc 01-04 I4 The code for NON-GRAphIC records is "18".
5.2 LEVEL cc 05-07 I3 Level or data type number of graphic element
5.3 LINE CODE cc 08-10 I3 Line code of graphic element
5.4 START X CO-ORD cc 11-21 F11.3 Meters
5.5 START Y CO-ORD cc 22-32 F11.3 Meters
5.6 TEXT ANGLE cc 33-40 F8.3 Degrees
5.7 TEXT HEIGHT cc 41-47 F7.3 Meters
5.8 TEXT WIDTH cc 48-54 F7.3 Meters
5.9 NUMBER OF CHARS cc.56-57 I3 Maximum value is 255
5.10 FILLER cc 58 X
5.11 TEXT cc 59-313 25A1 This is a varying length binary (unformatted record)

Note: This record type will follow the graphic element that this data is associated with. If more than one graphic element share a
database element then that data will be replicated for each graphic element. The level and line code fields are described below.

<table>
<thead>
<tr>
<th>Level</th>
<th>Line Code</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>13</td>
<td>Restricted Development Area</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Federal Park Boundaries</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Provincial Park Boundaries</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Indian Reserves</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>Military Reserves</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Roads</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Railways</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>Surface Mine</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Underground Mine</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Uncertain Mine Location</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Mine Symbol Number</td>
</tr>
<tr>
<td>23</td>
<td>4</td>
<td>Mine Licence/Permit Number</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Mine Number</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>Licences</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>Permits</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>Mined Out Areas</td>
</tr>
</tbody>
</table>

The text field of a nongraphic database record where the level = 14 is formatted as:

```
10 A  Underground Mine
10 A  Surface Mine
10 A  Uncertain Mine
1 X   Filler
```

The text field of a nongraphic database record where the level = 23 is formatted as:

```
15 A  Mine Number
14 A  Licence Number
14 A  Permit Number
1 X   Filler
```

**TRANSALTA UTILITIES (TUA)**

Much of the coal and geological information was supplied by TUA. Most information was in hardcopy map form and required digitizing. Some information, particularly the coal quality information from Highvale, was in digital form; and was imported directly to PC INFO.

**OTHER**

Selected information from literature (Mills, 1987) and public maps (Alberta Energy, 1986) was collected and digitized. Based on Alberta Energy maps, coal lease information was digitized for NTS map sheet 83G.
MAP 1. GEOGRAPHIC REFERENCE MAP

Figure 4. Geographic reference map.
PROVINCE OF ALBERTA

COAL QUALITY DATA

1 PROXIMATE ANALYSIS
2 ULTIMATE ANALYSIS
3 CHEMICAL ANALYSIS
4 FUSION ANALYSIS
5 TRACE ELEMENTS ANALYSIS
6 PHYSICAL PROPERTIES ANALYSIS
7 COKING TEST

COAL GEOLOGY GROUP
ALBERTA GEOLOGICAL SURVEY

Figure 5. Provincial coal quality query screen.
USING THE PILOT DEMO

STARTING THE DEMO

Instructions for starting the demo can be found in Appendix 1. Within the demo it is possible to go to any level, print a map, query the data or quit without any knowledge of pcARC/INFO commands.

LEVEL 1: PROVINCIAL SCALE

The system can be queried for available information; figures 4 and 5 provide two views of base map information contained in the system.

Figure 4 contains the outlines of the 1:250 000 NTS map areas in Alberta with major cities and rivers providing a geographic reference. In addition, the provincial boundaries and lines of latitude/longitude are shown. Some of this information was also used in constructing the coal quality query screen shown in figure 5.

Figure 5 shows the subcrops of the Ardley and Horseshoe Canyon coals and indicates presence of available coal quality information. Items can be queried individually for the whole map area or for a small subarea by using the "zoom" function of pcARC/INFO. Individual data locations or alternately, all locations selected can have attribute information displayed as tables. The attribute information is attached to the data locations. In the Coal demo only the ERCB and AGS Coal Data Base (Richardson et.al., 1989) ID-key numbers are available. In addition, more than one type of information can be queried and displayed at once. Boolean operations are also possible. Figure 6 displays locations with proximate analysis data and trace element analysis. A hardcopy plot or a quick colour screen dump, such as figure 6, can be produced at any time at any menu level.
Figure 6. Proximate and trace element data distribution.
LEVEL 2: NTS 1:250 000 SCALE MAP AREAS

Provincial base map information such as lakes, rivers, and township grids (tables 3 and 4) is now available in a digital form from ABSM at a 1:250 000 scale. New digital maps at a scale of 1:20 000 will become available for the whole province gradually during the next decade; at present, less than half the province is available at the 1:20 000 scale. The base map information for Levels 2, 3 and 4 is based on the ABSM 1:250 000 scale data.

Figure 7 shows the Alberta Township Grid from ABSM. Once loaded into ARC/INFO the data can be used as a locational base for any subarea (figure 3). Other hardcopy maps, such as coal leases, can be digitized and integrated with the data (figure 8). Again, the data can be queried using the cursor and zoom feature; the data can also be used for further analysis or overlay creation.

Figure 9 is a screen dump of a 1:250 000 scale plotfile map that contains additional information legend not included in figure 8. The two figures showing the same information demonstrate both the capability and flexibility of the software to produce on-screen and/or hardcopy map products. Much more information can be displayed on the larger format hardcopy.
ALBERTA TOWNSHIP SURVEY
GRID FOR 83G

Figure 7. Alberta Township Survey for NTS Sheet 83G.
Figure 8. Coal lease data for NTS Sheet 83G.
Figure 9. Plotfile map of coal lease data; NTS Sheet 83G.
LEVEL 3: SUBREGIONAL STUDY AREAS

The area selected for the pilot project demo's subregional study was the major thermal coal mining region near Lake Wabamun, west of Edmonton. At Level 3, provincial information can be merged to mine scale for overview display and analysis.

Based on the ABSM 1:250 000 digital data, details of the hydrography and its relationship to section outlines has been displayed in figure 10. Digital information on licenced areas (green) and oil and gas well locations (red dots) have been imported from the ERCB digital files. A 400 m development buffer zone for each oil and gas well has been automatically produced by the software. This demonstrates how GIS can be used to identify areas where resource development conflicts may occur between existing oil and gas wellsites (active or abandoned) and future coal mining. The demo can be queryied on specific information related to the nature, status and ownership of the oil and gas wells. Abandoned or active wells can be easily distinguished. Since well status and licence information is available digitally the information can be easily updated.

Figure 11 demonstrates surface feature information (the wellsites) being integrated with subsurface resource information (coal isopachs) for use in resource management and/ or planning activities. Figure 11 shows the number of oil and gas wells and their areal distribution; the extent of potential resource conflict in terms of various seam thicknesses (Seam 1) and a radii of influence (400 m buffer zones) around each wellsite. The Seam-isopachs have been taken from Level 4 (the mine scale maps). On figure 11, the licence areas shown on figure 10 have been replaced by the actual mined out areas to demonstrate how different map elements can be combined. The colour of the well buffers were changed to black for clarity and to demonstrate how any polygon, line, or point can be modified.
Figure 10. Oil and gas well 400 m buffers, Wabamun Area.
Figure 11. Coal/oil and gas resource development/conflict analysis.
LEVEL 4. TOWNSHIP AND MINE SITE DETAILED AREAS

In addition to much of the data previously discussed at Levels 1 to 3, detailed information on coal quality and geology is available at Level 4. The area to the north of the North Saskatchewan River in figure 12 has data density too high for detailed analysis. A mine scale map (figure 13) of the Southern Highvale, was located north of the North Saskatchewan River, allows for the identification of individual wells. This can be compared to an isopach of Seam 1 (figure 14).

Figure 15 displays a single township (Twp 50 R4 W5M) at Level 4 to show geological information; figure 16 displays the status of individual oil and gas wells for individual sections.

Coal quality data for individual seams (Seams 1 through 5) is available in the demo for the whole of the Highvale mine permit area (figure 17).

Figure 18 shows the permit and licence information for the Northern Highvale area.

Figures 19 through 21 also pertain to the Northern Highvale area and provide examples of bedrock, isopach and structural contour maps that are resident in the demo.
Figure 12. Wabamun Area; buffered wells with road network.
Figure 13. Southern Highvale oil and gas distribution.
Figure 14. Southern Highvale isopach of Seam 1.
Figure 15. Township 50, Range 4, West of the 4th, isopach Seam 1.
Figure 16. Township 50, Range 4, West of the 4th, Well Status.
Figure 17. Highvale Area; as received volatile matter Seam 3.
Figure 18. Northern Highvale permit and licence data.
Figure 19. Northern Highvale geological map.
Figure 20. Northern Highvale isopach map of coal Seam 1.
Figure 21. Northern Highvale structure contour map of coal Seam 1.
EXPERIENCE GAINED FROM STUDY

CAPABILITIES

The workstation and software combine to make a fully functional GIS system. Virtually all the features of a fully operational mini-computer based system were available on pcARC/INFO.

Hardware

The 386 machine was able to complete most of the required processing in a few minutes. The disk storage of space 300Mb. exceeded necessary requirements.

Software

The software was capable of handling all the basic GIS functions and a large number of advanced applications.

LIMITATIONS

Hardware

The MS-DOS operating system was a major limitation on the hardware. Machine resources failed when too many files were open or the 640Kb. of regular memory was filled. A failure to buffer 10 000 points (after a 10-hour run) may have been caused by a lack of available RAM or disk space for scratch files. ESRI notes that the scratch space required by BUILD/CLEAN can be from 4 to 13 times the coverage size and as a general rule-of-thumb: the greater the number of coordinates per arc and the greater the number of intersections, the more scratch space will be needed.
Software

The software does not allow access to extended or expanded memory. A limit of 20 open files at any time is too restrictive. The software produces a large number of files which could be cumbersome to handle, if most of the organization were not automatic.

ESRI notes that the total number of arcs per coverage is 32,000 (limit applies only to ADS, DIGITIZE and EDIT); with the number of points per arc and the number of arcs per polygon is limited to 500 and 5,000 respectively.

The software is 2-D in nature, while many geological problems are best dealt with in 3-D.

Manpower

An experienced operator is needed for all but the simplest tasks. Training is required to use and develop the pcARC/INFO system. The operator needs to be a dedicated component of the GIS effort.

SYSTEM DOCUMENTATION

ARC/INFO Files

Appendix 2 lists and describes the various ARC/INFO file types.

MS-DOS File Directory Path

Appendix 4 is a MS-DOS path directory of all files in the pilot demo. A study of this appendix provides a guide to the structure of the demo on a directory/subdirectory/file basis. The complexity of the file system can be readily seen. Figure 2, the data structure, provides a greatly simplified view of the demo when compared to appendix 4.
File Size and Occurrence

Appendices 5 and 6 provide additional detail on files, including the date and time of creation, the size in bytes, and the directory/file name and extension.

A total of 600 files comprise Levels 1 and 2 of the demo; 4,661 files were created for Levels 3 and 4. In total, 5,261 files more than 28Mb. of storage space comprise the demo.

The largest file was 1.6Mb. while the mean, median and mode for all files was 5382, 512, and 80Kb. respectively (table 5). A log frequency plot (figure 22) shows that file frequency decreases rapidly with increasing file size, i.e., the system produces a large number of small files.
<table>
<thead>
<tr>
<th>Filename</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC</td>
<td>2167</td>
<td>80</td>
<td>554240</td>
<td>3761.89</td>
<td>432</td>
<td>80</td>
<td>18.7445</td>
</tr>
<tr>
<td>CNT</td>
<td>142</td>
<td>512</td>
<td>27392</td>
<td>2469.86</td>
<td>1152</td>
<td>512</td>
<td>4.3242</td>
</tr>
<tr>
<td>LAB</td>
<td>205</td>
<td>512</td>
<td>1.58008x10^6</td>
<td>12569.0</td>
<td>768</td>
<td>512</td>
<td>13.4876</td>
</tr>
<tr>
<td>LNK</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TIC</td>
<td>266</td>
<td>48</td>
<td>132</td>
<td>48.6316</td>
<td>48</td>
<td>48</td>
<td>11.4669</td>
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<tr>
<td>TXT</td>
<td>98</td>
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<td>512</td>
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<td>AAT</td>
<td>197</td>
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<td>369152</td>
<td>9670.54</td>
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<td>ADD</td>
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<tr>
<td>ARF</td>
<td>30</td>
<td>28</td>
<td>171948</td>
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<td>3612</td>
<td>2352</td>
<td>3.5682</td>
</tr>
<tr>
<td>NRF</td>
<td>187</td>
<td>4</td>
<td>25136</td>
<td>652.5</td>
<td>132</td>
<td>4</td>
<td>7.7586</td>
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<tr>
<td>PAL</td>
<td>140</td>
<td>512</td>
<td>102144</td>
<td>6370.7</td>
<td>2560</td>
<td>512</td>
<td>5.1827</td>
</tr>
<tr>
<td>PRF</td>
<td>47</td>
<td>16</td>
<td>19632</td>
<td>962.04</td>
<td>128</td>
<td>32</td>
<td>5.9341</td>
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<td>4</td>
<td>5120</td>
<td>179.3</td>
<td>16</td>
<td>16</td>
<td>6.5813</td>
</tr>
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<td>LOG</td>
<td>294</td>
<td>24</td>
<td>7292</td>
<td>903.5</td>
<td>656</td>
<td>24</td>
<td>2.9955</td>
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<td>512</td>
<td>768</td>
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<td>512</td>
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</tr>
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<td>24</td>
<td>19.7</td>
<td>24</td>
<td>24</td>
<td>-0.6</td>
</tr>
<tr>
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<td>5261</td>
<td>0</td>
<td>1.58008x10^6</td>
<td>5381.61</td>
<td>512</td>
<td>80</td>
<td>18.7445</td>
</tr>
<tr>
<td>SML</td>
<td>44</td>
<td>51</td>
<td>18717</td>
<td>5159.36</td>
<td>3479</td>
<td>55</td>
<td>0.4828</td>
</tr>
</tbody>
</table>
Figure 22. Frequency plot of demo file size.
Simple Macro Language (SML) Files

Appendix 7 is a complete listing of the SML files that make up the demo menu system. These files can be modified, compressed or adapted for other demos using the same or other ARC/INFO files.

SUMMARY

It is important to stress that it is the pilot project demo itself, not this report, that is the primary product of this project. The prime function of the project was to demonstrate the capabilities of a GIS system, as it pertains to enhancing and supporting the coal-related information requirements of the Alberta Geological Survey's Coal Geology Section as well as industry and government.

FUTURE PLANS

Future plans include the enhancement of the present GSIS system. The demo is currently being ported to an ARC/INFO environment of a minicomputer. Testing of the demo will begin in 1989-90, on the distributed system, to establish performance and costs. The existing PC-system will be kept operational and new data will be added from relevant Alberta Geological Survey's Coal Geology Section projects as the data becomes available. Substantial effort will be spent on developing the reporting and querying capabilities.

A project has been approved for 1989-90 for the development of an operational Geoscience Information System (GSIS) which will form the foundation of the Alberta Geological Survey's Coal Geology Section spatial data storage, display and analysis. This project will allow the Coal Geology Section and the Alberta Geological Survey to more thoroughly fulfill its mandate by achieving the following goals:

1. Help establish an Alberta-wide electronic map library of existing map data, consisting in part of base maps (planimetric, topographic and geologic), ERCB coalfield maps,
Alberta Energy's Coal Lease Maps, maps from the Alberta Geological Survey's Plains evaluation studies and maps from selected coal geology papers.

2. Convert the Alberta Geological Survey's Coal Data Base data into GIS format, i.e. build point coverages of all drill hole information with the GIS database attached.

3. Link the GSIS to the Alberta Geological Survey's Coal Data Base.

4. Build a user interface system to: (i) allow common queries to be facilitated by a menu system and (ii) allow data and maps commonly needed in geological survey, coal exploration, and resource evaluations to be facilitated by a menu system.

5. Establish links between other software such as statistical, mapping and geostatistical packages.

6. Establish links to the Provincial LRIS system.

REFERENCES


Figure 2. Data structure.
DISCLAIMER

This report was prepared as an account of work sponsored by the Alberta Department of Energy (AE), Office of Coal Research and Technology, and the Alberta Research Council (ARC). Every possible effort was made to ensure that the work conforms to accepted scientific practice. However, neither AE nor the ARC, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by AE or the ARC. The views and opinions of the authors expressed herein does not necessarily state or reflect those of AE or the ARC.
APPENDIX 1

COAL GSIS DEMO SYSTEM

Starting up the demo:

<table>
<thead>
<tr>
<th>STEPS</th>
<th>ENTER</th>
<th>TERMINALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ARC at DOS</td>
<td>386</td>
</tr>
<tr>
<td>2</td>
<td>CD PROJ1</td>
<td>386</td>
</tr>
<tr>
<td>3</td>
<td>DUALMODE 2 2400 (for VT100)</td>
<td>386</td>
</tr>
<tr>
<td></td>
<td>DUALMODE 2 4800 (for VT240)</td>
<td>386</td>
</tr>
<tr>
<td></td>
<td>DUALMODE 2 9600 (for tek4205)</td>
<td>386</td>
</tr>
<tr>
<td>4</td>
<td>ARC PLOT</td>
<td>VT100/240</td>
</tr>
<tr>
<td>5</td>
<td>DISPLAY 4 2 3</td>
<td>VT100/240</td>
</tr>
<tr>
<td>6</td>
<td>@WELCOME</td>
<td>VT100/240</td>
</tr>
<tr>
<td>7</td>
<td>DUALMODE OFF</td>
<td>BACK TO 386</td>
</tr>
</tbody>
</table>

If the system crashes, users can reboot the system and repeat step 1 to 6.

Each SML program (MANUAL.SML) is at its related subdirectory under directories WABAMUN and PROJ1 (See directory chart). Users can get into any WABAMUN subdirectories by changing step 2 to CD WABAMUN\*. (eg. CD WABAMUN\MINES\HIGHVA to get into the Highvale subdirectory) and start up its SML program by repeating step 3, 4 & 5. Step 6 should change to @MANUAL. In the case of directory PROJ1, the SML program for the provincial level is QLTAB (@QLTAB), and the SML program for the 83G is 83G (@83G).

Users can get into any SML programs (MANUAL.SML) at the Norton Editors by typing NE at the ARC mode or DOS mode and entering the name of the program (eg. MANUAL.SML) at the NE mode. After editing, users can exit from the NE mode by hitting either <F3><E> (exit with saving all the changes) or <F3><Q> (exit without saving any changes).

When doing the zoom in or selecting a particular point on the 386 monitor, users must use the arrows and <ENTER> on the 386 keyboard.
APPENDIX 2

ARC/INFO FILE TYPES (ESRI MANUALS)

Files Defining Features - contain coordinates and topological information about one class of feature. These files store records for each feature with record numbers equivalent to internal-ID.

- ARC - Arc Coordinates and Topology
- CNT - Polygon Centroid Coordinates
- LAB - Label Point Coordinates and Topology
- LNK - Link Coordinates
- TIC - Tic Coordinates
- TXT - Annotation Coordinates and Symbology

Files Providing Feature Attributes - contain attributes of one class of feature. These files store records related to features by internal-ID.

- AAT - Arc Attribute Table
- ADD - Feature Address Table
- PAT - Polygon or Point Attribute File
- TRN - Turn Impedence Table

Files Providing Feature Cross-Reference - contain records making explicit the topological relationships between features of one or more classes. These files store the internal-ID values of various features, so that feature definition files may be accessed directly without searching.

- ARF - Arc Cross-Reference File
- NRF - Node Cross-Reference File
- PAL - Polygon/Arc/Node Cross-Reference File
- PRF - Polygon Cross-Reference File

Files Describing Coverage

- BND - Coverage coordinate extremes
- LOG - Coverage History File
- MSK - Edited Areas mask file
- TOL - Coverage Tolerances file

* Other files used during ARC/INFO processing are temporary (deleted at completion of execution), or are user-defined attribute files.
APPENDIX 3
DATA AVAILABLE IN COAL GSIS AT VARIOUS LEVELS

LEVEL 1

PROVINCE OF ALBERTA

a. Proximate Analysis
b. Ultimate Analysis
c. Chemical Analysis
d. Fusion
e. Trace Elements
f. Physical Analysis
h. Coal
  - all the above have ERCB and ARC codes

LEVEL 2

NTS MAP OF 83G

a. ATS
b. Rivers
c. Lakes
d. Reserves, Park boundaries & Railways
e. County boundaries
f. Coal Depositions of 83G
   - polygon IDs
   - Description of depositions (Lease, Application, Freehold,
     Coal withdrawn from Deposit)
   - company IDs
   - company names

LEVEL 3

WABAMUN AREA

a. ATS
b. Rivers
c. Lakes
d. Highways
e. Licenced Areas
   - licence numbers
f. Surface Mines
   - mine IDs & locations
g. Underground Mines
   - mine IDs & locations
h. Uncertain Mines
   - mine IDs & locations
i. Permit Areas
   - permit numbers
j. Well Status
   - well IDs & descriptions
k. Mined Areas
l. Oil Wells Buffers (400m)

LEVEL 4

1. HIGHVALE AREA

   a. Isopach of coal seam 1
      - from less than 2.8m to greater than 3.8m
   b. Isopach of coal seam 2
      - from less than 2.0m to 4.2m
c. ATS
d. Rivers
e. Lakes
f. Highways
g. Mined Areas
h. Permit Areas
   - permit numbers
i. Surface Mines
   - mine IDs & locations
j. Underground Mines
   - mine IDs & locations
k. Coal drillhole locations
   - HV-codes (TRANSALTA)
   - eastings & northings
l. Cumulative Stratigraphic Overburden
   - STR 10,20,30,35,36,40,60,80,46,47,48,61,62,63,635,64,65,89
   - all the aboves have HV-codes, eastings & northings
m. Types of Analysis Performed (TRANSALTA)
   - gross samples (seam 1 - 6)
   - detail samples (seam 1 - 6)
   - composite samples (seam 1 - 6)
   - all the aboves have HV-codes, eastings & northings
n. Coal Quality for seam 1 - 6
   - as received ash in %
   - ' sulfur in %
   - ' H2O "
   - ' calval "
   - ' volm "
   - ' fxc "
   - adjusted ash in %
   - ' sulfur in %
   - ' H2O "
   - ' calval "
   - ' volm "
   - ' fxc "
   - all the aboves have HV-codes, eastings & northings
2. HIGHVALE NORTH
   a. Isopach of coal seam 1
      - from less than 1.6m to 4.2m
   b. Isopach of coal seam 2
      - from less than 2.0m to 4.2m
   c. Mined Areas
   d. Well Status
      - well IDs & descriptions
   e. Permit Areas
      - permit numbers
   f. Structural Contour of seam
   g. Licenced Areas
      - licence numbers
   h. Underground mines
      - mine IDs & locations
   i. Surface mines
      - mine IDs & locations
   j. Geological contour map
      - Upper Shale, Middle Shale, Middle Sandstone, Lower Shale, Ardley coal
l. Rivers
m. Lakes

3. HIGHVALE SOUTH
   a. Lakes
   b. Rivers
   c. ATS
   d. Isopach of the Lower Shale (Unit 80)
      - from less than 1m to 14m
   e. Isopach of coal seam 1
      - from less than 1m to 4.2m
   f. Isopach of coal seam 2
      - from less than 2m to 4.2m
   g. Isopach-Surface to top Lithology 500 (base of disturbed bedrock)
   h. Licenced Areas
      - licence numbers
   i. Permit Areas
      - permit numbers
   j. Well Status
      - well IDs & descriptions
   k. Highways

4. GENESEE
   a. ATS
   b. Lakes
   c. Rivers
   d. Top of the highest seam contours
   e. Top of the Upper Main contours
   f. Depth of cover to the Lower Main
   g. Ash contours - Lower Main
      - from less than 8m to 28m
h. Ash contours - High Seam
   - from 0 % to greater than 40 %

i. Sulfur contours - Lower Main
   - from less than 0.15m to 0.35m

j. Sulfur contours - High Seam
   - from 0 % to greater than 0.46 %

l. Drillhole locations
   - types of drillholes

k. Isopach of the Overburden Thickness
   - from less than 15m to 45m

m. Permit Areas
   - permit numbers

n. Surface Mines
   - mine IDs & locations

O. Well Status
   - well IDs & descriptions

5. WITHEWOOD AREA

a. Rivers
b. Lakes
c. ATS
d. Isopach of coal seam 3
   - from less than 0.8m to 4.0m
e. Structural contours of the top of coal seam 3
   - from less than 700m to 780m
f. Isopach of the overburden to the first mineable seam
   - from less than 2m to 60m
g. Licenced Areas
   - licence numbers
h. Permit Areas
   - permit numbers
i. Mined Areas
j. Well Status
   - well IDs & locations

6. TOWNSHIP 5535

a. Rivers
b. Lakes
c. ATS
d. Highways
e. Highvale Mine - Isopach of coal seam 1
   - from less than 2.6m to 3.8m
f. Highvale Mine - Isopach of coal seam 2
   - from 0m to 3.4m
g. Northern Highvale - geological contour map
   - STR100,80,60 & 40
h. Whitewood Mine - Isopach of seam 3
i. Whitewood Mine - Structural contours of the top of seam 3
   - from less than 750m to 770m
j. Whitewood Mine - Isopach overburden to first mineable seam
   - from less than 20m to 60m
k. Northern Highvale - Structural contours of coal seam 1
- from less than 714m to 728m

1. Well Status
   - well IDs & descriptions
m. Surface Mines
   - mine IDs & locations
n. Underground Mines
   - mine IDs & locations

7. TOWNSHIP 5534

a. ATS
b. Rivers
c. Lakes
d. Highways
e. Whitewood Mine - Isopach of coal seam 3
   - from less than 0.8m to 4.0m
f. Whitewood Mine - Isopach overburden to first mineable seam
   - from less than 2.0m to 50m
g. Whitewood Mine - Structural contours of the top of seam 3
   - from less than 700m to 780m
h. Licenced Areas
   - licence numbers
i. Mined Areas
j. Well Status
   - well IDs & descriptions
k. Surface Mines
   - mine IDs & locations
l. Underground Mines
   - mine IDs & locations

8. TOWNSHIP 5525

a. ATS
b. Rivers
c. Lakes
d. Highways
e. Highvale Mine - Isopach of coal seam 1
   - from less than 1.8m to 4.2m
f. Highvale Mine - Isopach of coal seam 2
   - from less than 2.8m to 3.6m
g. Northern Highvale Mine - Isopach of geological map
   - Lower Shale, Ardley Coal, Middle Shale & Middle Sandstone
h. Licenced Areas
   - licence numbers
i. Permit Areas
   - permit numbers
j. Mined Areas
k. Northern Highvale Mine - Structure of coal seam 1
   - from less than 710m to 730m
l. Well Status
   - well IDs & descriptions

9. TOWNSHIP 5524
a. ATS
b. Rivers
c. Lakes
d. Highways
e. Well Status
   - well IDs & descriptions
f. Highvale Mine - Isopach of coal seam 1
   - from less than 1.6m to 3.8m
g. Highvale Mine - Isopach of coal seam 2
   - from less than 3.0m to 3.6m
h. Northern Highvale Mine - geological contour map
   - Lower Shale, Ardley Coal, Middle Shale, Upper Shale, Middle Sandstone
i. Northern Highvale Mine - Isopach of the Lower Shale (Unit 80)
   - from less than 2m to 7m
j. Southern Highvale Mine - Isopach - Surface to top Lithology 500
   (base of disturbed bedrock)
k. Licenced Areas
   - licence numbers
l. Permit Areas
   - permit numbers
m. Mined Areas
o. Surface Mine
   - mine IDs & locations
p. Northern Highvale Mine - Structure contour seam 1
   - from less than 714m to 740m

10. TOWNSHIP 5515

a. ATS
b. Lakes
c. Rivers
d. Highways
e. Well Status
   - well IDs & descriptions

11. TOWNSHIP 5514

a. ATS
b. Lakes
c. Rivers
d. Highways
e. Well Status
   - well IDs & descriptions
f. Highvale Mine - Isopach of coal seam 1
   - from less than 0.8m to 4.2m
g. Highvale Mine - Isopach of coal seam 2
   - from less than 3.0m to 4.2m
h. Southern Highvale Mine - Isopach of the Lower Shale (Unit 80)
   - from less than 3m to 12m
i. Southern Highvale Mine - Surface to top Lithology 500 (base of
   disturbed bedrock)
   - from less than 10m to 110m
j. Permit Areas
- permit numbers

12. TOWNSHIP 5504

a. ATS
b. Lakes
c. Rivers
d. Highways
e. Well Status
   - well IDs & descriptions
f. Highvale Mine - Isopach of coal seam 1
   - from less than 1.6m to 3.6 m
g. Highvale Mine - Isopach of coal seam 2
   - from less than 3.0m to 4.2m
h. Southern Highvale Mine - Isopach of the Lower Shale (Unit 80)
   - from less than 2.0m to 7.0m
i. Southern Highvale Mine - Isopach of surface to top Lithology 500
   (base of disturbed bedrock)
j. Permit Areas
   - permit numbers

13. TOWNSHIP 5503

a. ATS
b. Rivers
c. Lakes
d. Highways
e. Genesee Mine - top of the highest seam contours
f. Genesee Mine - Drillhole distributions
   - drillhole types & descriptions
g. Genesee Mine - top of Upper Main
h. Genesee Mine - Sulfur contours of the Lower Main
   - from less than 0.15m to 0.35m
i. Genesee Mine - Depth of cover to Lower Main
   - from less than 15m to 60m
j. Genesee Mine - top of Lower Main contours
k. Genesee Mine - Ash contours of the High Seam
   - from less than 0.25m to 0.5m
l. Genesee Mine - Ash contours of the Lower Seam
   - from less than 0.25m to 0.5m
m. Genesee Mine - Overburden Thickness
   - from less than 5m to 35m
n. Licenced Areas
   - licence numbers
o. Permit Areas
   - permit numbers
# APPENDIX 4

## COAL GSIS DEMO SYSTEM

### DIRECTORY PATH LISTING FOR GSIS COAL DEMO

**Files:**

**Path:** `\PROJECT\NTS1`

**Sub-directories:** None

**Files:**

**Path:** `\PROJECT\HVPNT`

**Sub-directories:** None

**Files:**

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**Sub-directories:** None

**Files:**

**Path:** `\PROJECT\RIVER`

**Sub-directories:** None

**Files:**

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**Files:**

**Path:** `\PROJECT\OUTCROPS`

**Files:**

**Path:** `\PROJECT\BJG_PRO3`

**Files:**

**Path:** `\PROJECT\NTS`

**Files:**

**Path:** `\PROJECT\TCL`

**Files:**

**Path:** `\PROJECT\TXT`

**Files:**

**Path:** `\PROJECT\ERC_BOLT`

**Files:**

**Path:** `\PROJECT\ERCB_AB`

**Files:**

**Path:** `\PROJECT\DILW30G`

**Files:**

**Path:** `\PROJECT\BJG_NW`

**Files:**

**Path:** `\PROJECT\BJG_NE`

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**Files:**

**Path:** `\PROJECT\RTV`

**Files:**

**Path:** `\PROJECT\LAK`

**Files:**

**Path:** `\PROJECT\HWT`

**Files:**

**Path:** `\PROJECT\SET`

**Files:**

**Path:** `\PROJECT\WDB`

**Files:**

**Path:** `\PROJECT\BJG1`

**Files:**

**Path:** `\PROJECT\BJG_HW1`

**Files:**

**Path:** `\PROJECT\WINDO`

**Files:**

**Path:** `\PROJECT\BJG3`

**Files:**

**Path:** `\PROJECT\WAB_DEMO`

**Files:**

**Path:** `\PROJECT\BUF WELL`

**Files:**

**Path:** `\PROJECT\DIL_BUF`

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TXT
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PAT
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MINES
OR_DATA

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E0005 .PLT
E0006 .PLT

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- ARC
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- PAX

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    ARC
    AAT
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Files: BND
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    TOL
    LOG
    LAB
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Path: \WABAMUN\TWPS\TS035\HWWY
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Path: \WABAMUN\TWPS\TS035\JUMKB
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       TOL  LAB
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Path: \WABAMUN\TWPS\TS035\JUMBE
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LAB
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CNT
ARC
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- TOL
- LOG
- ARC
- AAT
- ARX
- NRF

**Files: TIC**
- AAT
- LOG
- TOL
- TXT
- TXX
- LAB
- NRF
- CNT
- ARC
- ARX
- CNX
- PRF
- PAL
- PAX
- BND
- PAT

**Files: BND**
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- PAL
- PAX
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- LOG
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| LOG                           |     |
| ARC                           |     |
| ARX                           |     |
| TXT                           |     |
| TXX                           |     |
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| Path: \WABAMUN\MINES\HIGHVA\SEAM6 |     |
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| LOG                           |     |
| ARC                           |     |
| ARX                           |     |
| TXT                           |     |
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| LOG                           |     |
| ARC                           |     |
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| ARC                           |     |
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| LOG                           |     |
| ARC                           |     |
| ARX                           |     |
| TXT                           |     |
| TXX                           |     |
| LAB                           |     |

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| E0082 .PLT                  |     |

| Path: \WABAMUN\MINES\HIGHVN |     |
| Sub-directories: ISO1 |     |
| Files:                        | INFO |
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| ISO2                         |     |
| MINED                        |     |
| STAT                         |     |
| PERM                         |     |
| SC1                          |     |
| LIC                          |     |
| UNDER                       |     |
| SURF                        |     |
| UNCERT                      |     |
| BND                         |     |
GEOI
ATS
RIV
LAK
HWY
SET

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ISO1A .KEY
ISO2B ->KE
SC1B ->KE
PRINTER .SM1
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SC1A ->KE
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PRF
PAL
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Path: \WABAM\MINES\GENERAL

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Sub-directories: None

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APPENDIX 5
### APPENDIX 5

COAL GSIS DEMO SYSTEM

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# APPENDIX 6

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</tr>
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<td>6-13-88 1:14p</td>
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<td>4493</td>
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<td>5-16-88 12:35p</td>
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<tr>
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<td>5-12-88 3:42p</td>
</tr>
<tr>
<td>4499</td>
<td>6-13-88 11:34o</td>
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<td>4500</td>
<td>7-14-88 1:04p</td>
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<td>4501</td>
<td>7-14-88 1:04p</td>
</tr>
<tr>
<td>4502</td>
<td>5-16-88 1:05p</td>
</tr>
<tr>
<td>4503</td>
<td>5-16-88 1:05p</td>
</tr>
<tr>
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</tr>
<tr>
<td>4505</td>
<td>5-12-88 3:50p</td>
</tr>
<tr>
<td>4506</td>
<td>5-12-88 3:50p</td>
</tr>
<tr>
<td>4507</td>
<td>6-13-88 11:34o</td>
</tr>
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</table>
APPENDIX 7
APPENDIX 7
THE SIMPLE MACRO LANGUAGE FILES
MENU SYSTEM FOR THE COAL GIS DEMO

FILE --> PROJ\OLTAB.SML

&REM ****************************
&REM THIS PROGRAM WILL DRAW A MAP OF ALBERTA IN 1971M AND WILL ALLOW USERS
&REM TO QUERY COAL QUALITY INFO AND PRODUCE PLOTS ANYTIME DURING THE PROCESS.
&REM FILE NAME OLTAB.SML
&REM D.CHAO 14.08.1988
&REM ****************************

&LABEL START
&SETVAR 20 0
&LABEL MENU
MAPEX ALBERTA ERCBOLT RIVER CITY SUBCROPS
MAPLIMITS PAGE
PAGESIZE 9.6 5.6
LINEC 1
BOX 0 0 9.6 5.6
LINEC 2
ARCS NTS
LINEC 9
ARCS ALBERTA
LINEC 6
ARCS RIVER
TEXTFONT 0
TEXTCOLOR 1
POINTMARKERS CITY 9
POINTMARKERS CITY 17
TEXTSIZE .09 .06
MOVE 1 1 .35
TEXT 'PEACE RIVER'
MOVE 0 .6 .31
TEXT 'GRANDE PRAIRIE'
MOVE 2.15 2.9
TEXT 'ATHABASCAN'
MOVE 1 5 2.6
TEXT 'WHITECOURT'
MOVE 2 1 2.7
TEXT 'BONNYVILLE'
MOVE 2 1 2.3
TEXT 'EDMONTON'
MOVE 1 2 2
TEXT 'HINTON'
MOVE 1 2 2
TEXT 'METASKWIN'
MOVE 2.2 2.1
TEXT 'CARMICHAEL'
MOVE 3 2.2
TEXT 'LOYDMINSTER'
MOVE 2.1 1.75
TEXT 'RED DEER'
MOVE 2 1.2
TEXT 'CALGARY'
MOVE 2.5 0.9
TEXT 'MEDICINE HAT'
MOVE 2 0.4
TEXT 'LETHBRIDGE'
TEXTSIZE 1 .075
MOVE 1 6 2.25
TEXT 'BEGG'
TEXTSIZE 2 15
MOVE 4.2 4.5
TEXT 'PROVINCE OF ALBERTA'
MOVE 4.2 4.0
TEXTSIZE 1 .1
TEXT '1. PROVINCIAL QUERIES'
MOVE 4 2 3.7
TEXT '2. BEGG'
MOVE 4 2 3.4
TEXT '3. MBAMURU AREAS'
MOVE 4 2 3.1
TEXT '4. HIGHVALE AREAS'
MOVE 4 2 2.8
&GOTO EXIT2 &IF &EO %2 9
&GOTO TTY &IF &EO %2 10
&GOTOPrINTER &IF &EO %2 8
&GOTOITEM%2

&LABELTTY
&TTY
&JUMP Task2

&LABEL ITEM1
WBEGN
RESEL ERCBOLT POINTS PROX GT 0.0
MARKERSYMBOL 1
POINTS ERCBOLT
WEND
&LABEL CALLZOOM
&QUERY 3 " ZOOM IN " &F
&GOTO ZOOM &IF &EO %3 Y
&QUERY 4 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
CLEARSEL
&GOTO Task2 &IF &EO %4 Y
DELETE
MFRESH
&GOTO Task2

&LABEL ITEM2
WBEGN
RESEL ERCBOLT POINTS ULT GT 0.0
MARKERSYMBOL 2
POINTS ERCBOLT
WEND
&QUERY 3 " ZOOM IN " &F
&GOTO ZOOM &IF &EO %3 Y
&QUERY 4 "OVERLAY THIS DISPLAY WITH THE NEXT ONE" &F
&GOTO Task2 &IF &EO %4 Y
DELETE
MFRESH
&GOTO Task2

&LABEL ITEM3
WBEGN
RESEL ERCBOLT POINTS CHEW GT 0.0
MARKERSYMBOL 3
POINTS ERCBOLT
WEND
&QUERY 3 " ZOOM IN " &F
&GOTO ZOOM &IF &EO %3 Y
&QUERY 4 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
CLEARSEL
&GOTO Task2 &IF &EO %4 Y
DELETE
MFRESH
&GOTO Task2

&LABEL ITEM4
WBEGN
RESEL ERCBOLT POINTS FUSION GT 0.0
MARKERSYMBOL 4
POINTS ERCBOLT
WEND
&QUERY 3 " ZOOM IN " &F
&GOTO ZOOM &IF &EO %3 Y
&QUERY 4 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
CLEARSEL
&GOTO Task2 &IF &EO %4 Y
DELETE
&GOTO Task2

&LABEL ITEM5
WBEGN
RESEL ERCBOLT POINTS TRACE GT 0.0
MARKERSYMBOL 5B
POINTS ERCBOLT
WEND
&QUERY 3 " ZOOM IN " &F
&GOTO ZOOM &IF &EO %3 Y
&QUERY 4 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
CLEARSEL
&GOTO Task2 &IF &EO %4 Y
@DELETE
@FRESH
@GOTO TASK2

@LABEL ITEM6
@BEGIN
RESEL ERCBOLT POINTS PHYSICS GT 0.0
MARKERSYMBOL 51
POINTS ERCBOLT
@END
@QUERY 3 " ZOOM IN " @F
@GOTO ZOOM @IF AEO %3 Y
@QUERY 4 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" @F
CLEARSEL
@GOTO TASK2 @IF AEO %4 Y
@DELETE
@GOTO TASK2

@LABEL ITEM7
@BEGIN
RESEL ERCBOLT POINTS COAK GT 0.0
MARKERSYMBOL 52
POINTS ERCBOLT
@END
@QUERY 3 " ZOOM IN " @F
@GOTO ZOOM @IF AEO %3 Y
@QUERY 4 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" @F
CLEARSEL
@GOTO TASK2 @IF AEO %4 Y
@DELETE
@GOTO TASK2

@LABEL ZOOM
@CALCVAR 21 %21 + 1
MAPEX *
@GOTO DELETE @IF AEO %21 1
@LABEL ZOOM2
CLEAR
POINTS ERCBOLT
@LABEL ASK
@TYPE "1-REVIEW INFORMATION FOR ALL THE POINTS"
@ASK 3 "2-REVIEW EACH INDIVIDUAL POINT, 3-EXIT, 4-ZOOM IN" @S
@GOTO MAPEX @IF AEO %3 1
@GOTO ASK1 @IF AEO %3 2
@GOTO QUIT @IF AEO %3 3
@GOTO ZOOM @IF AEO %3 4
@JUMP ASK

@LABEL DELETE
@CALCVAR 21 %21 - 1
@DELETE
@JUMP ZOOM2

@LABEL MAPEX
@RESEL ERCBOLT POINTS MAPEX
@LIST ERCBOLT POINTS CODE-ERCB CODE-ARC
@LABEL ASK2
@ASK 4 "1-REVIEW EACH INDIVIDUAL POINT, 2-ZOOM IN, 3-EXIT" @S
@GOTO IDEN1 @IF AEO %4 1
@GOTO ZOOM @IF AEO %4 2
@GOTO QUIT @IF AEO %4 3
@JUMP ASK2

@LABEL ASK1
@ASK 3 "1-ERCB AND ARC CODES, 2-EXIT, 3-ZOOM IN" @S
@GOTO IDEN1 @IF AEO %3 1
@GOTO QUIT @IF AEO %3 2
@GOTO ZOOM @IF AEO %3 3
@GOTO ASK1

@LABEL IDEN1
@IDENTIFY ERCBOLT POINTS + CODE-ERCB CODE-ARC
@JUMP ASK1

@LABEL QUIT
@DELETE
CLEAR
&SETVAR 21 0
&MAPEX ALBERTA ERCBOLT
&PAGESIZE 9.6 5.6
&MAPANGLE -1.5
&MFRESH
&GOTO CALL%2

&LABEL CALL1
&RESEL ERCBOLT POINTS PROX GT 0.0
&JUMP CALLZOOM

&LABEL CALL2
&RESEL ERCBOLT POINTS ULT GT 0.0
&JUMP CALLZOOM

&LABEL CALL3
&RESEL ERCBOLT POINTS CHEW GT 0.0
&JUMP CALLZOOM

&LABEL CALL4
&RESEL ERCBOLT POINTS FUSION GT 0.0
&JUMP CALLZOOM

&LABEL CALL5
&RESEL ERCBOLT POINTS TRACE GT 0.0
&JUMP CALLZOOM

&LABEL CALL6
&RESEL ERCBOLT POINTS PHYSICS GT 0.0
&JUMP CALLZOOM

&LABEL CALL7
&RESEL ERCBOLT POINTS COAK GT 0.0
&JUMP CALLZOOM

&LABEL 83G
&GOTO KILL3 &IF &EO %20 1
&MAP END
&RUN 83G.SML

&LABEL WABAMUN
&GOTO KILL2 &IF &EO %20 1
&MAP END
&SYSTEM "CD C:\WABAMUN\SAREA"
&RUN MANUAL.SML

&LABEL HIGHVALE
&SETVAR 7 "HIGHVA"
&GOTO KILL &IF &EO %20 1
&MAP END
&SYSTEM "CD C:\WABAMUN\MINES\HIGHVA"
&RUN MANUAL.SML

&LABEL GENESSEE
&SETVAR 7 "GENE"
&GOTO KILL &IF &EO %20 1
&MAP END
&SYSTEM "CD C:\WABAMUN\MINES\GENE"
&RUN MANUAL.SML

&LABEL WHITExWOOD
&SETVAR 7 "WHITE"
&GOTO KILL &IF &EO %20 1
&MAP END
&SYSTEM "CD C:\WABAMUN\MINES\WHITE"
&RUN MANUAL.SML

&LABEL HIGHVN
&SETVAR 7 "HIGHVN"
&GOTO KILL &IF &EO %20 1
&MAP END
&SYSTEM "CD C:\WABAMUN\MINES\HIGHVN"
&RUN MANUAL.SML

&LABEL HIGHVS
&SETVAR 7 "HIGHVS"
&GOTO KILL &IF &EO %20 1
&REM ********************
&REM THIS MANUAL WILL DISPLAY 83G REGIONAL COVERAGE.
&REM COVERAGE INCLUDE 1.WABAMUN\OR_DATA\ABSM ATS,RIV.
&REM LAK, HWY,SET AND WDB 2. 83G_NW, 83G_NE, 83G_SE, 83G_SW
&REM AND 83G
&REM USERS CAN PRODUCE PLOTS ANYTIME DURING THE PROCESS
&REM BY D.CHAD AUG.17.1988
&REM ********************
&LABEL START
MAPLIMIT PAGE
PAGESIZE 9.6 5.6
MAP000 ATS 83G_NW 83G_NE 83G_SE 83G_SW 83G_NE 83G
MAP MAP1
&LABEL MENU1
CLEAR
MBEGIN
MAPANGLE -1.5
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
APCS ATS
TEXTCOLOR 1
TEXTFONT 0
MOVE 0.5 4
TEXTSIZE 12 08
TEXT 'ALBERTA TOWNSHIP SURVEY'
MOVE 6.5 3.5
TEXT 'GRID FOR 83G'
TEXTCOLOR 2
TEXTFONT 0
TEXTSIZE 1 07
MOVE 0 1 0.3
TEXT 'COAL GEOLOGY GROUP'
MOVE 0 1 0.15
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8706
TEXT 'ALBERTA'
MOVE 8704
TEXT 'RESEARCH'
MOVE 8702
TEXT 'COUNCIL'
MEND
&LABEL MENU2
&TYPE "1-RIVERS, 2-LAKES, 3-HIGHWAYS, 4-RESERVES, PARK BOUNDARIES & RAILWAYS"
&TYPE "5-COUNTY BOUNDARIES, 6-COAL DISPOSITIONS, 7-WABAMUN AREA, 8-MAIN MENU"
&TYPE "9-PRINTER, 10-EXIT, 11-TTY"
&ASK 1 "PLEASE ENTER YOUR CHOICE" 12
&GOTO RIVER &IF &EQ %1 1
&GOTO LAKE &IF &EQ %1 2
&GOTO HWYS &IF &EQ %1 3
&GOTO SETS &IF &EQ %1 4
&GOTO MDBS &IF &EQ %1 5
&GOTO COAL &IF &EQ %1 6
&GOTO WAB &IF &EQ %1 7
&GOTO OLTAB &IF &EQ %1 8
&GOTO PRINTER &IF &EQ %1 9
&GOTO EXIT &IF &EQ %1 10
&GOTO TTY &IF &EQ %1 11
&GOTO MENU2
&LABEL TTY
MAP END
&TTY
&JUMP MENU2
&LABEL OLTAB
MAP END
KILLMAP MAP1
&SETVAR 3 "OLTAB"
CLEAR
&RUN %3
&LABEL RIVER
NBEGIN
LINEC 6
ARCS RIV
MEND
&JUMP OVERLAY
&LABEL LAKE
NBEGIN
LINESYM 8
ARCS LAK
MEND
&JUMP OVERLAY
&LABEL HWYS
NBEGIN
LINEC 2
ARCS HWY
MEND
&JUMP OVERLAY
&LABEL SETS
NBEGIN
LINEC 13
ARCS SET
MEND
&JUMP OVERLAY
&LABEL MDBS
NBEGIN
LINEC 11
ARCS MDB
MEND
&JUMP OVERLAY
&LABEL COAL
NBEGIN
TEXTCOLOR 1
TEXTFONT 0
TEXTSIZE .1 .07
KEYSEPARATION 2 .2
KEYPOSITION 6.5 2.5
KEYBOX 2 2
KEYSHADE B3G KEY
&LABEL SEL
RESEL B3G_SW POLYS USERS = 1
POLYGONSHADES B3G_SW 70
CLEARSEL
RESEL B3G_SE POLYS USERS = 1
POLYGONSHADES B3G_SE 70
CLEARSEL
RESEL B3G_NW POLYS USERS = 1
POLYGONSHADES B3G_NW 70
CLEARSEL
RESEL B3G_NE POLYS USERS = 1
POLYGONSHADES B3G_NE 70
CLEARSEL
RESEL B3G_SW POLYS USERS = 2
POLYGONSHADES B3G_SW 3
CLEARSEL
RESEL B3G_SE POLYS USERS = 2
POLYGONSHADES B3G_SE 3
CLEARSEL
RESEL B3G_NW POLYS USERS = 2
POLYGONSHADES B3G_NW 3
CLEARSEL
RESEL B3G_NE POLYS USERS = 2
POLYGONSHADES B3G_NE 3
CLEARSEL
RESEL B3G_SW POLYS USERS = 3
POLYGONSHADES B3G_SW 2
CLEARSEL
RESEL B3G_SE POLYS USERS = 3
POLYGONSHADES B3G_SE 2
CLEARSEL
RESEL B3G_NW POLYS USERS = 3
POLYGONSHADES B3G_NW 2
CLEARSEL
RESEL B3G_NE POLYS USERS = 3
POLYGONSHADES B3G_NE 2
CLEARSEL
RESEL B3G_SW POLYS USERS = 4
POLYGONSHADES B3G_SW 4
CLEARSEL
RESEL B3G_SE POLYS USERS = 4
POLYGONSHADES B3G_SE 4
CLEARSEL
RESEL B3G_NW POLYS USERS = 4
POLYGONSHADES B3G_NW 4
CLEARSEL
RESEL B3G_NE POLYS USERS = 4
POLYGONSHADES B3G_NE 4
CLEARSEL
LINEC 5
ARCS B3G_SE
ARCS B3G_SW
ARCS B3G_NE
ARCS B3G_NW
MEND
&QUERY 2 "ZOOM IN" &F
&GOTO ZOOM2 &IF &EO %2 Y
&GOTO OVERLAY &IF &EO %2 N

&LABEL WAB
MAP END
FILLMAP MAP1
CLEAR
&SYSTEM "CD C:\WABAMUN\SAREA"
&RUN MANUAL.SML

&LABEL ZOOM2
MAPEX *
CLEAR
LINEC 1
POLYS B3G
&LABEL IDENT
&type "1=REVIEW ALL THE POLYGONS, 2=REVIEW EACH POLYGON, 3=EXIT"
&ASK B "PLEASE ENTER YOUR CHOICE" 4
&GOTO MAPEX &IF &EO B 1
&GOTO IDENT &F &EO B 2
&GOTO NONE &IF &EO B 3
&JUMP IDENT
&LABEL IDENT1
IDENTIFY B3G POLYS + DISPOSITION COMPANY
&JUMP IDENT

&LABEL MAPEX
RESEL B3G POLYS MAPEX
LIST B3G POLYS DISPOSITION COMPANY
CLEARSEL
&JUMP IDENT

&LABEL NONE
MODELETE
CLEAR
PAGESIZE 9.6 5.6
MAPEX B3G B3G_NE B3G_NW B3G_SE B3G_SW ATS
&FRESH
MAPANGLE -1.5
&REM WBEGIN
&REM LINEC 1
&REM BOX 0 0 9.6 5.6
&REM LINEC 9
&REM ARC5 ATS
&REM LINEC 5
&REM ARC5 B3G_SW
&REM ARC5 B3G_SE
&REM ARC5 B3G_NW
&REM TEXTCOLOR 1
&REM TEXTBOLD 0
&REM MOVE 6.5 4
&REM TEXTSIZE .12 .98
&REM TEXT "ALBERTA TOWNSHIP SURVEY"
&REM MOVE 6.5 3.5
&REM TEXT "GRID FOR B3G"
&REM TEXTCOLOR 2
&REM TEXTBOLD 8
&REM TEXTSIZE .1 .07
&REM MOVE 8.5 0.3
&REM TEXT "COAL GEOLOGY GROUP"
&REM MOVE 8.5 0.15
&REM TEXT "ALBERTA GEOLOGICAL SURVEY"
&REM MOVE 8.7 0.6
&REM TEXT "ALBERTA"
&REM MOVE 8.7 0.4
&REM TEXT "RESEARCH"
&REM MOVE 8.7 0.2
&REM TEXT "COUNCIL"
&REM MEND
&QUERY 5 "ZOOM IN " &F
&GOTO ZOOM2 &F &IF &EO %5 Y
&JUMP OVERLAY

&LABEL EXIT
MAP END
KILLMAP MAP1
QUIT

&LABEL OVERLAY
&QUERY 5 "OVERLAY THIS DISPLAY INTO THE NEXT ONE " &F
&GOTO MENU2 &F &EO %5 Y
NSEL ALL
MODELETE
&GOTO MENU1

&LABEL PRINTER
&RUN PRINTER.SML
MAP END
KILLMAP MAP1
DISPLAY 4 2 3
&GOTO START

FILE-> WABAMUN\SAREA\MANUAL.SML

&REM-------------------------------------
&REM THIS MANUAL WILL DISPLAY THE ATS,RIVER,LAKES,Hwy,SET
&REM NOB,STAT,LENCE,PERMIT AND MINED AREAS AT THE WABAMUN
&REM AREA
TEXT '15 EXIT'
&LABEL MENU2
&ASK 1 "17 TTY PLEASE ENTER YOUR CHOICE " 18
&GOTO TASK &IF &EQ &1 1
&GOTO WHITWOOD &IF &EQ &1 3
&GOTO HIGHVALE &IF &EQ &1 2
&GOTO GENESEE &IF &EQ &1 4
&GOTO TS535 &IF &EQ &1 6
&GOTO TS545 &IF &EQ &1 5
&GOTO TS245 &IF &EQ &1 7
&GOTO TS555 &IF &EQ &1 8
&GOTO TS145 &IF &EQ &1 9
&GOTO TS555 &IF &EQ &1 10
&GOTO TS045 &IF &EQ &1 11
&GOTO TS935 &IF &EQ &1 12
&GOTO BS05 &IF &EQ &1 13
&GOTO MAIN &IF &EQ &1 14
&GOTO EXIT &IF &EQ &1 15
&GOTO PRINTER &IF &EQ &1 16
&GOTO TTY &IF &EQ &1 17
&GOTO MENU2

&LABEL TTY
MAP END
TTY
&JUMP MENU2

&LABEL TASK
&SETVAR 20 1
&SETVAR 21 0
MAP MAP1
&LABEL TASK2
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESymbol 7
ARCS LAK
LINEC 6
ARCS MIV
TEXTFONT 8
TEXTCOLOR 1
TEXTSIZE .2 16
MOVE 4.5 5
TEXT 'WABAMUN AREA'
TEXTFONT 8
TEXTCOLOR 2
TEXTSIZE .1 .67
MOVE 4.5 0.4
TEXT 'COAL GEOLOGY GROUP'
MOVE 4.5 0.2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 0.6
TEXT 'ALBERTA'
MOVE 8.7 0.4
TEXT 'RESEARCH'
MOVE 8.7 0.2
TEXT 'COUNCIL'
WEND
TEXTCOLOR 1
TEXTFONT 9
&LABEL MENU3
&TYPE '1-HWY, 2-WELL STATUS, 3-PERMIT AREAS, 4-MINED AREAS.'
&TYPE '5-LICENSE AREAS, 6-OIL WELL BUFFERS, 7-UNDERGROUND MINE.'
&TYPE '8-SURFACE MINES, 9-PRINTER, 10-EXIT, 11-TTY.'
&ASK 2 'PLEASE ENTER YOUR CHOICE ' 12
&GOTO HWYS &IF &EQ &2 1
&GOTO STAT &IF &EQ &2 2
&GOTO PERMS &IF &EQ &2 3
&GOTO MINE &IF &EQ &2 4
&GOTO LIC &IF &EQ &2 5
&GOTO BUFFER &IF &EQ &2 6
&GOTO UNDER &IF &EQ &2 7
&GOTO SURF &IF &EQ &2 8
&GOTO PRINTER &IF &EQ &2 9
&GOTO RETURN &IF &EQ &2 10
&GOTO TTY &IF &EQ &2 11
&GOTO MENU3
&LABEL HWYS
MBEGIN
LINEC 2
ARCS HWY
MEND
&GOTO OVERLAY

&LABEL STATS
MBEGIN
POINTMARKERS STAT 89
MEND
&LABEL QUERY1
QUERY 6 "WILL YOU LIKE TO REVIEW INFORMATION OF ANY WELLS" &F
&GOTO OVERLAY &F &SEQ &X 6 N
&QUERY 7 "ZOOM IN" &F
&GOTO ZOOM &F &SEQ &X 7 Y
&LABEL IDENT2
&ASK 8 "1 - WELL ID AND DESCRIPTION, 2-EXIT" 3
&GOTO 0 &F &SEQ &X 8 1
&GOTO OVERLAY &F &SEQ &X 8 2
&JUMP IDENT2
&LABEL ID
IDENTIFY 5, STAT POINTS + WELL_ID DESCRIPTION
&JUMP IDENT2

&LABEL ZOOM
&CALCVAR 21 %21 + 1
MAPEX *
&GOTO DELETE &IF &NE %21 1
&LABEL ZOOM2
CLEAR
MARKERS SYMBOL 89
POINTS STAT
&LABEL ZOOMASK
&TYPE "1-REVIEW INFORMATION FOR ALL WELLS."
&ASK 8 "2-REVIEW INFORMATION FOR EACH WELL, 3-EXIT" 4
&GOTO MAPEX &IF &SEQ &X 8 1
&GOTO ASK1 &IF &SEQ &X 8 2
&GOTO QUIT &IF &SEQ &X 3
&JUMP ZOOMASK

&LABEL DELETE
&CALCVAR 21 %21 - 1
MODELETE
&JUMP ZOOM2

&LABEL MAPEX
RESEL STAT POINTS MAPEX
LIST STAT POINTS WELL_ID DESCRIPTION
&LABEL MAPEXASK
&ASK 9 "1-REVIEW INFORMATION FOR EACH WELL, 2-ZOOM IN, 3-EXIT" 4
&GOTO ASK1 &IF &SEQ &X 9 1
&GOTO ZOOM &IF &SEQ &X 9 2
&GOTO QUIT &IF &SEQ &X 3
&JUMP MAPEXASK

&LABEL ASK1
&ASK 8 "1-WELL ID & DESCRIPTION, 2-EXIT, 3-ZOOM IN'" 4
&GOTO QUIT &IF &SEQ &X 8 2
&GOTO ID2 &IF &SEQ &X 8 1
&GOTO ZOOM &IF &SEQ &X 3
&GOTO ASK1

&LABEL ID2
IDENTIFY STAT POINTS + WELL_ID DESCRIPTION
&JUMP ASK1

&LABEL QUIT
MODELETE
CLEAR
CLEAREL
MAPEX ATS STAT PERM MINED LIC UNDER SURF
PAGESIZE 9.6 5.6
MFRESH
&SETVAR 21 0
&JUMP QUERY1

&LABEL PERMS
MBEGIN
LINEC 1
POLYGONSHADES PERM 70
ARCS PERM
MEND
&LABEL PERM2
&TYPE "1-PERMIT NUMBER FOR ALL THE POLYGONS;"
&ASK 4 "2-PERMIT NUMBER FOR EACH POLYGON, 3-EXIT" 4
&GOTO PERM1 &F &EQ &X 2
&GOTO MAPEX2 &I &EQ &X 4 1
&GOTO OVERLAY &I &EQ &X 4 3
&GOTO PERM2
&LABEL PERM1
IDENTIFY PERM POLYS = PERM_NUM
&JUMP PERM2
&LABEL MAPEX2
RESEL PERM POLYS MAPEX
LIST PERM POLYS PERM_NUM
CLEARSEL
&JUMP PERM2

&LABEL MINE5
MBegin
LINEC 1
POLYGONSHADES MINE5 2
ARCS MINE5
MEND
&GOTO MENU3

&LABEL LICS
MBEGIN
LINEC 1
POLYGONSHADES LIC 4
ARCS LIC
MEND
&LABEL LIC2
&TYPE "1-LICENCE NUMBER FOR ALL THE POLYGONS;"
&ASK 5 "2-LICENCE NUMBER FOR EACH POLYGON, 3-EXIT" 4
&GOTO LIC1 &F &EQ &X 5 2
&GOTO LIC3 &F &EQ &X 5 1
&GOTO OVERLAY &I &EQ &X 5 3
&GOTO LIC2
&LABEL LIC1
IDENTIFY LIC POLYS = LIC_NUM
&JUMP LIC2
&LABEL LIC3
RESEL LIC POLYS MAPEX
LIST LIC POLYS LIC_NUM
CLEARSEL
&JUMP LIC2

&LABEL WHITEMOOD
&SETVAR 15 "WHITE"
&GOTO KILL4 &I &EQ &X 20 1
MAP END
CLEAR
&SYSTEM "CD C:\WABAMUN\MINES\WHITE"
&RUN MANUAL.SML
&GOTO MENU1

&LABEL HIGHVALE
&SETVAR 15 "HIGHVA"
&GOTO KILL4 &I &EQ &X 20 1
MAP END
&SYSTEM "CD C:\WABAMUN\MINES\HIGHVA"
&RUN MANUAL.SML

&LABEL GENESEE
&SETVAR 15 "GENE"
&GOTO KILL4 &I &EQ &X 20 1
MAP END
&SYSTEM "CD C:\WABAMUN\MINES\GENE"
&RUN MANUAL.SML
&GOTO MENU1

&LABEL BUFFER
MBEGIN
TEXTSIZE .1 .07
MOVE 4 4.7
TEXT 'OIL & GAS WELLS WITH 400m BUFFERS'
POLYGONSHADES OILBUF 4
MEND
&GOTO MENU3

&LABEL UNDER
MBEGIN
POINTMARKERS UNDER B5
MEND
&LABEL UNDER2
&TYPE "1-ID & STATUS FOR ALL THE MINES."
&A SK B "2-ID & STATUS FOR EACH MINE, 3-EXIT" 4
&GOTO UNDER1 &IF &EQ %B 1
&GOTO UNDER3 &IF &EQ %B 2
&GOTO OVERLAY &IF &EQ %B 3
&GOTO UNDER2
&LABEL UNDER1
RESEL UNDER POINTS MAPEX
LIST UNDER POINTS MINE# LOC.
CLEARSEL
&JUMP UNDER2
&LABEL UNDER3
IDENTIFY UNDER POINTS + MINE# LOC.
&JUMP UNDER2

&LABEL SURF
MBEGIN
POINTMARKERS SURF B7
MEND
&LABEL SURF2
&TYPE "1-ID & STATUS FOR ALL THE MINES."
&A SK B "2-ID & STATUS FOR EACH MINE, 3-EXIT" 4
&GOTO SURF1 &IF &EQ %B 1
&GOTO SURF3 &IF &EQ %B 2
&GOTO OVERLAY &IF &EQ %B 3
&GOTO SURF5
&LABEL SURF1
RESEL SURF POINTS MAPEX
LIST SURF POINTS MINE# LOC.
CLEARSEL
&JUMP SURF2
&LABEL SURF3
IDENTIFY SURF POINTS + MINE# LOC.
&JUMP SURF2

&LABEL 8305
&SETVAR 17 "830"
&GOTO KILL3 &IF &EQ %20 1
C L E A R
M A P E N D
&SYSTEM "CD C:\PROJ1"
&RUN 830.SML

&LABEL MAH
C L E A R
&SETVAR 17 "DLTAB"
&GOTO KILL3 &IF &EQ %20 1
M A P E N D
&SYSTEM "CD C:\PROJ1"
&RUN DLTAB.SML

&LABEL 75355
C L E A R
&SETVAR 16 "75355"
&GOTO KILL2 &IF &EQ %20 1
M A P E N D
&SYSTEM "CD C:\WABAMUN\TWPS\75355"
&RUN MANUAL.SML

&LABEL 75345
C L E A R
&SETVAR 16 "75345"
&GOTO KILL2 &IF &EQ %20 1
M A P E N D
&SYSTEM "CD C:\WABAMUN\TWPS\75345"
&RUN MANUAL.SML

&LABEL 75255
C L E A R
&SETVAR 16 "T5255"
&GOTO KILL2 &IF &EO &%20 1
MAP END
&SYSTEM "CD C:\WABAMUN\TWPS\T5255"
&RUN MANUAL.SML

&LABEL T5245
CLEAR
&SETVAR 16 "T5245"
&GOTO KILL2 &IF &EO &%20 1
MAP END
&SYSTEM "CD C:\WABAMUN\TWPS\T5245"
&RUN MANUAL.SML

&LABEL T5155
CLEAR
&SETVAR 16 "T5155"
&GOTO KILL2 &IF &EO &%20 1
&SYSTEM "CD C:\WABAMUN\TWPS\T5155"
&RUN MANUAL.SML

&LABEL T5145
CLEAR
&SETVAR 16 "T5145"
&GOTO KILL2 &IF &EO &%20 1
&SYSTEM "CD C:\WABAMUN\TWPS\T5145"
&RUN MANUAL.SML

&LABEL T5045
CLEAR
&SETVAR 16 "T5045"
&GOTO KILL2 &IF &EO &%20 1
MAP END
&SYSTEM "CD C:\WABAMUN\TWPS\T5045"
&RUN MANUAL.SML

&LABEL T5035
CLEAR
&SETVAR 16 "T5035"
&GOTO KILL2 &IF &EO &%20 1
MAP END
&SYSTEM "CD C:\WABAMUN\TWPS\T5035"
&RUN MANUAL.SML

&LABEL PRINTER
&RUN PRINTER SML
MAP END
KILLMAP MAP1
DISPLAY 4 2 3
&ASK 12 "1-NEW MAP, 2-EXIT"
&GOTO TASK &IF &EO &%12 1
&GOTO MENU1

&LABEL OVERLAY
&QUERY 13 "OVERRIDE THIS DISPLAY ONTO THE NEXT ONE - &F
&MDELETE
&FRESH
&GOTO MENU3

&LABEL EXIT
MAP END
KILLMAP MAP1

&LABEL RETURN
MAP END
KILLMAP MAP1
&JUMP MENU1

&LABEL KILL
MAP END
KILLMAP MAP1
&RUN %10

&LABEL KILL2
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\WABAMUN\TWPS\%16"
&GOTO B3C &F &EO %1 13
&GOTO MAN &F &EO %1 14
&GOTO PRINTER &F &EO %1 15
&GOTO FINISH &F &EO %1 16
&GOTO TTY &F &EO %1 17
&GOTO MENU1

&LABEL TTY
MAP END
&TYY
&JUMP MENU1

&LABEL S1
MSEL ALL
&TYP & "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MODELETE
MBEGIN
LINEC 1
BOX 6 0 9.6 5.6
LINEC 9
ARCS ATS
LINESYMBOL 7
ARCS LAK
TEXTSIZE .2 .15
MOVE 5 4.7
TEXT "HIGHVALE AREA"

TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE 0.1 0.2
TEXT "ALBERTA GEOLOGICAL SURVEY"
MOVE 0.1 0.4
TEXT "COAL GEOLOGY GROUP"
MOVE 8.7 0.6
TEXT "ALBERTA"
MOVE 8.7 0.4
TEXT "RESEARCH"
MOVE 8.7 0.2
TEXT "COUNCIL"
MEND
MBEGIN
TEXTFONT 0
TEXTCOLOR 1
TEXTSIZE .1 .07
MOVE 5.4 4
TEXT "ISOPACH OF COAL SEAM 1"
TEXTSIZE 0.08 0.07
KEYSEPARATION 1 .1
KEYPOSITION 6.0 2.2
KEYBOX .2 .2
KEYSHADE ISO1.KEY
RESEL ISO1 POLYS VMAX LE 2.8
POLYGONSHADES ISO1 31
CLEARSEL
RESEL ISO1 POLYS VMAX GT 2.8 AND VMAX LE 3.2
POLYGONSHADES ISO1 95
CLEARSEL
RESEL ISO1 POLYS VMAX GT 3.2 AND VMAX LE 3.4
POLYGONSHADES ISO1 3
CLEARSEL
RESEL ISO1 POLYS VMAX GT 3.4 AND VMAX LE 3.6
POLYGONSHADES ISO1 36
CLEARSEL
RESEL ISO1 POLYS VMAX GT 3.6 AND VMAX LE 3.8
POLYGONSHADES ISO1 94
CLEARSEL
RESEL ISO1 POLYS VMAX GT 3.8
POLYGONSHADES ISO1 2
CLEARSEL
LINEC 1
MEND
&JUMP OVERLAY

&LABEL S2
MSEL ALL
CLEAR
MODELETE
&LABEL P103
&MAP END
&KILLMAP MAP1
#SYSTEM "CD C:\P103"
&RUN MANUAL.SML

&LABEL PERM
MBEGIN
POLYGONSHADERS PERM 98
LINEC 1
ARCS PERM
TEXTCOLOR 1
MOVE 0.5 4.5
TEXTSIZE .09 .06
TEXT 'PERM#: C77-28'
MEND
&JUMP OVERLAY

&LABEL LIC
MBEGIN
POLYGONSHADERS LIC 52
LINEC 1
ARCS LIC
TEXTSIZE .1 .07
POLYGONTXT LIC LIC_NUM
MEND
&LABEL ASK
&type "1=licence number for each polygon"
&ASK 2 "2=licence number for each polygon, 3=exit" 4
&GOTO MAPEX &IF &EQ %2 1
&GOTO IDENT &IF &EQ %2 2
&GOTO OVERLAY &IF &EQ %2 3
&JUMP ASK
&LABEL MAPEX
RESEL LIC POLYS MAPEX
LIST LIC POLYS LIC_NUM
CLEARGRL
&JUMP ASK
&LABEL IDENT
IDENTIFY LIC POLYS LIC_NUM
&JUMP ASK

&LABEL UNDER
MBEGIN
POINTMARKERS UNDER 95
TEXTSIZE 1 .07
MEND
&LABEL ASK2
&ASK 3 "1=status of all the mines, 2=status of each mine, 3=exit" 4
&GOTO MINE2 &IF &EQ %3 1
&GOTO MINE1 &IF &EQ %3 2
&GOTO OVERLAY &IF &EQ %3 3
&JUMP ASK2
&LABEL MINE1
IDENTIFY UNDER POINTS MINE# LOC.
&JUMP ASK2
&LABEL MINE2
RESEL UNDER POINTS MAPEX
LIST UNDER POINTS MINE# LOC.
CLEARGRL
&JUMP ASK2

&LABEL SURF
MBEGIN
POINTMARKERS SURF 87
MEND
&LABEL ASK3
&ASK 4 "1=status of all the mines, 2=status of each mine, 3=exit" 4
&GOTO ALLSURF &IF &EQ %4 1
&GOTO SURF1 &IF &EQ %4 2
&GOTO OVERLAY &IF &EQ %4 3
&GOTO ASK3
&LABEL ALLSURF
RESEL SURF POINTS MAPEX
LIST SURF POINTS MINE# LOC.
CLEARGRL
&JUMP ASK3
&LABEL 83G
KILLMAP MAP1
MAP END
&SYSTEM "CD C:\PROJ1"
CLEAR
&RUN 83G.SML

&LABEL MAIN
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\PROJ1"
CLEAR
&RUN DLTAB.SML

&LABEL FINISH
MAP END
KILLMAP MAP1
OUT

&LABEL OVERLAY
&QUERY 5 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
&GOTO MENU1 &IF &EQ &S5 Y
MODIFY
MFRESH
&JUMP MENU1

&LABEL PRINTER
&RUN PRINTER.SML
CLEAR
MAP END
KILLMAP MAP1
DISPLAY 4 2 3
&JUMP START

FILE --> MABAMUN\MINES\HIGHVA\HV1.SML

&REM ************************************************
&REM THIS MANUAL WILL DISPLAY ALL THE STRATIGRAPHIC CODES
&REM AND DESCRIPTIONS AS WELL AS MINERAL CONTENTS FROM
&REM SEAMS TO SEAMS AND TYPE OF ANALYSIS FOR HIGHVALE MINES
&REM WRITTEN BY D. CHAO ON AUG. 24, 1998.
&REM ************************************************
&LABEL START
PAGESIZE 9.6 5.6
CLEAR
MAPEX ATS LAK CVB SNP GD HVPT1
MAP MAP1
MAPANGLE -1.5
&LABEL MENU
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINE1 SYMBOL 7
ARCS LAK
TEXTCOLOR 1
TEXTFONT 0
MOVE 5.5 4.7
TEXTSIZE .2 .15
TEXT 'HIGHVALE AREA'
TEXTCOLOR 2
TEXTFONT 0
TEXTSIZE 0.1 0.07
MOVE 1 4
TEXT 'COAL GEOLOGY GROUP'
MOVE 1 2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .6
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
MEND
TEXTCOLOR 1
TEXTFONT 0
&LABEL MENU1
&TYPE "1=COAL DRILLHOLE LOCATIONS, 2=CUMULATIVE STRATIGRAPHIC OVPBURDEN,"
&TYPE "3-TYPES OF ANALYSIS PERFORMED, 4-COAL QUALITY FOR SEAM 1,"
&TYPE "5-COAL QUALITY FOR SEAM 2, 6-COAL QUALITY FOR SEAM 3,"
&TYPE "7-COAL QUALITY FOR SEAM 4, 8-COAL QUALITY FOR SEAM 5,"
&TYPE "9-COAL QUALITY FOR SEAM 6, 10-PRINTER, 11-HIGHVALE MAIN MENU,"
&TYPE "12-WABAMUN MENU, 13-B3G MENU, 14-MAIN MENU, 15-EXIT"
&ASK 1 "16-TTY, PLEASE ENTER YOUR CHOICE" 17
&GOTO DRILLHOLE &IF &EQU &R1 1
&GOTO ANALYSIS &IF &EQU &R1 3
&GOTO STRAT &IF &EQU &R1 2
&GOTO 51 &IF &EQU &R1 4
&GOTO 52 &IF &EQU &R1 5
&GOTO 53 &IF &EQU &R1 6
&GOTO 54 &IF &EQU &R1 7
&GOTO 55 &IF &EQU &R1 8
&GOTO 56 &IF &EQU &R1 9
&GOTO PRINTER &IF &EQU &R1 10
&GOTO HIGHVALE &IF &EQU &R1 11
&GOTO WABAMUN &IF &EQU &R1 12
&GOTO B3G &IF &EQU &R1 13
&GOTO MAIN &IF &EQU &R1 14
&GOTO EXIT &IF &EQU &R1 15
&GOTO TTY &IF &EQU &R1 16
&GOTO MENU1

&LABEL TTY
MAP END
TTY
&JUMP MENU1

&LABEL DRILLHOLE
&SETVAR 4 "QUERY1"
MBEGIN
MARKERS=SYMBOL 69
POINTS HVPNT
MEND
&LABEL QUERY1
&SETVAR 21 6
&QUERY 2 'ZOOM IN' &IF
&GOTO ZOOM1 &IF &EQU &R2 Y
&LABEL HERE
&TYPE "1-INFO ON ALL HOLES, 2-INFO ON EACH HOLE, 3-ZOOM IN,"
&TYPE "4-ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5-EXIT"
&ASK 3 "PLEASE ENTER YOUR CHOICE" 6
&GOTO MAPEX &IF &EQU &R3 1
&GOTO BOTH &IF &EQU &R3 2
&GOTO ZOOMOUT &IF &EQU &R3 3
&GOTO OVERLAY &IF &EQU &R3 4
&JUMP HERE

&LABEL ZOOM1
&CALCVAR 21 %Z1 1
MAPEX *
&GOTO DELETE1 &IF &NE %Z1 1
&LABEL ZOOMMIN
CLEAR
POINTS HVPNT
&JUMP HERE

&LABEL DELETE1
&CALCVAR 21 %Z1 1
DELETE
&JUMP ZOOMMIN

&LABEL MAPEX
RESH .HVPNT POINTS MAPEX
LIST HVPNT POINTS HV-CODE EAST NORTH
&JUMP HERE

&LABEL BOTH
IDENTIFY HVPNT POINTS = HV-CODE EAST NORTH
&JUMP HERE

&LABEL STRAT
&SETVAR 22 0
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOT"
HOELETE
HBECH
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCHS ATS
LINESTYMBOL 7
ARCHS LAK
TEXTSIZE 2.15
MOVE 5.5 4.7
TEXT 'HIGHYALE AREA'
TEXTCOLOR 2
TEXTFONT 0
TEXTSIZE 0.1 0.87
MOVE 1 4
TEXT 'COAL GEOLOGY GROUP'
MOVE 1.2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 6
TEXT 'ALBERTA'
MOVE 8.7 4
TEXT 'RESEARCH'
MOVE 8.7 2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
TEXTSIZE .13 .1
MOVE 5.5 4.4
TEXT 'CUMULATIVE STRATIGRAPHIC'
MOVE 5.5 4.2
TEXT 'OVERBURDEN'
TEXTSIZE 1 .07
KEYPOSITION 5.5 4.8
KEYSEPARATION 1 1
KEYBOX .1 .1
KEYMARKER STRAT KEY NO BOX
MEND
&LABEL START1
&TYPE "STRATIGRAPHIC CODES ; MAJOR UNITS -- 10,20,30,35,36 40,40,40."
&TYPE " SUB UNITS -- 20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50."
&AASK 4 "ENTER UNIT NUMBER" &F
&GOTO OVERLAY &F &EQ &% 4 &F
&GOTO %4

&LABEL 10
MBEGIN
RES SEL OVB POINTS STR-10 CT 0.0
MARKERSYMBOL 59
POINTS OVB
MEND
&QUERY 5 "ZOOM IN " &F
&GOTO ZOOM &F &EQ &% 5 Y
&LABEL ASK10
&TYPE "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE, 3-ZOOM IN."
&AASK 8 "4-ZOOM OUT (FOR ZOOMED-IN IMAGE ONLY), 5-EXIT " 5
&GOTO MAPEX1 &F &EQ &% 1
&GOTO IDENT &F &EQ &% 2
&GOTO ZOOM &F &EQ &% 3
&GOTO ZOOMOUT2 &F &EQ &% 4
&GOTO OVERLAY2 &F &EQ &% 5
&JUMP ASK10
&LABEL IDENT
IDENTIFY OVB POINTS ; STR-10 MV-CODE NORTH EAST
&GOTO ASK10

&LABEL 20
MBEGIN
RES SEL OVB POINTS STR-20 CT 0.0
MARKERSYMBOL 79
POINTS OVB
MEND
&QUERY 5 "ZOOM IN " &F
&GOTO ZOOM &F &EQ &% 5 Y
&LABEL ASK20
&TYPE "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE, 3-ZOOM IN."
&AASK 8 "4-ZOOM OUT (FOR ZOOMED-IN IMAGE ONLY), 5-EXIT " 5
&GOTO MAPEX1 &F &EQ &% 1
&ASYM "4-ZOOM OUT (FOR ZOOMED-IN IMAGE ONLY), 5-EXIT", 6
&GOTO MAPEX1 &IF &E0 &% 1
&GOTO IDENT4 &IF &E0 &% 2
&GOTO ZOOM &IF &E0 &% 3
&GOTO ZOOMOUT2 &IF &E0 &% 4
&GOTO OVERLAY3 &IF &E0 &% 5
&JUMP ASK40
&LABEL IDENT40
IDENTIFY OVB POINTS * STR-40 HV-CODE NORTH EAST
&JUMP ASK40

&LABEL 60
&BEGIN
RESEL OVB POINTS STR-60 GT 0.0
MARKERSYMBOL 45
POINTS OVB
MEND
&QUERY 5 "ZOOM IN " &F
&GOTO ZOOM &IF &E0 &% 5 &Y
&LABEL ASK60
&TYPE "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE, 3-ZOOM IN,"
&ASK 8 "4-ZOOM OUT (FOR ZOOMED-IN IMAGE ONLY), 5-EXIT", 6
&GOTO MAPEX1 &IF &E0 &% 1
&GOTO IDENT4 &IF &E0 &% 2
&GOTO ZOOM &IF &E0 &% 3
&GOTO ZOOMOUT2 &IF &E0 &% 4
&GOTO OVERLAY3 &IF &E0 &% 5
&JUMP ASK60
&LABEL IDENT60
IDENTIFY OVB POINTS * STR-60 HV-CODE NORTH EAST
&JUMP ASK60

&LABEL 80
&BEGIN
RESEL OVB POINTS STR-80 GT 0.0
MARKERSYMBOL 38
POINTS OVB
MEND
&QUERY 5 "ZOOM IN " &F
&GOTO ZOOM &IF &E0 &% 5 &Y
&LABEL ASK80
&TYPE "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE, 3-ZOOM IN,"
&ASK 8 "4-ZOOM OUT (FOR ZOOMED-IN IMAGE ONLY), 5-EXIT", 6
&GOTO MAPEX1 &IF &E0 &% 1
&GOTO IDENT4 &IF &E0 &% 2
&GOTO ZOOM &IF &E0 &% 3
&GOTO ZOOMOUT2 &IF &E0 &% 4
&GOTO OVERLAY3 &IF &E0 &% 5
&JUMP ASK80
&LABEL IDENT80
IDENTIFY OVB POINTS * STR-80 HV-CODE NORTH EAST
&JUMP ASK80

&LABEL 40
&BEGIN
RESEL OVB POINTS STR-40 GT 0.0
MARKERSYMBOL 29
POINTS OVB
MEND
&QUERY 5 "ZOOM IN " &F
&GOTO ZOOM &IF &E0 &% 5 &Y
&LABEL ASK40
&TYPE "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE, 3-ZOOM IN,"
&ASK 8 "4-ZOOM OUT (FOR ZOOMED-IN IMAGE ONLY), 5-EXIT", 6
&GOTO MAPEX1 &IF &E0 &% 1
&GOTO IDENT4 &IF &E0 &% 2
&GOTO ZOOM &IF &E0 &% 3
&GOTO ZOOMOUT2 &IF &E0 &% 4
&GOTO OVERLAY3 &IF &E0 &% 5
&JUMP ASK40
&LABEL IDENT40
IDENTIFY OVB POINTS * STR-40 HV-CODE NORTH EAST
&JUMP ASK40

&LABEL 47
&BEGIN
RESEL OVB POINTS STR-47 GT 0.0
MARKERSYMBOL 28
POINTS OVB
MEND
&QUERY 5 "ZOOM IN" &F
&GOTO ZOOM &IF &EEO %5 Y
&LABEL ASK47
&type "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE ,3-ZOOM IN,"
&ASK 8 "4-ZOOM OUT (FOR ZOOMED- IN IMAGE ONLY), 5-EXIT " 6
&GOTO WAPEX1 &IF &EEO %8 1
&GOTO IDENT47 &IF &EEO %8 2
&GOTO ZOOM &IF &EEO %8 3
&GOTO ZOOMOUT2 &IF &EEO %8 4
&GOTO OVERLAY3 &IF &EEO %8 5
&JUMP ASK47
&LABEL IDENT47
&IDENTIFY OVB POINTS * STR-47 HV-CODE NORTH EAST
&JUMP ASK47

&LABEL 48
MBEGIN
&RESEL OVB POINTS STR-48 GT 0.0
&MARKERSYMBOL 27
&POINTS OVB
MEND
&QUERY 5 "ZOOM IN" &F
&GOTO ZOOM &IF &EEO %5 Y
&LABEL ASK48
&type "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE ,3-ZOOM IN,"
&ASK 8 "4-ZOOM OUT (FOR ZOOMED- IN IMAGE ONLY), 5-EXIT " 6
&GOTO WAPEX1 &IF &EEO %8 1
&GOTO IDENT48 &IF &EEO %8 2
&GOTO ZOOM &IF &EEO %8 3
&GOTO ZOOMOUT2 &IF &EEO %8 4
&GOTO OVERLAY3 &IF &EEO %8 5
&JUMP ASK48
&LABEL IDENT48
&IDENTIFY OVB POINTS * STR-48 HV-CODE NORTH EAST
&JUMP ASK48

&LABEL 61
MBEGIN
&RESEL OVB POINTS STR-61 GT 0.0
&MARKERSYMBOL 25
&POINTS OVB
MEND
&QUERY 5 "ZOOM IN" &F
&GOTO ZOOM &IF &EEO %5 Y
&LABEL ASK61
&type "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE ,3-ZOOM IN,"
&ASK 8 "4-ZOOM OUT (FOR ZOOMED- IN IMAGE ONLY), 5-EXIT " 6
&GOTO WAPEX1 &IF &EEO %8 1
&GOTO IDENT61 &IF &EEO %8 2
&GOTO ZOOM &IF &EEO %8 3
&GOTO ZOOMOUT2 &IF &EEO %8 4
&GOTO OVERLAY3 &IF &EEO %8 5
&JUMP ASK61
&LABEL IDENT61
&IDENTIFY OVB POINTS * STR-61 HV-CODE NORTH EAST
&JUMP ASK61

&LABEL 62
MBEGIN
&RESEL OVB POINTS STR-62 GT 0.0
&MARKERSYMBOL 20
&POINTS OVB
MEND
&QUERY 5 "ZOOM IN" &F
&GOTO ZOOM &IF &EEO %5 Y
&LABEL ASK62
&type "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE ,3-ZOOM IN,"
&ASK 8 "4-ZOOM OUT (FOR ZOOMED- IN IMAGE ONLY), 5-EXIT " 6
&GOTO WAPEX1 &IF &EEO %8 1
&GOTO IDENT62 &IF &EEO %8 2
&GOTO ZOOM &IF &EEO %8 3
&GOTO ZOOMOUT2 &IF &EEO %8 4
&GOTO OVERLAY3 &IF &EEO %8 5
&JUMP ASK62
&LABEL IDENT62
&IDENTIFY OVB POINTS * STR-62 HV-CODE NORTH EAST
&JUMP ASK62
MOVE 1 4
TEXT 'COAL GEOLOGY GROUP'
MOVE 1 2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8 7 6
TEXT 'ALBERTA'
MOVE 8 7 4
TEXT 'RESEARCH'
MOVE 8 7 2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
WEND
BEGIN
MOVE 5 3 4 4
TEXTSIZE 12.0
TEXT 'TYPES OF ANALYSIS PERFORMED:
TEXTSIZE 1.0
MOVE 5 5 4 1
TEXT 'C - COMPOSITE SAMPLE'
MOVE 5 5 3 0
TEXT 'G - GROSS SUB-UNIT SAMPLE'
MOVE 5 5 3 5
TEXT 'O - DETAIL SAMPLE'
MOVE 5 5 3 2
TEXT 'H - SAMPLE TYPE C,C,O WITHOUT'
MOVE 5 5 2 7
TEXT 'O - QUIT'
WEND
&SETVAR 20 72
&LABEL RESPONSE
&SETVAR 23 0
&TYPE "C - COMPOSITE SAMPLE, G - GROSS SUB-UNIT SAMPLE, O - DETAIL SAMPLE,"
&TYPE "N - SAMPLE WITHOUT SEAM CODE, O - QUIT"
&RESPONSE 8 "PLEASE ENTER YOUR CHOICE " &F
&GOTO NOCODE &IF &EO &EQ &H "N"
&GOTO OVERLAY &IF &EO &EQ &H "O"
&LABEL ASK2
&ASK 9 "SELECT COAL SEAM (1-6) 0 - EXIT" 7
&GOTO RESPONSE &IF &EO &EQ &H 0
&GOTO SEAMS &IF &EO &NE &H 1 6
&JUMP ASK2
&LABEL SEAMS
BEGIN
MOVE 5 3 4 4
TEXTSIZE 12.0
TEXT 'TYPES OF ANALYSIS PERFORMED:
RESET SMPCD POINTS S%9,%B = 1
&TYPE "**************************"
&TYPE "* DISPLAYING TYPE %B SEAM %9 *
&TYPE "**************************"
&CALCVAR 20 %20 + 1
MARKERSYMBOL %20
POINTS SMPCD
WEND
&QUERY 2 "ZOOM IN " &F
&GOTO ZOOM2 &IF &EO &LE &H 2
&LABEL CONT
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE, 3 - ZOOM-IN "
&TYPE "4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 12 "ENTER YOUR CHOICE " 6
&GOTO MAPEX2 &IF &EO &LE &H 1
&GOTO 3 &IF &EO &LE &H 2
&GOTO ZOOM2 &IF &EO &LE &H 3
&GOTO OVERLAY2 &IF &EO &LE &H 5
&GOTO ZOOMOUT &IF &EO &LE &H 4
&JUMP CONT
&LABEL SMPCD
RESET SMPCD POINTS S%9,%B = 1
&JUMP CONT
&LABEL ZOOM2
&CALCVAR 23 %23 + 1
MAPEX *
&GOTO DELETE3 &IF &NE &H 23 1
&LABEL ZOOMIN
CLEAR
POINTER SMPCD
&JUMP CONT

&LABEL DELETE
&CALCVA 23 %23 - 1
DELETE
&JUMP ZOOMIN

&LABEL MAPEX2
RESER SMPCD POINTS MAPEX
LIST SMPCD POINTS HY-CODE NORTH EAST
&JUMP CONT

&LABEL 3
IDENTIFY SMPCD POINTS + HY-CODE NORTH EAST
QUERY 13 "CONTINUE TO SELECT" &F
GOTO 3 &IF &EO %13 Y
&JUMP CONT

&LABEL NOCODE
&SETVAR 4 "NOCODE"
&RESPONSE 11 "WHICH SAMPLE TYPE (C,O,D) ? 0 - QUIT" 0
&GOTO OVERLAY2 &IF &EO %11 "0"
RESER SMPCD POINTS NOCODE %11 = 1
MARKERSYMBOL %28
POINTS SMPCD
&JUMP CONT

&REM &LABEL ASK3
&REM ASK 12 "1-REVIEW INFO ON ALL HOLES, 2-REVIEW INFO ON EACH HOLE, 3-EXIT" 4
&REM GOTO NOCODE &IF &EO %12 1
&REM GOTO NOCODE1 &IF &EO %12 2
&REM CLEARSEL
&REM GOTO NOCODE &IF &EO %12 3
&REM JUMP ASK3

&LABEL MAPEX3
RESER SMPCD POINTS MAPEX
LIST SMPCD POINTS HY-CODE NORTH EAST
&JUMP ASK3

&LABEL NOCODE1
IDENTIFY SMPCD POINTS + HY-CODE NORTH EAST
QUERY 13 "CONTINUE TO SELECT" &F
GOTO NOCODE1 &IF &EO %13 Y
&JUMP ASK3

&LABEL OVERLAY2
CLEARSEL
QUERY 12 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
GOTO RESPONSE &IF &EO %12 Y
DELETE
MFRESH
&JUMP RESPONSE

&LABEL ZOOMOUT
CLEAR
DELETE
CLEARSER
MAPEX ATS OVB SMPCD LAK MVPNT
PAGESIZE 9.6 5.6
MFRESH
&SETVAR 23 0
&JUMP %4

&LABEL ZOOMOUT2
CLEAR
DELETE
CLEARSER
MAPEX ATS OVB SMPCD LAK MVPNT
PAGESIZE 9.6 5.6
MFRESH
&SETVAR 22 0
&JUMP SEL%4

&LABEL SEL10
RESER OVB POINTS STR-10 GT 0 0
&LABEL SEL20
RESEL OVB POINTS STR-20 GT 0.0
&JUMP ASK4

&LABEL SEL30
RESEL OVB POINTS STR-30 GT 0.0
&JUMP ASK4

&LABEL SEL35
RESEL OVB POINTS STR-35 GT 0.0
&JUMP ASK4

&LABEL SEL36
RESEL OVB POINTS STR-36 GT 0.0
&JUMP ASK4

&LABEL SEL40
RESEL OVB POINTS STR-40 GT 0.0
&JUMP ASK4

&LABEL SEL60
RESEL OVB POINTS STR-60 GT 0.0
&JUMP ASK4

&LABEL SEL80
RESEL OVB POINTS STR-80 GT 0.0
&JUMP ASK4

&LABEL SEL46
RESEL OVB POINTS STR-46 GT 0.0
&JUMP ASK4

&LABEL SEL47
RESEL OVB POINTS STR-47 GT 0.0
&JUMP ASK4

&LABEL SEL48
RESEL OVB POINTS STR-48 GT 0.0
&JUMP ASK4

&LABEL SEL61
RESEL OVB POINTS STR-61 GT 0.0
&JUMP ASK4

&LABEL SEL62
RESEL OVB POINTS STR-62 GT 0.0
&JUMP ASK4

&LABEL SEL63
RESEL OVB POINTS STR-63 GT 0.0
&JUMP ASK4

&LABEL SEL635
RESEL OVB POINTS STR-635 GT 0.0
&JUMP ASK4

&LABEL SEL64
RESEL OVB POINTS STR-64 GT 0.0
&JUMP ASK4

&LABEL SEL65
RESEL OVB POINTS STR-65 GT 0.0
&JUMP ASK4

&LABEL SEL89
RESEL OVB POINTS STR-89 GT 0.0
&JUMP ASK4

&LABEL S1
MAP END
KILLMAP MAP1
&SETVAR 20 "SEAM1"
&RUN %20
&GOTO START

&LABEL S2
MAP END
&REM ################################################################################
&REM THIS MANUAL WILL DISPLAY ALL THE STRATIGRAPHIC CODES
&REM AND DESCRIPTIONS AS WELL AS MINERAL CONTENTS FROM
&SETVAR 4 "SEL1"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL1
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION - " 6
&GOTO MAPEX &IF &EQ %17 1
&GOTO A1 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL1

&LABEL MAPEX
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HV-CODE RCDC-H2O
&JUMP SEL1

&LABEL A1
IDENTIFY SEAM1 POINTS = NORTH EAST HV-CODE RCDC-H2O
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A1 &IF &EQ %18 Y
&JUMP SEL1

&LABEL H2O1
&SETVAR 21 0
&SETVAR 3 "H2O"
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAM1 POINTS ADJC-H2O GT 0.0
MARKERS SYMBOL 71
POINTS SEAM1 MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL2"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL2
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION - " 6
&GOTO MAPEX2 &IF &EQ %17 1
&GOTO A2 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL2

&LABEL MAPEX2
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HV-CODE ADJC-H2O
&JUMP SEL2

&LABEL A2
IDENTIFY SEAM1 POINTS = NORTH EAST HV-CODE ADJC-H2O
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A2 &IF &EQ %18 Y
&JUMP SEL2

&LABEL VOLM
MBEGIN
&SETVAR 21 0
&SETVAR 3 "VLT"
&SETVAR 10 "RCDC"
RESEL SEAM1 POINTS RCDC-VLT GT 0.0
MARKERS SYMBOL 71
POINTS SEAM1 MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL3"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL3
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION - " 6
&GOTO MAPEX3 &IF &EQ %17 1
&GOTO A3 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL3

&LABEL MAPEX3
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HV-CODE RCDC-QLT
&JUMP SEL3

&LABEL A3
IDENTIFY SEAM1 POINTS + NORTH EAST HV-CODE RCDC-QLT
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A3 &IF &EO %18 Y
&JUMP SEL3

&LABEL VOLUM
&SETVAR 21 0
&SETVAR 3 "QLT"
&SETVAR 18 "ADJC"
NBEGIN
RESEL SEAM1 POINTS ADJC-QLT GT 0.0
MARKERSYMBOL 72
POINTS SEAM1
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL4"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL4
&TYPES "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ONB EACH HOLE."
&TYPES "3 - ZOOM IN. 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY). 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX4 &IF &EO %17 1
&GOTO A4 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL4

&LABEL MAPEX4
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HV-CODE ADJC-QLT
&JUMP SEL4

&LABEL A4
IDENTIFY SEAM1 POINTS + NORTH EAST HV-CODE ADJC-QLT
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A4 &IF &EO %18 Y
&JUMP SEL4

&LABEL ASH
&SETVAR 21 0
&SETVAR 3 "ASH"
&SETVAR 18 "RCDC"
NBEGIN
RESEL SEAM1 POINTS RCDC-ASH GT 0.0
MARKERSYMBOL 3
POINTS SEAM1
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL5"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL5
&TYPES "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ONB EACH HOLE."
&TYPES "3 - ZOOM IN. 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY). 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX5 &IF &EO %17 1
&GOTO A5 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL5

&LABEL MAPEX5
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HV-CODE RCDC-ASH
&JUMP SEL5

&LABEL A5
IDENTIFY SEAM1 POINTS + NORTH EAST HV-CODE RCDC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A5 &IF &EO %18 Y
&JUMP SEL5

&LABEL ASH1
&BEGIN
&SETVAR 21 0
&SETVAR 3 "ASH"
&SETVAR 10 "ADJC"
RESEL SEAM1 POINTS ADJC-ASH GT 0.0
MARKERSymbol 89
POINtS SEAM1
MEND
&QUERY 1 "ZOOM IN -" &F
&SETVAR 4 "SEL6"
&GOTO zoom &F &EO %1 Y
&LABEL SEL6
&type "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION -" 6
&GOTO MAPEX6 &F &EO %17 1
&GOTO AS6 &F &EO %17 2
&GOTO zoom &F &EO %17 3
&GOTO DISPLAY &F &EO %17 5
&GOTO ZOOMOUT &F &EO %17 4
&JUMP SEL6

&LABEL MAPEX6
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HUCODE ADJC-ASH
&JUMP SEL6
&LABEL 06
IDENTIFY SEAM1 POINTS + ADJC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO 06 &F &EO %18 Y
&JUMP SEL6
&LABEL AS6
IDENTIFY SEAM1 POINTS + NORTH EAST HUCODE ADJC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO AS6 &F &EO %18 Y
&JUMP SEL6

&LABEL FXC
&SETVAR 21 0
&SETVAR 3 "FXC"
&SETVAR 10 "RCDC"
&BEGIN
RESEL SEAM1 POINTS RCDC-FXC GT 0.0
MARKERSymbol 4
POINtS SEAM1
MEND
&QUERY 1 "ZOOM IN -" &F
&SETVAR 4 "SEL7"
&GOTO zoom &F &EO %1 Y
&LABEL SEL7
&type "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION -" 6
&GOTO MAPEX7 &F &EO %17 1
&GOTO A7 &F &EO %17 2
&GOTO zoom &F &EO %17 3
&GOTO DISPLAY &F &EO %17 5
&GOTO ZOOMOUT &F &EO %17 4
&JUMP SEL7

&LABEL MAPEX7
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HUCODE RCDC-FXC
&JUMP SEL7

&LABEL A7
IDENTIFY SEAM1 POINTS + NORTH EAST HUCODE RCDC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A7 &F &EO %18 Y
&JUMP SEL7

&LABEL EXIT
MAP END
KILL MAP MAP1
CLEAR
&RETURN
&MODEL FN2
&SETVAR 21 0
&SETVAR 3 "FXC"
&SETVAR 10 "ADJC"

MBEGIN
RESEL SEAM1 POINTS ADJC-FXC GT 0.0
MARKERSYMBOL 90
POINTS SEAM1
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL9"
&GOTO ZOOM &IF &EO %1 Y
&LABEL S9
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(Exit for Zoomed-In Display), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 5
&GOTO MAPEX9 &IF &EO %17 1
&GOTO A9 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 4
&GOTO ZOOMOUT &IF &EO %17 5
&JUMP S9

&LABEL MAPEX9
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HY-CODE ADJC-FXC
&JUMP S9

&LABEL A9
IDENTIFY SEAM1 POINTS - NORTH EAST HY-CODE ADJC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A9 &IF &EO %18 Y
&JUMP S9

&LABEL SUL
&SETVAR 21 0
&SETVAR 3 "S"
&SETVAR 10 "ADJC"

MBEGIN
RESEL SEAM1 POINTS ADJC-S GT 0.0
MARKERSYMBOL 93
POINTS SEAM1
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL11"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL11
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX11 &IF &EO %17 1
&GOTO A11 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL1

&LABEL MAPEX11
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HV-CODE ADJC-S
&JUMP SEL18

&LABEL A11
IDENTIFY SEAM1 POINTS + NORTH EAST HV-CODE ADJC-S
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A11 &IF &EO %18 Y
&JUMP SEL18

&LABEL CAL
&SETVAR 21 0
&SETVAR 3 "CAL"
&SETVAR 10 "RCDC"
MBEGIN
RESEL SEAM1 POINTS RCDC-CAL GT 0.0
MARKERSYMBOL 70
POINTS SEAM1
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL11"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL11
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX11 &IF &EO %17 1
&GOTO A11 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL11

&LABEL MAPEX11
RESEL SEAM1 POINTS MAPEX
LIST SEAM1 POINTS NORTH EAST HV-CODE RCDC-CAL
&JUMP SEL11
&LABEL Q11
IDENTIFY SEAM1 POINTS + RCDC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO Q11 &IF &EO %18 Y
&JUMP SEL11

&LABEL A11
IDENTIFY SEAM1 POINTS + NORTH EAST HV-CODE RCDC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A11 &IF &EO %18 Y
&JUMP SEL11

&LABEL CAL1
&SETVAR 21 0
&SETVAR 3 "CAL"
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAM1 POINTS ADJC-CAL GT 0.0
MARKERSYMBOL 92
POINTS SEAM1
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL12"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL12
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
FILE -> WABAMUN\MINES\HIGHVA\SEAM 2.SML

&REM ******************************************************
&REM THIS MANUAL WILL DISPLAY ALL THE STRATIGRAPHIC CODES
&REM AND DESCRIPTIONS AS WELL AS MINERAL CONTENTS FROM
&REM SEAM 1 TO SEAM 6 AND TYPE OF ANALYSIS FOR HIGHVALE MINES
&REM WRITTEN BY D. CHAO ON AUG. 24 1988
&REM ******************************************************
PAGESIZE 9.6 5.6
MAPEX AT LAH SEAM 2
&LABEL SEAM 2 CLEAR
MAP MAP 1 
MAPANGLE = -1.5
&LABEL SEAM MBEGIN LINEC 1 
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESYMBOL 7
ARCS LAX
TEXTSIZE .15 .12
MOVE 5.5 4.5
TEXT 'HIGHVALE MINES'
TEXTSIZE .1 .07
MOVE 5.5 4.2
TEXT 'COAL SEAM 2'
KEYPOSITION 5.5 3.6
KEYSEPARATION .2 .15
KEYBOX 89 .89
TEXTSIZE 1 .07
KEYMARKER SEAM .KEY NOBOX
TEXTSIZE 1 .07
TEXTFONT 0
TEXTCOLOR 2
MOVE .1 .4
TEXT 'COAL GEOLOGY GROUP'
MOVE .1 .2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
WEND

&LABEL OVLAY
&TYPE '13 EXIT, 14 PRINTER, 15 TTY'
&ASK 16 "PLEASE ENTER YOUR CHOICE " 16
&GOTO M20 &IF &EQ %16 1
&GOTO VLN &IF &EQ %16 2
&GOTO ASH &F &EQ %16 3
&GOTO FXC &F &EQ %16 4
&GOTO SUL &F &EQ %16 5
&GOTO CAL &F &EQ %16 6
&GOTO H2O1 &IF &EQ %16 7
&GOTO VLM1 &IF &EQ %16 8
&GOTO ASH1 &F &EQ %16 9
&GOTO FXC1 &F &EQ %16 10
&GOTO SUL1 &F &EQ %16 11
&GOTO CAL1 &F &EQ %16 12
&GOTO EXIT &IF &EQ %16 13
&GOTO PRINTER &IF &EQ %16 14
&GOTO TTY &F &EQ %16 15
&GOTO OVLAY

&LABEL TTY
MAP END
TTY
&JUMP OVLAY

&LABEL M20
&SETVAR 3 "M20"
&SETVAR 10 "RCDC"
&SETVAR 21 0
MBEGIN
RESSEL SEAM2 POINTS RCDC M20 GT 0.0
MARKERSYMBOL 1
POINTS SEAM2
WEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL1"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL1
&TYPE "1 REVIEW INFO ON ALL HOLES, 2 REVIEW INFO ON EACH HOLE,"
&TYPE "3 ZOOM IN, 4 ZOOM OUT(EXIT FOR ZOOM GEO DISPLAY),"
&TYPE "5 EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 17
&GOTO MAPEX &IF &EQ %17 1
&GOTO A1 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL1
RESEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE RCDC-VLT
\&JUMP SEL1

\&LABEL A1
IDENTIFY SEAM1 POINTS \* NORTH EAST HV-CODE RCDC-H2O
\&QUERY 18 "CONTINUE TO SELECT" \&F
\&GOTO A1 \&IF \&EQ %18 Y
\&JUMP SEL1

\&LABEL H2O1
\&SETVAR 3 "H2O"
\&SETVAR 10 "ADJC"
\&SETVAR 21 0
MBEGIN
RESEL SEAM2 POINTS ADJC-H2O GT 0,0
MARKERS\MBOL 7.1
POINTS SEAM2
MEND
\&QUERY 1 "ZOOM IN " \&F
\&SETVAR 4 "SEL2"
\&GOTO ZOOM \&IF \&EQ %1 Y
\&LABEL SEL2
\&TYPE 1 - "REVIEW INFO ON ALL HOLES, 2 - "REVIEW INFO ON EACH HOLE."
\&TYPE 3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY),
\&TYPE 5 - "EXIT"
\&BASK 17 "PLEASE ENTER YOUR SELECTION " 6
\&GOTO MAPEX2 \&IF \&EQ %17 1
\&GOTO A2 \&IF \&EQ %17 2
\&GOTO ZOOM \&IF \&EQ %17 3
\&GOTO DISPLAY \&IF \&EQ %17 5
\&GOTO ZOOMOUT \&IF \&EQ %17 4
\&JUMP SEL2

\&LABEL MAPEX2
RESEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE ADJC-H2O
\&JUMP SEL2
\&LABEL A2
IDENTIFY SEAM2 POINTS \* NORTH EAST HV-CODE ADJC-H2O
\&QUERY 18 "CONTINUE TO SELECT" \&F
\&GOTO A2 \&IF \&EQ %18 Y
\&JUMP SEL2

\&LABEL VOLT
MBEGIN
\&SETVAR 3 "VLT"
\&SETVAR 10 "RCDC"
\&SETVAR 21 0
RESEL SEAM2 POINTS RCDC-VLT GT 0,0
MARKERS\MBOL 2
POINTS SEAM2
MEND
\&QUERY 1 "ZOOM IN " \&F
\&SETVAR 4 "SEL3"
\&GOTO ZOOM \&IF \&EQ %1 Y
\&LABEL SEL3
\&TYPE 1 - "REVIEW INFO ON ALL HOLES, 2 - "REVIEW INFO ON EACH HOLE."
\&TYPE 3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY),
\&TYPE 5 - "EXIT"
\&BASK 17 "PLEASE ENTER YOUR SELECTION " 6
\&GOTO MAPEX3 \&IF \&EQ %17 1
\&GOTO A3 \&IF \&EQ %17 2
\&GOTO ZOOM \&IF \&EQ %17 3
\&GOTO DISPLAY \&IF \&EQ %17 5
\&GOTO ZOOMOUT \&IF \&EQ %17 4
\&JUMP SEL3

\&LABEL MAPEX3
RESEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE RCDC-VLT
\&JUMP SEL3
\&LABEL A3
IDENTIFY SEAM2 POINTS \* NORTH EAST HV-CODE RCDC-VLT
\&QUERY 18 "CONTINUE TO SELECT" \&F
\&GOTO A3 \&IF \&EQ %18 Y
\&JUMP SEL3
RESSEL SEAM2 POINTS ADJC-VLT GT 0.0
MARKERSYMBOL 72
POINTS SEAM2
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL4"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL4
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY.)"
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX4 &IF &EQ %17 1
&GOTO A4 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL4

&LABEL MAPEX4
RESSEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE ADJC-VLT
&JUMP SEL4
&LABEL A4
IDENTIFY SEAM2 POINTS * NORTH EAST HV-CODE ADJC-VLT
&QUERY 18 "CONTINUE TO SELECT " &F
&GOTO A4 &IF &EQ %18 Y
&JUMP SEL4

&LABEL ASH
&SETVAR 3 "ASH"
&SETVAR 10 "RCDC"
&SETVAR 21 0
MBEGIN
RESSEL SEAM2 POINTS RCDC-ASH GT 0.0
MARKERSYMBOL 3
POINTS SEAM2
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL5"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL5
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY.)"
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX6 &IF &EQ %17 1
&GOTO A6 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL6

&LABEL MAPEX6
RESSEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE RCDC-ASH
&JUMP SEL6
&LABEL A5
IDENTIFY SEAM2 POINTS * NORTH EAST HV-CODE RCDC-ASH
&QUERY 18 "CONTINUE TO SELECT " &F
&GOTO A5 &IF &EQ %18 Y
&JUMP SEL6

&LABEL ASH1
MBEGIN
&SETVAR 3 "ASH"
&SETVAR 18 "ADJC"
&SETVAR 21 0
RESSEL SEAM2 POINTS ADJC-ASH GT 0.0
MARKERSYMBOL 89
POINTS SEAM2
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL6"
&GOTO ZOOM &F &EQ %1 Y
&LABEL SEL6
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY),"
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX6 &IF &EQ %17 1
&GOTO A6 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL6

&LABEL MAPEX6
RESEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE ADJC-ASH
&JUMP SEL6

&LABEL A6
IDENTIFY SEAM2 POINTS = NORTH EAST HV-CODE ADJC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A6 &IF &EQ %18 Y
&JUMP SEL6

&LABEL FXC
&SETVAR 3 "FXC"
&SETVAR 18 "RCDC"
&SETVAR 21 0
&MBEGIN
RESEL SEAM2 POINTS RCDC-FXC GT 0.0
MARKERSYMBOL 4
POINTS SEAM2
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL7"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL7
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY),"
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX7 &IF &EQ %17 1
&GOTO A7 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL7

&LABEL MAPEX7
RESEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE RCDC-FXC
&JUMP SEL7

&LABEL A7
IDENTIFY SEAM2 POINTS = NORTH EAST HV-CODE RCDC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A7 &IF &EQ %18 Y
&JUMP SEL7

&LABEL EXIT
MAP END
KILLMAP MAP1
CLEAR
&RETURN

&LABEL FXC1
&SETVAR 3 "FXC"
&SETVAR 18 "ADJC"
&SETVAR 21 0
&MBEGIN
RESEL SEAM2 POINTS ADJC-FXC GT 0.0
MARKERSYMBOL 90
POINTS SEAM2
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SELB"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SELB
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY),"
&TYPE "5 - EXIT"
&ASH 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX &IF &EO %17 1
&GOTO A8 &IF &EO %17 2
&GOTO ZOWN &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOONOUT &IF &EO %17 4
&JUMP SELB

&LABEL MAPEX
RESSEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE ADJC-FXC
&JUMP SELB
&LABEL A8
IDENTIFY SEAM2 POINTS + NORTH EAST HV-CODE ADJC-FXC
&QUERY 18 "CONTINUE TO SELECT" &IF
&GOTO A8 &IF &EO %18 Y
&JUMP SELB

&LABEL SUL
&SETVAR 3 "3"
&SETVAR 10 "RCDC"
&SETVAR 21 0
&BEGIN
RESSEL SEAM2 POINTS RCDC-S GT 0.0
MARKERSYMBOL 89
POINTS SEAM2
MEND
&QUERY 1 "ZOOM IN " &IF
&SETVAR 4 "SEL9"
&GOTO ZOWN &IF &EO %1 Y
&LABEL SEL9
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY)."
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX &IF &EO %17 1
&GOTO A9 &IF &EO %17 2
&GOTO ZOWN &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOONOUT &IF &EO %17 4
&JUMP SEL9

&LABEL MAPEX9
RESSEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE RCDC-S
&JUMP SEL9
&LABEL A9
IDENTIFY SEAM2 POINTS + NORTH EAST HV-CODE RCDC-S
&QUERY 18 "CONTINUE TO SELECT" &IF
&GOTO A9 &IF &EO %18 Y
&JUMP SEL9

&LABEL SUL1
&SETVAR 3 "5"
&SETVAR 10 "ADJC"
&SETVAR 21 0
&BEGIN
RESSEL SEAM2 POINTS ADJC-S GT 0.0
MARKERSYMBOL 91
POINTS SEAM2
MEND
&QUERY 1 "ZOOM IN " &IF
&SETVAR 4 "SEL10"
&GOTO ZOWN &IF &EO %1 Y
&LABEL SEL10
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY)."
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX10 &IF &EO %17 1
&GOTO A10 &IF &EO %17 2
&GOTO ZOWN &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOONOUT &IF &EO %17 4
&JUMP SEL10

&LABEL MAPEX10
RESSEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE ADJC-S
&JUMP SEL10
&LABEL A10
IDENTIFY SEAM2 POINTS + NORTH EAST HV-CODE ADJC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A18 &IF &EO &Y
&JUMP SEL10

&LABEL CAL
&SETVAR 3 "CAL"
&SETVAR 10 "RCDC"
&SETVAR 21 0
&WBEGIN
RESEL SEAM2 POINTS RCDC-CAL GT 0.0
MARKERSYMBOL 70
POINTS SEAM2
WEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL11"
&GOTO ZOOM &IF &EO &Y
&LABEL SEL11
&TYPE "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN. 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY)."
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX11 &IF &EO &Y
&GOTO A11 &IF &EO &Y
&GOTO ZOOM &IF &EO &Y
&GOTO DISPLAY &IF &EO &Y
&GOTO ZOOMOUT &IF &EO &Y
&JUMP SEL11

&LABEL MAPEX11
RESEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE RCDC-CAL
&JUMP SEL11
&LABEL A11
IDENTIFY SEAM2 POINTS + NORTH EAST HV-CODE RCDC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A18 &IF &EO &Y
&JUMP SEL11

&LABEL CAL1
&SETVAR 3 "CAL"
&SETVAR 10 "ADJC"
&SETVAR 21 0
&WBEGIN
RESEL SEAM2 POINTS ADJC-CAL GT 0.0
MARKERSYMBOL 92
POINTS SEAM2
WEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL12"
&GOTO ZOOM &IF &EO &Y
&LABEL SEL12
&TYPE "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN. 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY)."
&TYPE "5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX12 &IF &EO &Y
&GOTO ZOOM &IF &EO &Y
&GOTO DISPLAY &IF &EO &Y
&GOTO ZOOMOUT &IF &EO &Y
&JUMP SEL12

&LABEL MAPEX12
RESEL SEAM2 POINTS MAPEX
LIST SEAM2 POINTS NORTH EAST HV-CODE ADJC-CAL
&JUMP SEL12
&LABEL A12
IDENTIFY SEAM2 POINTS + NORTH EAST HV-CODE ADJC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A12 &IF &EO &Y
&JUMP SEL12

&LABEL DISPLAY
&QUERY 19 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
CLEARESEL
&GOTO OVLAY &IF &EO &Y
WE DELETE
MFRESH
&JUMP OVLAY

&LABEL PRINTER
MAP END
&RUN PRINTER.SML
KILLMAP MAP1
DISPLAY 4 2 3
&JUMP SEAM2

&LABEL ZOOM
&CALCVAR 21 %21 + 1
MAP EX
&GOTO DELETE &IF &NE %21 1
&LABEL ZOOM2
CLEAR
POINTS SEAM2
&JUMP %4

&LABEL DELETE
&CALCVAR 21 %21 - 1
W DELETE
&JUMP ZOOM2

&LABEL ZOOMOUT
W DELETE
MAP EX AT5 SEAM2
CLEARSEL
PAGESIZE 9.6 5.6
MFRESH
RESET SEAM2 POINTS %10-%3 GT 0.0
&SETVAR 21 0
&JUMP %4

FILE -&gt; WABAMUN\MINES\HIGHVA\SEAM 3.SML

&REM ***********************************************
&REM THIS MANUAL WILL DISPLAY ALL THE STRATIGRAPHIC CODES
&REM AND DESCRIPTIONS AS WELL AS MINERAL CONTENTS FROM
&REM SEAM1 TO SEAM6 AND TYPE OF ANALYSIS FOR HIGHVALE MINES
&REM WRITTEN BY D. CHAO ON AUG. 24, 1988.
&REM ***********************************************
PAGESIZE 9.6 5.6
MAP EX AT5 LAK SEAM3
&LABEL SEAM3
CLEAR
MAP MAP1
WAPANGLE -1.5
&LABEL SEAM
WBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS AT5
LINESYMBOlov 7
ARCS LAK
TEXTSIZE .15 .12
MOVE 5.5 4.5
TEXT 'HIGHVALE MINES'
TEXTSIZE 1 .87
MOVE 5.5 4.2
TEXT 'COAL SEAM 3'
KEYPOSITION 5.5 3.6
KEYSEPARATION 2 .15
KEYBOX 09 .09
TEXTSIZE 1 .07
KEYMARKER SEAM.KEY NOBOX
TEXTSIZE 1 .07
TEXTFONT B
TEXTCOLOR 2
MOVE .1 .4
TEXT 'COAL GEOLOGY GROUP'
MOVE 1 .2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 0.7 .6
TEXT 'ALBERTA'
MOVE 0.7 .4
TEXT "RESEARCH"
MOVE 87 2
TEXT "COUNCIL"
TEXTFONT 0
TEXTCOLOR 1
MEND
&LABEL OVLAY
&type "13 - EXIT, 14-PRINTER, 15-TTY"
&ASK 16 "PLEASE ENTER YOUR CHOICE " 16
&GOTO H20 &IF &EO %16 1
&GOTO VOLM &IF &EO %16 2
&GOTO ASH &IF &EO %16 3
&GOTO FXC &IF &EO %16 4
&GOTO SUL &IF &EO %16 5
&GOTO CAL &IF &EO %16 6
&GOTO H201 &IF &EO %16 7
&GOTO VOLM1 &IF &EO %16 8
&GOTO ASH1 &IF &EO %16 9
&GOTO FXC1 &IF &EO %16 10
&GOTO SUL1 &IF &EO %16 11
&GOTO CAL1 &IF &EO %16 12
&GOTO EXIT &IF &EO %16 13
&GOTO PRINTER &IF &EO %16 14
&GOTO TTY &IF &EO %16 15
&GOTO OVLAY
&LABEL TTY
MAP END
TTY
&JUMP OVLAY

&LABEL H20
&SETVAR 3 "H20"
&SETVAR 21 0
&SETVAR 10 "RCDC"
MBEGIN
RESEL SEAM3 POINTS RCDC-H20 GT 0.0
MARKERSYMBOL 1
POINTS SEAM3
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL1"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL1
&type "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 17
&GOTO MAPEX &IF &EO %17 1
&GOTO A1 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL1

&LABEL MAPEX
RESEL SEAM3 POINTS MAPEX
LIST SEAM3 POINTS NORTH EAST HV-CODE RCDC-H20
&JUMP SEL1

&LABEL A1
IDENTIFY SEAM3 POINTS = NORTH EAST HV-CODE RCDC-H20
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A1 &IF &EO %18 Y
&JUMP SEL1

&LABEL H201
&SETVAR 3 "H20"
&SETVAR 21 0
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAM3 POINTS ADJC-H20 GT 0.0
MARKERSYMBOL 71
POINTS SEAM3
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL2"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL2
RESEL SEAM3 POINTS MAPEX
LIST SEAM3 POINTS NORTH EAST HV-CODE ADJC-VLT
&JUMP SEL4

&LABEL A4
IDENTIFY SEAM3 POINTS = NORTH EAST HV-CODE ADJC-VLT
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A4 &IF &EQ %16 Y
&JUMP SEL4

&LABEL ASH
&SETVAR 3 "ASH"
&SETVAR 21 0
&SETVAR 10 "ADJC"
BEGIN
RESEL SEAM3 POINTS ADJC-ASH GT 0 0
MARKERSYMBOL 3
POINTS SEAM3
END
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL5
&type "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY). 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX5 &IF &EQ %17 1
&GOTO A5 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL5

&LABEL MAPEX5
RESEL SEAM3 POINTS MAPEX
LIST SEAM3 POINTS NORTH EAST HV-CODE RCDC-ASH
&JUMP SEL5

&LABEL A5
IDENTIFY SEAM3 POINTS = NORTH EAST HV-CODE RCDC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A5 &IF &EQ %16 Y
&JUMP SEL5

&LABEL ASH1
BEGIN
&SETVAR 3 "ASH"
&SETVAR 21 0
&SETVAR 10 "ADJC"
RESEL SEAM3 POINTS ADJC-ASH GT 0 0
MARKERSYMBOL B3
POINTS SEAM3
END
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL6
&type "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY). 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX6 &IF &EQ %17 1
&GOTO A6 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL6

&LABEL MAPEX6
RESEL SEAM3 POINTS MAPEX
LIST SEAM3 POINTS NORTH EAST HV-CODE ADJC-ASH
&JUMP SEL6

&LABEL A6
IDENTIFY SEAM3 POINTS = NORTH EAST HV-CODE ADJC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A6 &IF &EQ %16 Y
&JUMP SEL6

&LABEL FSC
&GOTO A11 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL11

&LABEL MAPIX11
RESEL SEAM3 POINTS MAPIEX
LIST SEAM3 POINTS NORTH EAST HV-CODE RCDC-CAL
&JUMP SEL11

&LABEL A11
IDENTIFY SEAM3 POINTS = NORTH EAST HV-CODE RCDC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A11 &IF &EQ %18 Y
&JUMP SEL11

&LABEL CAL1
&SETVAR 3 "CAL"
&SETVAR 21 0
&SETVAR 10 "ADJC"
BEGIN
RESEL SEAM3 POINTS ADJC-CAL GT 0,0
MARKERSYMBOL 12
POINTS SEAM3
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL12"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL12
&TYPE "1 = REVIEW INFO ON ALL HOLES, 2 = REVIEW INFO ON EACH HOLE,"
&TYPE "3 = ZOOM IN, 4 = ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 = EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPIX12 &IF &EQ %17 1
&GOTO A12 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL12

&LABEL MAPIX12
RESEL SEAM3 POINTS MAPIEX
LIST SEAM3 POINTS NORTH EAST HV-CODE ADJC-CAL
&JUMP SEL12

&LABEL A12
IDENTIFY SEAM3 POINTS = NORTH EAST HV-CODE ADJC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A12 &IF &EQ %18 Y
&JUMP SEL12

&LABEL DISPLAY
&QUERY 19 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F CLEARSEL
&GOTO OVLAY &IF &EQ %19 Y
MDELETE
MFRESH
&JUMP OVLAY

&LABEL PRINTER
MAP END
&RUN PRINTER.SML
KILLMAP MAP1
DISPLAY 4 2 3
&JUMP SEAM3

&LABEL ZOOM
ECALCVAR 21 %21 + 1
MAPEX =
&GOTO DELETE &IF &NE %21 1
&LABEL ZOOM2
CLEAR
POINTS SEAM3
&JUMP %4

&LABEL DELETE
ECALCVAR 21 %21 - 1
MDELETE
&JUMP ZOOM2
&LABEL TTY
MAP END
&TTY
&JUMP OVLAT

&LABEL H2O
&SETVAR 3 "H2O"
&SETVAR 21 0
&SETVAR 18 "RCDC"
MBEGIN
RESL SEAM4 POINTS RCDC-H2O GT 0,0
MARKERSYMBOL 1
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN " @F
&SETVAR 4 "SEL1"
&GOTO ZOOM @F @EO @X1 @Y
&LABEL SEL1
@TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX @F @EO @X17 @Y
&LABEL MAPEX
RESL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE RCDC-H2O
&JUMP SEL1

&LABEL A1
IDENTIFY SEAM4 POINTS * NORTH EAST HV-CODE RCDC-H2O
&QUERY 18 "CONTINUE TO SELECT" @F
&GOTO A1 @F @EO @X18 @Y
&JUMP SEL1

&LABEL H2O1
&SETVAR 3 "H2O"
&SETVAR 21 0
&SETVAR 18 "ADJC"
MBEGIN
RESL SEAM4 POINTS ADJC-H2O GT 0,0
MARKERSYMBOL 11
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN " @F
&SETVAR 4 "SEL2"
&GOTO ZOOM @F @EO @X1 @Y
&LABEL SEL2
@TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEx2 @F @EO @X17 @Y
&LABEL MAPEx2
RESL SEAM4 POINTS MAPEx
LIST SEAM4 POINTS NORTH EAST HV-CODE ADJC-H2O
&JUMP SEL2

&LABEL A2
IDENTIFY SEAM4 POINTS * NORTH EAST HV-CODE ADJC-H2O
&QUERY 18 "CONTINUE TO SELECT" @F
&GOTO A2 @F @EO @X18 @Y
&JUMP SEL2

&LABEL VLM
MBEGIN
&SETVAR 3 "VLM"
&SETVAR 21 0
&SETVAR 10 "RCDC"
RESL SEAM4 POINTS RCDC-VLM GT 0,0
MARKERSYMBOL 2
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL3
&TYPE "1" - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE.
&TYPE "3" - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT.
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX3 &IF &EO %17 1
&GOTO A3 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL3

&LABEL MAPEX3
RESEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE RDC-VLT
&JUMP SEL3

&LABEL A3
IDENTIFY SEAM4 POINTS = NORTH EAST HV-CODE RDC-VLT
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A3 &IF &EO %18 Y
&JUMP SEL3

&LABEL VOL4
&SETVAR 3 "VLT"
&SETVAR 21 0
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAM4 POINTS ADJC-VLT GT 0.0
MARKERSYMBOL 72
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL4
&TYPE "1" - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE.
&TYPE "3" - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT.
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX4 &IF &EO %17 1
&GOTO A4 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL4

&LABEL MAPEX4
RESEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE ADJC-VLT
&JUMP SEL4

&LABEL A4
IDENTIFY SEAM4 POINTS = NORTH EAST HV-CODE ADJC-VLT
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A4 &IF &EO %18 Y
&JUMP SEL4

&LABEL ASH
&SETVAR 3 "ASH"
&SETVAR 21 0
&SETVAR 10 "RDC-VLT"
MBEGIN
RESEL SEAM4 POINTS RCDC-ASH GT 0.0
MARKERSYMBOL 3
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL5
&TYPE "1" - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE.
&TYPE "3" - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT.
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX5 &IF &EO %17 1
&GOTO A5 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL5

&LABEL MAPEX5
RESSEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE RCDC-ASH
&JUMP SEL5

&LABEL A5
IDENTIFY SEAM4 POINTS NORTH EAST HV-CODE RCDC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A5 &IF &EQ %18 Y
&JUMP SEL5

&LABEL ASH1
BEGIN
&SETVAR 3 "ASH"
&SETVAR 21 0
&SETVAR 18 "ADJC"
RESSEL SEAM4 POINTS ADJC-ASH GT 0.0
MARKERSymbol 89
POINTS SEAM4
WEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL6"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL6
&TYPE "1" - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,
&TYPE "3" - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT:
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX6 &IF &EQ %17 1
&GOTO A6 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL5

&LABEL MAPEX6
RESSEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE ADJC-ASH
&JUMP SEL6

&LABEL A6
IDENTIFY SEAM4 POINTS NORTH EAST HV-CODE ADJC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A6 &IF &EQ %18 Y
&JUMP SEL5

&LABEL FXC
&SETVAR 3 "FXC"
&SETVAR 21 0
&SETVAR 18 "RCDC"
BEGIN
RESSEL SEAM4 POINTS RCDC-FXC GT 0.0
MARKERSymbol 4
POINTS SEAM4
WEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL7"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL7
&type "1" - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,
&TYPE "3" - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT:
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX7 &IF &EQ %17 1
&GOTO A7 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL7

&LABEL MAPEX7
RESSEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE RCDC-FXC
&JUMP SEL7
&LABEL A7
IDENTIFY SEAM4 POINTS = NORTH EAST HV-CODE RCDC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A7 &IF &EQ &X18 &Y
&JUMP SEL7

&LABEL EXIT
MAP END
KILLMAP MAP1
CLEAR
&RETURN

&LABEL FXC1
&SETVAR 3 "FXC"
&SETVAR 21 0
&SETVAR 10 "ADJC"
&BEGIN
RESEL SEAM4 POINTS ADJC-FXC GT 0.0
MARKERSYMBOL 90
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SELB"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SELB
&TYPE "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX8 &IF &EQ %17 1
&GOTO A8 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SELB

&LABEL MAPEX8
RESEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE ADJC-FXC
&JUMP SELB

&LABEL A8
IDENTIFY SEAM4 POINTS = NORTH EAST HV-CODE ADJC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A8 &IF &EQ %18 &Y
&JUMP SELB

&LABEL SUL
&SETVAR 3 "S"
&SETVAR 21 0
&SETVAR 10 "RCDC"
&BEGIN
RESEL SEAM4 POINTS RCDC-S GT 0.0
MARKERSYMBOL 69
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL9"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL9
&TYPE "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION " 6
&GOTO MAPEX9 &IF &EQ %17 1
&GOTO A9 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL9

&LABEL MAPEX9
RESEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE RCDC-S
&JUMP SEL9

&LABEL A9
IDENTIFY SEAM4 POINTS = NORTH EAST HV-CODE RCDC-S
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A9 &IF &EQ %18 &Y
&JUMP SEL9
&LABEL SUL1
&SETVAR 3 "S"
&SETVAR 21 0
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAM4 POINTS ADJC-GT 0.0
MARKERSYMBOL 91
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL10"
&GOTO ZOOM &F &EO &%1 Y
&LABEL SEL10
&TYP1 "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYP1 "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION - 6"
&GOTO MAPEX10 &IF &EO &%17 1
&GOTO A16 &IF &EO &%17 2
&GOTO ZOOM &IF &EO &%17 3
&GOTO DISPLAY &F &EO &%17 5
&GOTO ZOOMOUT &F &EO &%17 4
&JUMP SEL10
&LABEL MAPEX10
RESEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE ADJC-S
&JUMP SEL10
&LABEL A10
IDENTIFY SEAM4 POINTS = NORTH EAST HV-CODE ADJC-S
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A16 &IF &EO &%18 Y
&JUMP SEL10
&LABEL CAL
&SETVAR 3 "CAL"
&SETVAR 21 0
&SETVAR 10 "RCDC"
MBEGIN
RESEL SEAM4 POINTS RCDC-CAL GT 0.0
MARKERSYMBOL 70
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL11"
&GOTO ZOOM &F &EO &%1 Y
&LABEL SEL11
&TYP1 "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYP1 "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION - 6"
&GOTO MAPEX11 &IF &EO &%17 1
&GOTO A11 &IF &EO &%17 2
&GOTO ZOOM &F &EO &%17 3
&GOTO DISPLAY &F &EO &%17 5
&GOTO ZOOMOUT &F &EO &%17 4
&JUMP SEL11
&LABEL MAPEX11
RESEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE RCDC-CAL
&JUMP SEL11
&LABEL A11
IDENTIFY SEAM4 POINTS = NORTH EAST HV-CODE RCDC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A16 &IF &EO &%18 Y
&JUMP SEL11
&LABEL CAL1
&SETVAR 3 "CAL"
&SETVAR 21 0
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAM4 POINTS ADJC-CAL GT 0.0
MARKERSYMBOL 92
POINTS SEAM4
MEND
&QUERY 1 "ZOOM IN - &F
&SETVAR 4 "SEL12"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL12
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" &USE
&GOTO MAPEX12 &IF &EQ %17 1
&GOTO A12 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL12

&LABEL MAPEX12
RESEL SEAM4 POINTS MAPEX
LIST SEAM4 POINTS NORTH EAST HV-CODE ADJC-CL
&JUMP SEL12

&LABEL A12
IDENTIFY SEAM4 POINTS * NORTH EAST HV-CODE ADJC-CL
&QUERY 18 "CONTINUE TO SELECT" &IF
&GOTO A12 &IF &EQ %18 Y
&JUMP SEL12

&LABEL DISPLAY
&QUERY 19 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &IF
CLEARSEL
&GOTO OVLAY &IF &EQ %19 Y
DELETE
MFRESH
&JUMP OVLAY

&LABEL PRINTER
MAP END
&RUN PRINTER SML
KILLMAP MAP1
DISPLAY 4 2 3
&JUMP SEAM4

&LABEL ZOOM
&CALCVAR 21 %21 + 1
MAPEX *
&GOTO DELETE &IF %HE %21 1
&LABEL ZOOM2
CLEAR
POINTS SEAM4
&JUMP %4

&LABEL DELETE
&CALCVAR 21 %21 + 1
DELETE
&JUMP ZOOM2

&LABEL ZOOMOUT
DELETE
CLEARSEL
MAPEX ATS SEAM4
PAGESIZE 9.6 5.6
MFRESH
RESEL SEAM4 POINTS %10-%3 GT 0.0
&SETVAR 21 0
&JUMP %4

FILE -> WABAMUNK\MINES\HIGHVA\SEAM 5.SML

&REM ******************************************************************************
&REM THIS MANHOLE DISPLAY DISPLAY ALL THE STRATIGRAPHIC CODES
&REM AND DESCRIPTIONS AS WELL AS MINERAL CONTENTS FROM
&REM SEAM1 TO SEAM6 AND TYPE OF ANALYSIS FOR HIGHVALE MINES
&REM WRITTEN BY D. CHAO ON AUG. 24, 1988.
&REM ******************************************************************************
PAGESIZE 9.6 5.6
MAPEX ATS LAK SEAM5
&LABEL SEAM5
CLEAR
MAP MAP1
MAPANGLE -1.5
&LABEL SEAM
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCSTY 7
ARCS LAK
TEXTSIZE .15 .12
MOVE 5.5 4.5
TEXT 'HIGHVALE MINES'
TEXTSIZE .1 .07
MOVE 5.5 4.2
TEXT 'COAL SEAM 5'
KEYPOSITION 5.5 3.6
KEYSEP .2 .15
KEYBOX .09 .09
TEXTSIZE .1 .07
KEYMARKER SEAM KEY NOBOX
TEXTFONT 8
TEXTSIZE 0.1 0.07
TEXTCOLOR 2
MOVE .1 .4
TEXT 'COAL GEOLOGY GROUP'
MOVE 1 .2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
WEND
&LABEL OVLAY
&TYP '13 - EXIT, 14 - PRINTER, 15 - TTY'
&ASK 16 "PLEASE ENTER YOUR CHOICE" 16
&GOTO H2O &IF &EQ %16 1
&GOTO VOLUM &IF &EQ %16 2
&GOTO ASH &IF &EQ %16 3
&GOTO FIC &IF &EQ %16 4
&GOTO SUL &IF &EQ %16 5
&GOTO CAL &IF &EQ %16 6
&GOTO H2O1 &IF &EQ %16 7
&GOTO VOLUM1 &IF &EQ %16 8
&GOTO ASH1 &IF &EQ %16 9
&GOTO FIC1 &IF &EQ %16 10
&GOTO SUL1 &IF &EQ %16 11
&GOTO CAL1 &IF &EQ %16 12
&GOTO EXIT &IF &EQ %16 13
&GOTO PRINTER &IF &EQ %16 14
&GOTO TTY &IF &EQ %16 15
&GOTO OVLAY
&LABEL TTY
MAP END
&TTY
&JUMP OVLAY
&LABEL H2O
&SETVAR 3 "H2O"
&SETVAR 2 1 0
&SETVAR 18 "RCDC"
&BEGIN
RES SEAM5 POINTS RCDC-H2O GT 0.0
MARKERSYMBOL 1
POINTS SEAM5
WEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL1"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL1
&TYP '1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE.'
&TYP '3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT';
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO ZAP &IF &EQ %17 1
&GOTO A1 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL1

&LABEL MAPEX
RESEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE RCDC-H20
&JUMP SEL1

&LABEL A1
IDENTIFY SEAMS POINTS NORTH EAST HV-CODE RCDC-H20
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A1 &IF &EO &E18 Y
&JUMP SEL1

&LABEL H201
&SETVAR 3 "H20"
&SETVAR 21 0
&SETVAR 18 "ADJC"
MBEGIN
RESEL SEAMS POINTS ADJC-H20 GT 0.0
MARKERSYMBOL 71
POINTS SEAMS
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL2"
&GOTO ZOOM &IF &EO &E1 Y
&LABEL SEL2
&type "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,”
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT”
&ASK 17 "PLEASE ENTER YOUR SELECTION = 6
&GOTO MAPEX2 &IF &EO &E17 1
&GOTO A2 &IF &EO &E17 2
&GOTO ZOOM &IF &EO &E17 3
&GOTO DISPLAY &IF &EO &E17 5
&GOTO ZOOMOUT &IF &EO &E17 4
&JUMP SEL2

&LABEL MAPEX2
RESEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE ADJC-H20
&JUMP SEL2

&LABEL A2
IDENTIFY SEAMS POINTS NORTH EAST HV-CODE ADJC-H20
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A2 &IF &EO &E18 Y
&JUMP SEL2

&LABEL VOLL
MBEGIN
&SETVAR 3 "VLT"
&SETVAR 21 0
&SETVAR 10 "RCDC"
RESEL SEAMS POINTS RCDC-VLT GT 0.0
MARKERSYMBOL 2
POINTS SEAMS
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL3"
&GOTO ZOOM &IF &EO &E1 Y
&LABEL SEL3
&type "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,”
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT”
&ASK 17 "PLEASE ENTER YOUR SELECTION = 6
&GOTO MAPEX3 &IF &EO &E17 1
&GOTO A3 &IF &EO &E17 2
&GOTO ZOOM &IF &EO &E17 3
&GOTO DISPLAY &IF &EO &E17 5
&GOTO ZOOMOUT &IF &EO &E17 4
&JUMP SEL3

&LABEL MAPEX3
RESEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE RCDC-VLT
&JUMP SEL3

&LABEL A3
IDENTIFY SEAMS POINTS NORTH EAST HV-CODE RCDC-VLT
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A3 &IF &EO &E18 Y
&JUMP SEL3

&LABEL VOLM1
&SETVAR 3 "VLT"
&SETVAR 21 0
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAMS5 POINTS ADJC--VLT GT 0.0
MARKERSYMBOL 72
POINTS SEAMS5
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SEL4"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL4
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION - 6"
&GOTO MAPEX4 &IF &EO %17 1
&GOTO A4 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL4

&LABEL MAPEX4
RESEL SEAMS5 POINTS MAPEX
LIST SEAMS5 POINTS NORTH EAST HV-CODE ADJC--VLT
&JUMP SEL4

&LABEL A4
IDENTIFY SEAMS5 POINTS + NORTH EAST HV-CODE ADJC--VLT
&QUERY 18 "CONTINUE TO SELECT? " &F
&GOTO A4 &IF &EO %18 Y
&JUMP SEL4

&LABEL ASH
&SETVAR 3 "ASH"
&SETVAR 21 0
&SETVAR 10 "RCDC"
MBEGIN
RESEL SEAMS5 POINTS RCDC--ASH GT 0.0
MARKERSYMBOL 3
POINTS SEAMS5
MEND
&QUERY 1 "ZOOM IN " &F
&SETVAR 4 "SELS5"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL5
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION - 6"
&GOTO MAPEX5 &IF &EO %17 1
&GOTO A5 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL5

&LABEL MAPEX5
RESEL SEAMS5 POINTS MAPEX
LIST SEAMS5 POINTS NORTH EAST HV-CODE RCDC--ASH
&JUMP SEL5

&LABEL A5
IDENTIFY SEAMS5 POINTS + NORTH EAST HV-CODE RCDC--ASH
&QUERY 18 "CONTINUE TO SELECT? " &F
&GOTO A5 &IF &EO %18 Y
&JUMP SEL5

&LABEL ASH1
MBEGIN
&SETVAR 3 "ASH"
&SETVAR 21 0
&SETVAR 10 "ADJC"
RESEL SEAMS5 POINTS ADJC--ASH GT 0.0
MARKERSYMBOL 89
POINTS SEAMS5
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL6"
&GOTO ZOOM &F &EO %1 Y
&LABEL SEL6
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX6 &IF &EO %17 1
&GOTO A6 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL6

&LABEL MAPEX6
RESEL SEAM5 POINTS MAPEX
LIST SEAM5 POINTS NORTH EAST HV-CODE ADJC-ASH
&JUMP SEL6

&LABEL A6
IDENTIFY SEAM5 POINTS + NORTH EAST HV-CODE ADJC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A6 &IF &EO %18 Y
&JUMP SEL6

&LABEL FXC
&SETVAR 3 "FXC"
&SETVAR 21 0
&SETVAR 18 "RCDC"
MBEGIN
RESEL SEAM5 POINTS RCDC-FXC GT 0.0
MARKERSYMBOL 4
POINTS SEAM5
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL7"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL7
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX7 &IF &EO %17 1
&GOTO A7 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL7

&LABEL MAPEX7
RESEL SEAM5 POINTS MAPEX
LIST SEAM5 POINTS NORTH EAST HV-CODE RCDC-FXC
&JUMP SEL7

&LABEL A7
IDENTIFY SEAM5 POINTS + NORTH EAST HV-CODE RCDC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A7 &IF &EO %18 Y
&JUMP SEL7

&LABEL EXIT
MAP END
KILLMAP MAP1
CLEAR
&RETURN

&LABEL FXC1
&SETVAR 3 "FXC"
&SETVAR 21 0
&SETVAR 18 "ADJC"
MBEGIN
RESEL SEAM5 POINTS ADJC-FXC GT 0.0
MARKERSYMBOL 90
POINTS SEAM5
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL8"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL8
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
@ASK 17 "PLEASE ENTER YOUR SELECTION " 6
@GOTO MAPEX8 @IF @EO %17 1
@GOTO AB @IF @EO %17 3
@GOTO ZOOM @IF @EO %17 5
@GOTO ZOOMOUT @IF @EO %17 4
@JUMP SEL9

@LABEL MAPEX8
RESSEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE ADJC-FCX
@JUMP SEL8

@LABEL SEL8
IDENTIFY SEAMS POINTS + NORTH EAST HV-CODE ADJC-FCX
@QUERY 18 "CONTINUE TO SELECT" @IF
@GOTO AB @IF @EO %18 Y
@JUMP SEL8

@LABEL SUL1
@SETVAR 3 "S"
@SETVAR 21 0
@SETVAR 10 "ADJC"
@BEGIN
RESSEL SEAMS POINTS ADJC-S GT 0.0
MARKERSYMBOL 69
POINTS SEAMS
@END
@QUERY 1 "ZOOM IN" @IF
@SETVAR 4 "SEL9"
@GOTO ZOOM @IF @EO %1 Y
@LABEL SEL9
@TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
@ASK 17 "PLEASE ENTER YOUR SELECTION " 6
@GOTO MAPEX9 @IF @EO %17 1
@GOTO AB @IF @EO %17 2
@GOTO ZOOM @IF @EO %17 3
@GOTO DISPLAY @IF @EO %17 5
@GOTO ZOOMOUT @IF @EO %17 4
@JUMP SEL9

@LABEL MAPEX9
RESSEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE RCDC-S
@JUMP SEL9

@LABEL SEL9
IDENTIFY SEAMS POINTS + NORTH EAST HV-CODE RCDC-S
@QUERY 18 "CONTINUE TO SELECT" @IF
@GOTO AB @IF @EO %18 Y
@JUMP SEL9

@LABEL SUL1
@SETVAR 3 "S"
@SETVAR 21 0
@SETVAR 10 "ADJC"
@BEGIN
RESSEL SEAMS POINTS ADJC-S GT 0.0
MARKERSYMBOL 91
POINTS SEAMS
@END
@QUERY 1 "ZOOM IN" @IF
@SETVAR 4 "SEL10"
@GOTO ZOOM @IF @EO %1 Y
@LABEL SEL10
@TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
@ASK 17 "PLEASE ENTER YOUR SELECTION " 6
@GOTO MAPEX10 @IF @EO %17 1
@GOTO AB @IF @EO %17 2
@GOTO ZOOM @IF @EO %17 3
@GOTO DISPLAY @IF @EO %17 5
@GOTO ZOOMOUT @IF @EO %17 4
@JUMP SEL10

@LABEL MAPEX10
RESSEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE ADJC-S
&JUMP SEL10

&LABEL A10
&IDENTIFY SEAMS POINTS + NORTH EAST HV-CODE ADJC-S
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A10 &IF &EQ %18 Y
&JUMP SEL10

&LABEL CAL
&SETVAR 3 "CAL"
&SETVAR 21 0
&SETVAR 10 "RCDC"
MBEGIN
RESEL SEAMS POINTS RCDC-CAL GT 0 0
MARKERSYMBOL 70
POINTS SEAMS
WEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL11"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL11
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX11 &IF &EQ %17 1
&GOTO A11 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL11

&LABEL MAPEX11
RESEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE RCDC-CAL
&JUMP SEL11

&LABEL A11
&IDENTIFY SEAMS POINTS + NORTH EAST HV-CODE RCDC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A11 &IF &EQ %18 Y
&JUMP SEL11

&LABEL CAL1
&SETVAR 3 "CAL"
&SETVAR 21 0
&SETVAR 10 "ADJC"
MBEGIN
RESEL SEAMS POINTS ADJC-CAL GT 0 0
MARKERSYMBOL 92
POINTS SEAMS
WEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL12"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL12
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" 6
&GOTO MAPEX12 &IF &EQ %17 1
&GOTO A12 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL12

&LABEL MAPEX12
RESEL SEAMS POINTS MAPEX
LIST SEAMS POINTS NORTH EAST HV-CODE ADJC-CAL
&JUMP SEL12

&LABEL A12
&IDENTIFY SEAMS POINTS + NORTH EAST HV-CODE ADJC-CAL
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A12 &IF &EQ %18 Y
&JUMP SEL12

&LABEL DISPLAY
&QUERY 19 "OVERLAY THIS DISPLAY ON THE NEXT ONE" &F
FILE -> WABAMUN\MINES\HIGHVA\SEAM 6.SML

&REM
&REM THIS MANUAL WILL DISPLAY ALL THE STRATIGRAPHIC CODES
&REM AND DESCRIPTIONS AS WELL AS MINERAL CONTENTS FROM
&REM SEAM 1 TO SEAM 6 AND TYPE OF ANALYSIS FOR HIGHVALE MINES
&REM WRITTEN BY D. CHAO ON AUG 24, 1988.
&REM

PAGESIZE 9.6 5.6
MAPEX ATS LAK SEAM 6
&LABEL SEAM 6
CLEAR
MAP MAP 1
MAPANGLE .1 .5
&LABEL SEAM
LABEG 1
BOX .0 .0 9.6 5.6
LNEEG 9
ARCS ATS
LINESYM 7
ARCS LAK
TEXTSIZE .15 .12
MOVE 5.5 4.5
TEXT 'HIGHVALE MINES'
TEXTSIZE .6 .07
MOVE 5.5 .42
TEXT 'COAL SEAM 6'
KEYPOSITION 5.5 3.6
KEYSEPARATION 2 .15
KEYBOX .09 .09
TEXTSIZE .07
KEYMARKER SEAM KEY NOBOX
TEXTCOLOR 2
TEXTFONT 8
MOVE .1 .4
TEXT 'COAL GEOLOGY GROUP'
MOVE 1 2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 4
TEXT "RESEARCH"
MOVE 8.7 .2
TEXT "COUNCIL"
TEXTCOLOR 1
TEXTFONT 8
MEND
&LABEL OVLAY
&type "13 - EXIT, 14-PRINTER, 15-TTY "
&ask 16 "PLEASE ENTER YOUR CHOICE " 16
&goto h20 &if &eq &x16 1
&goto volm &if &eq &x16 2
&goto ashm &if &eq &x16 3
&goto fxm &if &eq &x16 4
&goto su &if &eq &x16 5
&goto cal &if &eq &x16 6
&goto h201 &if &eq &x16 7
&goto volm1 &if &eq &x16 8
&goto ashm1 &if &eq &x16 9
&goto fxm1 &if &eq &x16 10
&goto su &if &eq &x16 11
&goto cal &if &eq &x16 12
&goto exit &if &eq &x16 13
&goto printer &if &eq &x16 14
&goto tty &if &eq &x16 15
&goto ovlay

&LABEL TTY
MAP END
&tty &jump ovlay

&LABEL H20
&setvar 3 "H20"
&setvar 19 "RCDC"
&setvar 21 0
&begin
resel seam6 points rcdc-h20 gt 0.0
markersymbol 1
points seam6
mend
&query 1 "ZOOM IN " &f
&setvar 4 "SEL1"
&goto zoom &if &eq &x1 y
&label sel1
&type "1 - REVIEW INFO ON ALL HOLES , 2 - REVIEW INFO ON EACH HOLE,
&type "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT:
&ask 17 "PLEASE ENTER YOUR SELECTION " 6
&goto mapex &if &eq &x17 1
&goto a1 &if &eq &x17 2
&goto zoom &if &eq &x17 3
&goto display &if &eq &x17 5
&goto zoomout &f &eq &x17 4
&jump sel1

&LABEL MAPEX
resel seam6 points mapex
list seam6 points north east hv-code rcdc-h20
&jump sel1

&LABEL A1
identify seam6 points - north east hv-code rcdc-h20
&query 1b "CONTINUE TO SELECT " &f
&goto a1 &if &eq &x18 y
&jump sel1

&LABEL H201
&setvar 3 "H20"
&setvar 19 "ADJC"
&setvar 21 0
&begin
resel seam6 points adjc-h20 gt 0.0
markersymbol 71
points seam6
mend
&query 1 "ZOOM IN " &f
&setvar 4 "SEL2"
&goto zoom &if &eq &x1 y
&label sel2
@TYPE "1 - REVIEW INFO ON ALL HOLES , 2 - REVIEW INFO ON EACH HOLE."
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
@ASK 17 "PLEASE ENTER YOUR SELECTION - 6"
@GOTO MAPEX2 &IF @EO %17 1
@GOTO A2 &IF @EO %17 2
@GOTO ZOOM &IF @EO %17 3
@GOTO DISPLAY &IF @EO %17 5
@GOTO ZOOMOUT &IF @EO %17 4
@JUMP SEL2

@LABEL MAPEX2
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE ADJC-M20
@JUMP SEL2

@LABEL A2
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE ADJC-M20
@QUERY 18 "CONTINUE TO SELECT" &F
@GOTO A2 &IF @EO %18 Y
@JUMP SEL2

@LABEL VOLUM
MBEGIN
@SETVAR 3 "VLT"
@SETVAR 10 "RCDC"
@SETVAR 21 0
RESEL SEAM6 POINTS RCDC-VLT GT 0.0
MARKERSymbol 2
POINTS SEAM6
MEND
@QUERY 1 "ZOOM IN " &F
@SETVAR 4 "SEL3"
@GOTO ZOOM &IF @EO %1 Y
@LABEL SEL3
@TYPE "1 - REVIEW INFO ON ALL HOLES , 2 - REVIEW INFO ON EACH HOLE."
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
@ASK 17 "PLEASE ENTER YOUR SELECTION - 6"
@GOTO MAPEX3 &IF @EO %17 1
@GOTO A3 &IF @EO %17 2
@GOTO ZOOM &IF @EO %17 3
@GOTO DISPLAY &IF @EO %17 5
@GOTO ZOOMOUT &IF @EO %17 4
@JUMP SEL3

@LABEL MAPEX3
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE RCDC-VLT
@JUMP SEL3

@LABEL A3
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE RCDC-VLT
@QUERY 18 "CONTINUE TO SELECT" &F
@GOTO A3 &IF @EO %18 Y
@JUMP SEL3

@LABEL VOLUM1
@SETVAR 3 "VLT"
@SETVAR 10 "ADJC"
@SETVAR 21 0
MBEGIN
RESEL SEAM6 POINTS ADJC-VLT GT 0.0
MARKERSymbol 72
POINTS SEAM6
MEND
@QUERY 1 "ZOOM IN " &F
@SETVAR 4 "SEL4"
@GOTO ZOOM &IF @EO %1 Y
@LABEL SEL4
@TYPE "1 - REVIEW INFO ON ALL HOLES , 2 - REVIEW INFO ON EACH HOLE."
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
@ASK 17 "PLEASE ENTER YOUR SELECTION - 6"
@GOTO MAPEX4 &IF @EO %17 1
@GOTO A4 &IF @EO %17 2
@GOTO ZOOM &IF @EO %17 3
@GOTO DISPLAY &IF @EO %17 5
@GOTO ZOOMOUT &IF @EO %17 4
@JUMP SEL4

@LABEL MAPEX4
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE ADJC-VLT
&JUMP SEL4

&LABEL A4
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE ADJC-VLT
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A4 &IF &EO %18 Y
&JUMP SEL4

&LABEL ASH
&SETVAR 3 "ASH"
&SETVAR 18 "RCDC"
&SETVAR 21 0
MBEGIN
RESEL SEAM6 POINTS RCDC-ASH GT 0.0
MARKERSYMBOL 3
POINTS SEAM6
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL5"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL5
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" &F
&GOTO MAPEX6 &IF &EO %17 1
&GOTO A5 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &F &EO %17 4
&JUMP SEL5

&LABEL MAPEX5
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE RCDC-ASH
&JUMP SEL5

&LABEL A5
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE RCDC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A5 &IF &EO %18 Y
&JUMP SEL5

&LABEL ASH1
MBEGIN
&SETVAR 3 "ASH"
&SETVAR 19 "ADJC"
&SETVAR 21 0
RESEL SEAM6 POINTS ADJC-ASH GT 0.0
MARKERSYMBOL 89
POINTS SEAM6
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL6"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL6
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT (EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" &F
&GOTO MAPEX6 &IF &EO %17 1
&GOTO A6 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL6

&LABEL MAPEX6
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE ADJC-ASH
&JUMP SEL6

&LABEL A6
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE ADJC-ASH
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A6 &IF &EO %18 Y
&JUMP SEL6

&LABEL FXC
&SETVAR 3 "FXC"
&SETVAR 10 "RCDC"
&SETVAR 21 0
MBEGIN
RESEL SEAM6 POINTS RCDC-FXC GT 0.0
MARKERSYMBOL 4
POINTS SEAM6
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL7"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL7
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK "PLEASE ENTER YOUR SELECTION" &6
&GOTO MAPEX7 &IF &EO %17 1
&GOTO A7 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL7

&LABEL MAPEX7
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE RCDC-FXC
&JUMP SEL7

&LABEL A7
IDENTIFY SEAM6 POINTS NORTH EAST HV-CODE RCDC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A7 &IF &EO %18 Y
&JUMP SEL7

&LABEL EXIT
MAP END
KILLMAP MAP1
CLEAR
&RETURN

&LABEL FXC1
&SETVAR 3 "FXC"
&SETVAR 10 "ADJC"
&SETVAR 21 0
MBEGIN
RESEL SEAM6 POINTS ADJC-FXC GT 0.0
MARKERSYMBOL 99
POINTS SEAM6
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL8"
&GOTO ZOOM &IF &EO %1 Y
&LABEL SEL8
&TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE."
&TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY), 5 - EXIT"
&ASK "PLEASE ENTER YOUR SELECTION" &6
&GOTO MAPEX8 &IF &EO %17 1
&GOTO A8 &IF &EO %17 2
&GOTO ZOOM &IF &EO %17 3
&GOTO DISPLAY &IF &EO %17 5
&GOTO ZOOMOUT &IF &EO %17 4
&JUMP SEL8

&LABEL MAPEX8
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE ADJC-FXC
&JUMP SEL8

&LABEL A8
IDENTIFY SEAM6 POINTS NORTH EAST HV-CODE ADJC-FXC
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A8 &IF &EO %18 Y
&JUMP SEL8

&LABEL SUL
&SETVAR 3 "S"
&SETVAR 10 "RCDC"
&SETVAR 21 0
MBEGIN
RESEL SEAM6 POINTS RCDC-S GT 0.0
MARKERSYMBOL 69
POINTS SEAM6
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL9"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL9
&type "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&type "3 - ZOOM IN. 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY). 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" &F
&GOTO MAPEX18 &IF &EQ %17 1
&GOTO A9 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL9
&LABEL MAPEX9
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE RCDC-S
&JUMP SEL9
&LABEL A9
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE RCDC-S
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A9 &IF &EQ %18 Y
&JUMP SEL9
&LABEL SUL1
&SETVAR 3 "S"
&SETVAR 18 "ADJC"
&SETVAR 21 0
&MBEGIN
RESEL SEAM6 POINTS ADJC-S GT 0 0
MARKERSYMBOL 91
POINTS SEAM6
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL18"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL18
&type "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&type "3 - ZOOM IN. 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY). 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" &F
&GOTO MAPEX18 &IF &EQ %17 1
&GOTO A18 &IF &EQ %17 2
&GOTO ZOOM &IF &EQ %17 3
&GOTO DISPLAY &IF &EQ %17 5
&GOTO ZOOMOUT &IF &EQ %17 4
&JUMP SEL18
&LABEL MAPEX18
RESEL SEAM6 POINTS MAPEX
LIST SEAM6 POINTS NORTH EAST HV-CODE ADJC-S
&JUMP SEL18
&LABEL A18
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE ADJC-S
&QUERY 18 "CONTINUE TO SELECT" &F
&GOTO A18 &IF &EQ %18 Y
&JUMP SEL18
&LABEL CAL
&SETVAR 3 "CAL"
&SETVAR 18 "RCDC"
&SETVAR 21 0
&MBEGIN
RESEL SEAM6 POINTS RCDC-CAL GT 0 0
MARKERSYMBOL 78
POINTS SEAM6
MEND
&QUERY 1 "ZOOM IN" &F
&SETVAR 4 "SEL11"
&GOTO ZOOM &IF &EQ %1 Y
&LABEL SEL11
&type "1 - REVIEW INFO ON ALL HOLES. 2 - REVIEW INFO ON EACH HOLE."
&type "3 - ZOOM IN. 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY). 5 - EXIT"
&ASK 17 "PLEASE ENTER YOUR SELECTION" &F
&GOTO MAPEX11 &IF &EQ %17 1
@GOTO A11 &F &EO %17 2
@GOTO ZOOM &F &EO %17 3
@GOTO DISPLAY &F &EO %17 5
@GOTO ZOOMOUT &F &EO %17 4
@JUMP SEL11

LABEL MAPEX11  
RESEL SEAM6 POINTS MAPEX  
LIST SEAM6 POINTS NORTH EAST HV-CODE RCD-CAL  
@JUMP SEL11

LABEL A11  
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE RCD-CAL  
@QUERY 10 "CONTINUE TO SELECT" &F  
@GOTO A11 &F &EO %18 Y  
@JUMP SEL11

LABEL CAL1  
@SETVAR 3 "CAL"  
@SETVAR 10 "ADJC"  
@SETVAR 21 0  
MBEGIN  
RESEL SEAM6 POINTS ADJC-CAL GT 0.0  
MARKERSYM #2  
POINTS SEAM6  
MEND  
@QUERY 1 "ZOOM IN" &F  
@SETVAR 4 "SEL12"  
@GOTO ZOOM &F &EO %1 Y  
@LABEL SEL12  
@TYPE "1 - REVIEW INFO ON ALL HOLES, 2 - REVIEW INFO ON EACH HOLE,"  
@TYPE "3 - ZOOM IN, 4 - ZOOM OUT(EXIT FOR ZOOMED-IN DISPLAY ONLY), 5 - EXIT"  
@ASK 17 "PLEASE ENTER YOUR SELECTION" 6  
@GOTO MAPEX12 &F &EO %17 1  
@GOTO A12 &F &EO %17 2  
@GOTO ZOOM &F &EO %17 3  
@GOTO DISPLAY &F &EO %17 5  
@GOTO ZOOMOUT &F &EO %17 4  
@JUMP SEL12

LABEL MAPEX12  
RESEL SEAM6 POINTS MAPEX  
LIST SEAM6 POINTS NORTH EAST HV-CODE ADJC-CAL  
@JUMP SEL12

LABEL A12  
IDENTIFY SEAM6 POINTS = NORTH EAST HV-CODE ADJC-CAL  
@QUERY 10 "CONTINUE TO SELECT" &F  
@GOTO A12 &F &EO %18 Y  
@JUMP SEL12

LABEL DISPLAY  
@QUERY 19 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F  
CLEARSEL  
@GOTO OVLAY &F &EO %19 Y  
MDELETE  
MFRESH  
@JUMP OVLAY

LABEL PRINTER  
MAP END  
@RUN PRINTER.SWL  
KILLMAP MAP1  
DISPLAY 4 2 3  
@JUMP SEAM6

LABEL ZOOM  
&CALCVAR 21 %21 + 1  
MAPEX +  
@GOTO DELETE &F &NE %21 1  
LABEL ZOOM2  
CLEAR  
POINTS SEAM6  
@JUMP R4

LABEL DELETE  
&CALCVAR 21 %21 - 1  
MDELETE  
@JUMP ZOOM2
&GOTO $3G &F &E0 %1 14
&GOTO $GHXS &F &E0 %1 15
&GOTO $PRINTER &F &E0 %1 16
&GOTO $EXIT &F &E0 %1 17
&GOTO $TY &F &E0 %1 18
&GOTO $ASK

&LABEL $TY
MAP END
&$TY
&JUMP $ASK

&LABEL $SURFACE
&MBEGIN
MARKERSYMBOLE 85
POINTS SURF
&MENU
&LABEL $ASK2
&ASK 2 "1-STATUS OF ALL THE MINES, 2-STATUS OF EACH MINE, 3-EXIT" 4
&GOTO $ALSTATUS &F &E0 %2 1
&GOTO $STATUS &F &E0 %2 2
&GOTO $OVERLAY &F &E0 %2 3
&JUMP $ASK2
&LABEL $ALSTATUS
RESEL SURF POINTS MAPEX
LIST SURF POINTS MINE# LOC.
CLEARS
&JUMP $ASK2
&LABEL $STATUS
IDENTIFY SURF POINTS + MINE# LOC.
&JUMP $ASK2

&LABEL $OVERLAY
&QUERY 3 "OVERLAY THIS COVERAGE ONTO THE NEXT ONE" &F
&GOTO $ASK &F &E0 %3 Y
MODELE
&FPRESS
&JUMP $ASK

&LABEL $UNDER
&MBEGIN
MARKERSYMBOLE 87
POINTS UNDER
&MENU
&LABEL $ASK3
&ASK 4 "1-STATUS OF THE MINES, 2-STATUS OF EACH MINE, 3-EXIT" 4
&GOTO $ALUNDER &F &E0 %4 1
&GOTO $UNDER &F &E0 %4 2
&GOTO $OVERLAY &F &E0 %4 3
&JUMP $ASK3
&LABEL $ALUNDER
RESEL UNDER POINTS MAPEX
LIST UNDER POINTS MINE# LOC.
CLEARS
&JUMP $ASK3
&LABEL $UNDER
IDENTIFY UNDER POINTS + MINE# LOC.
&JUMP $ASK3

&LABEL $GEOL
$SEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOT"
MODELE
&MBEGIN
LINEC 1
BOX 0 0 0 0 5.6
LINEC 9
ARCS ATS
LINESSYMBOLE 7
ARCS LAK
LINEC 6
ARCS RV
MOVE 6.5 2.5
TEXTSIZE 15 12
TEXT "NORTHERN"
MOVE 6.5 2.25
TEXT "SOUTHERN"
TEXTFONT 8
ARCS SC1
LINESYMBOL 7
ARCS LAK
LINES 6
ARCS RIV
MEND
&JUMP OVERLAY

&LABEL STAT
MARKERSYMBOL 89
POINTS STAT
&LABEL ASK4
&TYPE "1-ID & STATUS OF ALL THE WELLS, 2-ID & STATUS OF EACH WELL."
&ASK 9 "3-EXIT " 4
&GOTO ALL &IF $EO %9 1
&GOTO STAT1 &IF $EO %9 2
&GOTO OVERLAY &IF $EO %9 3
&JUMP ASK4
&LABEL ALL
RESEL STAT POINTS MAPEX
LIST STAT POINTS WELL_ID DESCRIPTION
CLEARSEL
&JUMP ASK4
&LABEL STAT1
IDENTIFY STAT POINTS * WELL_ID DESCRIPTION
&JUMP ASK4

&LABEL HIGHVALE
CLEAR
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\WABAMUN\MINES\HIGHVALE"
&RUN MANUAL.SML

&LABEL HIGHVS
CLEAR
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\WABAMUN\MINES\HIGHVS"
&RUN MANUAL.SML

&LABEL MAIN
CLEAR
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\PROJ1"
&RUN OLTAB.SML

&LABEL WABAMUN
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\WABAMUN\SAREA"
&RUN MANUAL.SML

&LABEL 83G
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\PROJ1"
&RUN 83G.SML

&LABEL EXIT
MAP END
KILLMAP MAP1
O

&LABEL PRINTER
MAP END
&RUN PRINTER.SML
KILLMAP MAP1
DISPLAY 4 2 3
&JUMP START

FILE -> WABAMUN\MINES\HIGHVS\MANUAL.SML

&REM ******************************************************
&REM  THIS MENU WILL DISPLAY THE ISOPACH OF COAL SEAM #1, ISOPACH OF THE
&REM  BASE OF DISTURBED BEDROCK, ISOPACH OF LOWER SHALES, LICENCED AREAS,
&REM  PERMEDITED AREAS AND OIL & GAS WELL LOCATIONS OF SOUTH HIGHVALE.
&REM WRITTEN BY D.CHAO SEPT 2, 1988
&REM ************************************************************************
PAGESIZE 9.6 5.6
&LABEL START
CLEAR
TEXTCOLOR 1
TEXTFONT 0
MAPEX ATS ISOLS ISO1 ISO2 DBED STAT LIC PERM
MAP MAP1
MAPANGLE -1.5
&LABEL MENU1
BEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESYMBOL 7
ARCS LAK
LINEC 6
ARCS RIV
TEXTSIZE .2 17
MOVE 4.5 .8
TEXT 'SOUTHERN HIGHVALE'
TEXTCOLOR 2
TEXTFONT 8
TEXTSIZE .1 .07
MOVE 4.7 .4
TEXT 'COAL GEOLOGY GROUP'
MOVE 4.7 .2
TEXT 'ALBERTA GEOLOGICAL SURVEY'
MOVE 0.7 .6
TEXT 'ALBERTA'
MOVE 0.7 .4
TEXT 'RESEARCH'
MOVE 0.7 .2
TEXT 'COUNCIL'
TEXTFONT 8
TEXTCOLOR 1
END
&LABEL MENU2
&TYPE "1-ISOFOCH OF THE LOWER SHALE, 2-COAL SEAM 1, 3-COAL SEAM 2, "
&TYPE "4-BASE OF DISTURBED BEDROCK, 5-PERMIT ARENAS, 6-LICENCE ARENAS,"
&TYPE "7-OIL & GAS WELL LOCATIONS, 8-HWYS, 9-PRINTER, 10-HIGHVALE MENU,"
&TYPE "11-WABAMUN MENU, 12-BEG MENU, 13-HIGHVALE NORTH MENU, 14-MAIN MENU,"
&ASK 1 "15-EXIT. 16-TTY. PLEASE ENTER YOUR CHOICE" 17
&GOTO ISOLS &IF &EQ %1 1
&GOTO ISO1 &IF &EQ %1 2
&GOTO ISO2 &IF &EQ %1 3
&GOTO DRED &IF &EQ %1 4
&GOTO PERM &IF &EQ %1 5
&GOTO LIC &IF &EQ %1 6
&GOTO STAT &IF &EQ %1 7
&GOTO HWY &IF &EQ %1 8
&GOTO PRINTER &IF &EQ %1 9
&GOTO HIGHVALE &IF &EQ %1 10
&GOTO WABAMUN &IF &EQ %1 11
&GOTO 83G &IF &EQ %1 12
&GOTO HIGHVN &IF &EQ %1 13
&GOTO MAIN &IF &EQ %1 14
&GOTO EXIT &IF &EQ %1 15
&GOTO TTY &IF &EQ %1 16
&JUMP MENU2

&LABEL TTY
MAP END
&TTY
&JUMP MENU2

&LABEL ISOLS
MSEL ALL
CLEAR
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESYMBOL 7
ARCS LAK
POLYGONSHADES DBED 70
CLEAR
RESSEL DBED POLYS CLASS = 4
POLYGONSHADES DBED 2
CLEAR
RESSEL DBED POLYS CLASS = 5
POLYGONSHADES DBED 31
CLEAR
RESSEL DBED POLYS CLASS = 6
POLYGONSHADES DBED 35
CLEAR
RESSEL DBED POLYS CLASS = 7
POLYGONSHADES DBED 71
CLEAR
RESSEL DBED POLYS CLASS = 8
POLYGONSHADES DBED 3
CLEAR
RESSEL DBED POLYS CLASS = 9
POLYGONSHADES DBED 36
CLEAR
RESSEL DBED POLYS CLASS = 10
POLYGONSHADES DBED 72
CLEAR
RESSEL DBED POLYS CLASS = 11
POLYGONSHADES DBED 4
CLEAR
LINEC 1
ARCS DBED
LINESTYLE 7
ARCS LAK
LINEC 6
ARCS RIV
MEND
&GOTO OVERLAY2

&LABEL PERM
MBEGIN
POLYGONSHADES PERM 91
LINEC 1
ARCS PERM
MOVE 2 2
TEXTSIZE 1 .07
TEXT 'PERM#:C77-20'
MEND
&GOTO OVERLAY2

&LABEL LIC
MBEGIN
POLYGONSHADES LIC 78
LINEC 1
ARCS LIC
MOVE 0 9 5.35
TEXT 'LIC#:C83-63'
MEND
&GOTO OVERLAY2

&LABEL STAT
MBEGIN
MARKERSymbol 89
POINTS STAT
MEND
&LABEL ASK
&ASK 3 "1-STATUS OF ALL THE WELLS. 2-STATUS OF EACH WELL. 3-EXIT " 4
&GOTO STAT2 &IF &EQ %3 1
&GOTO STAT1 &IF &EQ %3 2
&GOTO OVERLAY2 &IF &EQ %3 3
&JUMP ASK
&LABEL STAT2
RESSEL STAT POINTS MAPEX
LIST STAT POINTS WELL_ID DESCRIPTION
CLEAR
&JUMP ASK
&LABEL STAT1
IDENTIFY STAT POINTS = WELL_ID DESCRIPTION
&JUMP ASK

&LABEL HWY
MBEGIN
FILE -> WABAMUN\MINES\GENE\MANUAL.SML

&REM *******************************************
&REM GENESSEE COVERAGE INCLUDES PERMITED AREAS, LICENCED AREAS,
&REM DRILLHOLES, OVERBURDEN THICKNESS, ASH CONTOURS-HIGH SEAM,
&REM SULPHUR CONTOURS-HIGH SEAM, WELLS STAT, ERCB COAL SURFACE
&REM MINE LOCATIONS, LAKES AND RIVERS
&REM WRITTEN BY D. CHAO ON AUG 29, 1988
&REM *******************************************
PAGE SIZE 9.6 5.6
MAPS ATEX DRILLH OTC SURF LIC STAT PERM ACN S0H S0LM DOLM HSC TLM TUM SCLM ACLM
&LABEL START
&LABEL MAP1
&LABEL MENU
CLEAR
BEGIN
LINEC 1
BOX 0 0 9 6 5 6
MAPLIMS 0 0 7 5
MAPANGLE -1.6
 LINEC 9
ARC ATS
LINESymbol 7
ARC LAK
LINEC 6
ARC RV
TEXTS IZE 0.15 0.12
MOVE 6.5 4.5
&GOTO BOTH &IF &E0 %4 3
&GOTO OVERLAY &IF &E0 %4 4
&JUMP STAT1
&LABEL WHEL
IDENTIFY STAT POINTS * WHEL_ID
&JUMP STAT1
&LABEL WHELDES
IDENTIFY STAT POINTS * DESCRIPTION
&JUMP STAT1
&LABEL BOTH
IDENTIFY STAT POINTS * WHEL_ID DESCRIPTION
&JUMP STAT1

&LABEL DRILLH
MBEGIN
TEXTSIZE 1 87
MOVE 6.5 4.2
TEXT 'DRILLHOLE TYPES & LOCATIONS'
KEYPOSITION 6.5 2
KEYBOX .15 .15
TEXTSIZE .09 .06
KEYSEPARATION .15 .15
KEYMARKER DRILLH KEY NOBOX
MARKERSIZE 2
RESSEL DRILLH POINTS TYPE = 1
MARKERSymbol 90
POINTS DRILLH
CLEARSEL
RESSEL DRILLH POINTS TYPE = 2
MARKERSymbol 91
POINTS DRILLH
CLEARSEL
RESSEL DRILLH POINTS TYPE = 3
MARKERSymbol 92
POINTS DRILLH
CLEARSEL
MEND
&JUMP OVERLAY

&LABEL SURF
POINTMARKERS SURF 86
&LABEL SURF1
&ASK 2 '1-MINE NUMBER & LOCATION, 2-EXIT' 3
&GOTO MINE# &IF &E0 %2 1
&GOTO OVERLAY &IF &E0 %2 2
&JUMP SURF1
&LABEL MINE#
IDENTIFY SURF POINTS * MINE# LOC.
&JUMP SURF1

&LABEL OTC
MSEL ALL
&TYPE "ANSWER <Y> TO AVOID UNCLEAR PLOTS-
CLEAR
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESymbol 7
ARCS LAK
LINEC 6
ARCS RIV
MOVE 6.5 4.5
TEXTSIZE .15 .12
TEXT 'GENESEE AREA'
TEXTSIZE 1 87
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 0.7 6
TEXT 'ALBERTA'
MOVE 0.7 4
TEXT 'RESEARCH'
MOVE 0.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
LINEC 1
RESEL ACHS POLYS CLASS = 1
POLYGONSHADES ACHS 30
CLEARSEL
RESEL ACHS POLYS CLASS = 2
POLYGONSHADES ACHS 34
CLEARSEL
RESEL ACHS POLYS CLASS = 3
POLYGONSHADES ACHS 2
CLEARSEL
RESEL ACHS POLYS CLASS = 4
POLYGONSHADES ACHS 31
CLEARSEL
RESEL ACHS POLYS CLASS = 5
POLYGONSHADES ACHS 35
CLEARSEL
RESEL ACHS POLYS CLASS = 6
POLYGONSHADES ACHS 3
CLEARSEL
RESEL ACHS POLYS CLASS = 7
POLYGONSHADES ACHS 36
CLEARSEL
RESEL ACHS POLYS CLASS = 8
POLYGONSHADES ACHS 4
CLEARSEL
LINEC 1
ARCS ACHS
LINESYMBOL 7
ARCS LAK
LINEC 6
ARCS RIV
MEND
&JUMP OVERLAY
&LABEL ACLS
CLEAR
MSEL ALL
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS AIS
LINESYMBOL 7
ARCS LAK
LINEC 6
ARCS RIV
TEXTSIZE .15 .12
MOVE 6.5 4.5
TEXT 'GENESEE AREA'
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTAN'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
MOVE 6.5 4.2
TEXT 'ASH - LOW MAIN'
KEYPOSITION 6.5 2.8
KEYSEPARATION 15 .15
KEYBOX .15 .15
KEYSHADE ACLM.KEY
RESEL ACLM POLYS CLASS = 1
POLYGONSHADES ACLM 34
CLEARSEL
RESEL ACLM POLYS CLASS = 2
POLYGONSHADES ACLM 2
CLEARSEL
RESEL ACLM POLYS CLASS = 3
POLYGONSHADES ACLM 35
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT ' ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
MOVE 6.15 4.2
TEXT 'TOP OF THE LOWER MAIN CONTOURS'
KEYPOSITION 6.5 3.8
KEYSEPARATION .15 .15
KEYBOX .15 .15
KEYLINE TLM KEY NOBOX
RESSEL TLM ARCS VALUE = 101
LINESYMBOL 1
ARCS TLM
CLEARSEL
RESSEL TLM ARCS VALUE GE 695 AND VALUE LE 700
LINESYMBOL 2
ARCS TLM
CLEARSEL
RESSEL TLM ARCS VALUE GE 701 AND VALUE LE 705
LINESYMBOL 6
ARCS TLM
CLEARSEL
RESSEL TLM ARCS VALUE GE 706 AND VALUE LE 710
LINESYMBOL 3
ARCS TLM
CLEARSEL
RESSEL TLM ARCS VALUE GE 711 AND VALUE LE 715
LINESYMBOL 7
ARCS TLM
CLEARSEL
RESSEL TLM ARCS VALUE GE 716 AND VALUE LE 720
LINESYMBOL 4
ARCS TLM
CLEARSEL
RESSEL TLM ARCS VALUE GE 721 AND VALUE LE 725
LINESYMBOL 8
ARCS TLM
CLEARSEL
RESSEL TLM ARCS VALUE GE 726 AND VALUE LE 730
LINESYMBOL 12
ARCS TLM
CLEARSEL
LINEC 9
ARCS RIV
LINESYMBOL 7
ARCS LAK
MEND
&JUMP OVERLAY
&LABEL TUM
MSELECT ALL
CLEAR
DELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESYMBOL 7
ARCS LAK
LINEC 6
ARCS RIV
TEXTSIZE .15 .12
MOVE 0.5 4.5
TEXT 'GENESEE AREA'
TEXTSIZE .1 8.7
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
FILE -> WABAMUN\MINES\WHITE\MANUAL.SML

&MAP END
&SETVAR 15 "PRINTER"
&RUN %15
DISPLAY 4 2 3
KILLMAP MAP1
&GOTO START

&LABEL MAIN
&MAP END
KILLMAP MAP1
&SYSTEM "CD C:\PROJ"
&RUN OLAB

&LABEL EXIT
&MAP END
KILLMAP MAP1
O

&REM ####################################################################
&REM THIS MENU INCLUDES PERMITED AREAS, MINED AREAS, ISOPACH
&REM OF OVERBURDEN TO FIRST MINEABLE Seam, LICENCED AREAS,
&REM AND OIL & GAS WELLS STAT
&REM WRITTEN BY D. CHAO ON AUG 30, 1988
&REM ####################################################################
PAGESIZE 9.6 5.6
&LABEL START
CLEAR
MAPATX ATS LIC PERM MINED STAT ISO3FMS SCT3
MAP MAP1
&LABEL MENU1
&BEGIN
MAPANGLE -1.5
MAPLIMITS 0 0 7 5
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESYMBOl 7
ARCS LAK
LINEC 6
ARCS RIV
MOVE 2.8 4.6
TEXTCOLOR 1
TEXTSIZE 2 2
TEXT "WHITENOOD AREAS"
TEXTSIZE 1 0.7
TEXTCOLOR 2
TEXTFONT 0
MOVE 1 1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 6
TEXT "ALBERTA"
MOVE 8.7 4
TEXT "RESEARCH"
MOVE 8.7 2
TEXT "COUNCIL"
TEXTFONT 0
TEXTCOLOR 1
&END

&LABEL MENU2
&TYPE "1- LICENCED AREAS, 2 - PERMITED AREAS, 3 - MINED AREAS."
&TYPE "4 - OVERBURDEN THINNESS TO THE 1ST MINEABLE Seam, 5 - OIL & GAS WELLS"
&TYPE "6 - ISOPACH OF Seam 3, 7 - STRUCTURAL CONTOURS (TOP OF Seam 3)"
&TYPE "8 - HWY, 9 - COUNTY BOUNDARIES, 10 - PRINTER, 11 - WABAMUN MENU, 12 - HIGHVAY MENU, 13 - B3G MENU, 14 - MAIN MENU, 15 - EXIT"
&ASK 1 "16-TTY, PLEASE ENTER YOUR CHOICE" 17
&GOTO LIC &IF &EQ %1 1
&GOTO PERM &IF &EQ %1 2
&GOTO MINED &IF &EQ %1 3
&GOTO OTC &IF &EQ %1 4
&GOTO STAT &IF &EQ %1 5
&GOTO ISO3 &IF &EQ %1 6
&GOTO SCT3 &IF &EQ %1 7
&GOTO HWY &IF &EQ %1 8
&GOTO OB &IF &EQ %1 9
&GOTO PRINTER &IF &EQ %1 10
&GOTO WABAMUN &IF &EO %1 11
&GOTO HIGHVALE &IF &EO %1 12
&GOTO B3G &IF &EO %1 13
&GOTO MAIN &IF &EO %1 14
&GOTO EXIT &IF &EO %1 15
&GOTO TTY &IF &EO %1 16
&GOTO MENU2

&LABEL TTY
MAP END
TTY
&JUMP MENU2

&LABEL LIC
MBEGIN
POLYGONS LICH 67
LINEC 1
ARCS LIC
TEXT SIZE 1 .07
MOVE 4.5 2
TEXT 'LICH #C83-30'
MEND
&GOTO OVERLAY

&LABEL OVERLAY
&AQUERY 2 'OVERLAY THIS COVERAGE ON THE NEXT ONE' &F
&GOTO MENU2 &IF &EO %2 Y
MDELETE
&MFRSH
&GOTO MENU2

&LABEL PERM
MBEGIN
POLYGONS PERM 46
LINEC 1
ARCS PERM
TEXT SIZE 1 .07
MOVE 3.5 2.5
TEXTCOLOR 1
TEXT 'PERMIT #C76-15'
MEND
&GOTO OVERLAY

&LABEL MINED
MBEGIN
POLYGONS MINED 32
LINEC 1
ARCS MINED
MEND
&GOTO OVERLAY

&LABEL OTC
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINESYMBOL 7
ARCS LAK
LINEC 6
ARCS RIV
TEXT SIZE 2 .2
MOVE 2.8 4.6
TEXT 'WHITNEYWOOD AREA'
TEXT SIZE 1 .07
MOVE 2.6 4.3
TEXT 'ISOCHrons OF OVERBURDEN TO THE 1ST MINEABLE SEAM'
TEXT SIZE .1 .07
TEXTCOLOR 2
TEXTFONT 8
MOVE 1.1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
RESL SCT3 POLYS CLASS = 2
POLYGON SHADES SCT3 2
CLEARSEL
RESL SCT3 POLYS CLASS = 3
POLYGON SHADES SCT3 3
CLEARSEL
RESL SCT3 POLYS CLASS = 4
POLYGON SHADES SCT3 4
CLEARSEL
RESL SCT3 POLYS CLASS = 5
POLYGON SHADES SCT3 5
CLEARSEL
LINES 1
ARCS SCT3
LINESYMBOL 7
ARCS LAK
LINES 6
ARCS RIV
MEND
&GOTO OVERLAY

&LABEL STAT
MBEGIN
POINT MARKERS STAT 89
MOVE 4.5 0.6
TEXT SIZE .1 .67
TEXT 'WELL ID:B3689'
MOVE 4.5 0.4
TEXT 'STATUS:ABANDONED'
MEND
&GOTO OVERLAY

&LABEL HWY
MBEGIN
LINES 2
ARCS HWY
MEND
&JUMP OVERLAY

&LABEL CB
MBEGIN
LINES 5
ARCS NDB
MEND
&JUMP OVERLAY

&LABEL PRINTER
MAP END
&RUN PRINTER SML
KILLMAP MAP1
DISPLAY 4 2 3
&JUMP START

&LABEL MAIN
CLEAR
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\PROJ1"
&RUN OILAB.SML

&LABEL WABAMUN
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\WABAMUN\SAREA"
&RUN MANUAL.SML

&LABEL HIGHVALE
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\WABAMUN\MINES\HIGHVA"
&RUN MANUAL.SML

&LABEL 33G
MAP END
KILLMAP MAP1
&SYSTEM "CD C:\PROJ1"
&RUN 33G.SML

&LABEL EXIT
FILE -> WABAMUN\WPS\TS345\MANUAL.SML

&REM  **********************************************************************
&REM  THIS MENU INCLUDES ALL THE COVERAGES IN THE TS345 DIRECTORY. USERS
&REM  CAN PRODUCE ANY HARDCOPIES ANYTIME THEY WISH DURING THE PROCESS.
&REM  WRITTEN BY D. CHAD SEPT 15, 1988
&REM  **********************************************************************
&LABEL NAME
PAGESIZE 9.6 5.6
MAP MAP1
MAPEX W1503 WFMS WSCT3 ATS
&LABEL MENU
CLEAR
LINEC 1
BOX @ 0 9.6 5.6
MBEGIN
MAPANGLE -1.5
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 6
ARCS RW
MOVE 8.5 5
TEXTSIZE .15 .13
TEXT "TOP 53 4"
TEXTSIZE .1 .07
TEXTCOLOR 2
TEXTFONT 8
MOVE .1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 6
TEXT "ALBERTA"
MOVE 8.7 4
TEXT "RESEARCH"
MOVE 8.7 2
TEXT "COUNCIL"
TEXTCOLOR 1
TEXTFONT 8
MEND
&LABEL MENU1
&TYPE "1-HW1, 2-WHITE COAL SEAM 3, 3-WHITE OVERBURDEN ISOPACH,"
&TYPE "4-WHITE, STRUCTURAL SEAMS, 5-MINED AREAS, 6-LICENSEED, 7-PERMITTED"
&TYPE "8-PERMITED COAL MINES, 9-WELL STAT, 10-PRINTER, 11-WABAMUN MENU,"
&ASK 1 "12-MAIN MENU, 13-EXIT, 14-TTY, PLEASE ENTER YOUR CHOICE - 15"
&GOTO HW1 &IF &EO %1 1
&GOTO SEAM3 &IF &EO %1 2
&GOTO OTC &IF &EO %1 3
&GOTO SSEAM &IF &EO %1 4
&GOTO MINED &IF &EO %1 5
&GOTO LIC &IF &EO %1 6
&GOTO PERM &IF &EO %1 7
&GOTO COAL &IF &EO %1 8
&GOTO STAT &IF &EO %1 9
&GOTO PRINTER &IF &EO %1 10
&GOTO WABAMUN &IF &EO %1 11
&GOTO MAIN &IF &EO %1 12
&GOTO EXIT &IF &EO %1 13
&GOTO TTY &IF &EO %1 14
&GOTO MENU1
&LABEL TTY
TTY
&JUMP MENU1
&LABEL HW1
MBEGIN
LINEC 5
ARCS HW1
MEND
&JUMP OVERLAY
&LABEL SEAM3
CLEAR

\textbf{TYPE}: "ENTER <Y> TO AVOID UNCLEAR PLOTS"

\textbf{MODE}: DELETE

\textbf{MBEGIN}

\textbf{LINE}: 1

\textbf{BOX}: 0 0 9.6 5.6

\textbf{LINE}: 9

\textbf{ARCS}: ATS

\textbf{LINE}: 12

\textbf{ARCS}: LAK

\textbf{LINE}: 6

\textbf{ARCS}: RIV

\textbf{TEXT}: TEXTSIZE 15 13

\textbf{MOVE}: 6.5 5

\textbf{TEXT}: "WP: 53 4"

\textbf{TEXT}: TEXTSIZE 1 87

\textbf{TEXT}: TEXTCOLOR 2

\textbf{TEXT}: TEXTFONT 8

\textbf{MOVE}: .1 .1

\textbf{TEXT}: "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"

\textbf{MOVE}: 8.7 .6

\textbf{TEXT}: "ALBERTA"

\textbf{MOVE}: 8.7 .4

\textbf{TEXT}: "RESEARCH"

\textbf{MOVE}: 8.7 .2

\textbf{TEXT}: "COUNCIL"

\textbf{TEXT}: TEXTCOLOR 1

\textbf{TEXT}: TEXTFONT 0

\textbf{MEND}

\textbf{MBEGIN}

\textbf{TEXT}: TEXTSIZE 13 11

\textbf{MOVE}: 6 4.7

\textbf{TEXT}: "WHITEWOOD MINE"

\textbf{MOVE}: 6 4.5

\textbf{TEXT}: "ISOPACH OF SEAM 3"

\textbf{TEXT}: TEXTSIZE 1 88

\textbf{TEXT}: KEYPOSITION 6 3.5

\textbf{TEXT}: KEYSEPARATION 15 .15

\textbf{TEXT}: KEYBOX .2 .2

\textbf{TEXT}: KEYSHADE WISO3.KEY

\textbf{RESEL}: WISO3 POLYS CLASS = 1

\textbf{POLYGONSHADES}: WISO3 30

\textbf{RESEL}: WISO3 POLYS CLASS = 2

\textbf{POLYGONSHADES}: WISO3 54

\textbf{RESEL}: WISO3 POLYS CLASS = 3

\textbf{POLYGONSHADES}: WISO3 2

\textbf{RESEL}: WISO3 POLYS CLASS = 4

\textbf{POLYGONSHADES}: WISO3 31

\textbf{RESEL}: WISO3 POLYS CLASS = 5

\textbf{POLYGONSHADES}: WISO3 55

\textbf{RESEL}: WISO3 POLYS CLASS = 6

\textbf{POLYGONSHADES}: WISO3 3

\textbf{RESEL}: WISO3 POLYS CLASS = 7

\textbf{POLYGONSHADES}: WISO3 32

\textbf{RESEL}: WISO3 POLYS CLASS = 8

\textbf{POLYGONSHADES}: WISO3 56

\textbf{RESEL}: WISO3 POLYS CLASS = 9

\textbf{POLYGONSHADES}: WISO3 4

\textbf{MEND}

\textbf{MBEGIN}

\textbf{TEXT}: \&JUMP OVERLAY

\textbf{A\&LABEL}: OTC

\textbf{MSEL}: ALL

\textbf{CLEAR}

\textbf{TYPE}: "ENTER <Y> TO AVOID UNCLEAR PLOTS"

\textbf{MODE}: DELETE

\textbf{MBEGIN}
&REM  ***********************************************
&REM THIS MENU IS A COMBINATION OF THE SWL AND MAP COMPOSITION
&REM OPERATE CAN PRODUCE ANY HARDCOPIES OF ANY DISPLAYS OR OVERLAYS
&REM ANYTIME DURING THE PROCESS.
&REM ***********************************************
&LABEL NAME
PAGESIZE 9.6 5.6
MAP MAP1
MAPEX ATS RN HWY MISO1 MISO2 MLGEOV WISO3 WFS WSCT3 MISO1 STAT
MAPANGLE -1.5
&LABEL MENU
CLEAR
MBEGIN
LINEC 1
BOX 0 0 9.5 5.6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAC
LINEC 6
ARCS RV
MOVE 6.5 5
TEXTSIZE 15 .13
TEXT 'TWP:5 53 5'
TEXTSIZE .1 .67
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
END
&LABEL MENU
&TYPE "1-HWY, 2-HWY, MINE SEAM 1, 3-HWY, MINE SEAM 2, 4-HWY, GEOLOGICAL MAP"
&TYPE "5-HWY, STRUCTURAL SEAM 1, 6-WHITE, OVERBURDEN SOPACH, 7-WHITEWOOD"
&TYPE "STRUCTURAL SEAMS, 8-WELL STAT, 9-ERCB COAL, 10-PRINTER, 11-WABAMUN MENU"
&LABEL ASK
&ASK 1 "12-TTY ENTER YOUR CHOICE- 13
&GOTO HWY &IF &EO &1 1
&GOTO SEAM1 &IF &EO &1 2
&GOTO SEAM2 &IF &EO &1 3
&GOTO GEOV &IF &EO &1 4
&GOTO HWYSEAM &IF &EO &1 5
&GOTO OTC &IF &EO &1 6
&GOTO WHTSEAM &IF &EO &1 7
&GOTO STAT &IF &EO &1 8
&GOTO COAL &IF &EO &1 9
&GOTO PRINTER &IF &EO &1 10
&GOTO WABAMUN &IF &EO &1 11
&GOTO TTY &IF &EO &1 12
&GOTO ASK

&LABEL TTY
&TTY
&JUMP ASK

&LABEL HWY
MBEGIN
LINEC 2
ARCS HWY
END
&QUERY 1 "OVERLAY HWY WITH THE NEXT DISPLAY" &F
&GOTO MENU1 &IF &EO &2 Y
&QUERY 4 "SEND TO PRINTER" &F
&GOTO PRINTER &IF &EO &4 Y
&TYPE "DELETE YOUR HIGHWAYS?"
DELETE
MFRESH
&GOTO ASK
RESL HNGEO1 POLYS LEVEL = 100
POLYGONSHADES HNGEO1 2
CLEARSEL
RESL HNGEO1 POLYS LEVEL = 80
POLYGONSHADES HNGEO1 3
CLEARSEL
RESL HNGEO1 POLYS LEVEL = 60
POLYGONSHADES HNGEO1 4
CLEARSEL
RESL HNGEO1 POLYS LEVEL = 40
POLYGONSHADES HNGEO1 1
CLEARSEL
LNC 1
ARCS HNGEO1
MEND
&JUMP OVERLAY

&LABEL HVSMEM
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MDELETE
MBEGIN
LNEC 1
BOX 0 0 9.6 5.6
LNEC 9
ARCS ATS
LNEC 12
ARCS LAK
LNEC 6
ARCS RIV
TEXTSIZE .15 .13
MOVE 6.5 5
TEXT 'TWP.5 53 5'
TEXTSIZE 1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE 13 11
MOVE 6 4.7
TEXT 'HIGHVALE MINE NORTH:'
TEXTSIZE 11 .89
MOVE 5.8 4.5
TEXT 'STRUCTURAL CONTOUR SEAM 1'
TEXTSIZE 13 .11
KEYPOSITION 6 2.5
KEYSEPARATION .15 .15
KEYBOX .15 .15
KEYSHADE HNSC1.KEY
RESL HNSC1 POLYS CLASS = 3
POLYGONSHADES HNSC1 42
CLEARSEL
RESL HNSC1 POLYS CLASS = 4
POLYGONSHADES HNSC1 54
CLEARSEL
RESL HNSC1 POLYS CLASS = 5
POLYGONSHADES HNSC1 42
CLEARSEL
RESL HNSC1 POLYS CLASS = 6
POLYGONSHADES HNSC1 43
CLEARSEL
RESL HNSC1 POLYS CLASS = 7
POLYGONSHADES HNSC1 55
CLEARSEL
RESL HNSC1 POLYS CLASS = 8
POLYGONSHADES HNSC1 3
CLEARSEL
RESL HNSC1 POLYS CLASS = 9
POLYGONSHADES HMSC1 44
CLEARSEL
RESEL HMSC1 POLYS CLASS = 10
POLYGONSHADES HMSC1 56
CLEARSEL
LINEC 1
ARCS HMSC1
MEND
$&JUMP OVERLAY

$LABEL OTC
MSEL ALL
CLEAR
$TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MODELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 8
ARCS RIV
TEXTSIZE 0.15 .13
MOVE 6.5 5
TEXT 'TWP:5 53 5'
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 8
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE .13 .11
MOVE 6 4.7
TEXT 'WHRWOOD MINE'
TEXTSIZE 1 .08
MOVE 6 4.5
TEXT 'ISOPACH OF OVERBURDEN TO'
MOVE 6 4.3
TEXT 'FIRST MINEABLE SEAM'
TEXTSIZE .13 .11
KEYPOSITION 6 2.8
KEYSEPARATION .15 .15
KEYBOX .15 .15
KEYSHADE WFMS.KEY
RESEL WFMS POLYS CLASS = 3
POLYGONSHADES WFMS 42
CLEARSEL
RESEL WFMS POLYS CLASS = 4
POLYGONSHADES WFMS 2
CLEARSEL
RESEL WFMS POLYS CLASS = 5
POLYGONSHADES WFMS 43
CLEARSEL
RESEL WFMS POLYS CLASS = 6
POLYGONSHADES WFMS 3
CLEARSEL
RESEL WFMS POLYS CLASS = 7
POLYGONSHADES WFMS 44
CLEARSEL
LINEC 1
ARCS WFMS
MEND
$&JUMP OVERLAY

$LABEL #55SEAM
MSEL ALL
CLEAR
$TYPE "ENTER <Y> TO AVOID UNCLEAR PLOT"
DELETE
BEGIN
LINEC 1
BOX 0 0 0.6 5.6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 6
ARCS RV
TEXTSIZE .15 .13
MOVE 6.5 5
TEXT 'TWP:5 53 5'
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 8
TEXTCOLOR 1
END
BEGIN
TEXTSIZE .13 .11
MOVE 6.2 4.7
TEXT 'WHITWOOD MINE'
MOVE 6.0 4.5
TEXTSIZE .1 .09
TEXT 'STRUCTURAL CONTOUR'
MOVE 6.0 4.3
TEXT 'TOP OF SEAM 3'
TEXTSIZE .13 .11
KEYPOSITION 6 1.5
KEYSEPARATION .15 .15
KEYBOX :.15 .15
KEYSHADE WSC13.KEY
RESSEL WSC13 POLYS CLASS = 2
POLYGONSHADES WSC13 2
CLEARS
RESSEL WSC13 POLYS CLASS = 3
POLYGONSHADES WSC13 3
CLEARS
RESSEL WSC13 POLYS CLASS = 4
POLYGONSHADES WSC13 4
CLEARS
LINEC 1
ARCS WSC13
END
&JUMP OVERLAY

&LABEL STAT
BEGIN
TEXTSIZE .12 .09
MOVE 6.8 4
TEXT 'ABANDONED OIL WELLS'
POINTMARKERS STAT 91
END
&LABEL ASK1
&ASK 6 '1-ID OF ALL THE WELLS, 2-ID OF EACH WELL, 3-EXIT' 4
&GOTO OVERLAY &IF &EQ %6 3
&GOTO ALLWELL &IF &EQ %6 1
IDENTIFY STAT POINTS * WELL_ID
&GOTO ASK1
&LABEL ALLWELL
RESSEL STAT POINTS MAPEX
LIST STAT POINTS WELL_ID
CLEARS
&JUMP ASK1

&LABEL COAL
BEGIN
POINTMARKERS SURF 86
POINTMARKERS UNDER 87
TEXTSIZE 87 .06
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT "TWP:5 52 4" TEXTCOLOR 2
TEXTSIZE .1 .07
TEXTFONT 8
MOVE .1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT "ALBERTA"
MOVE 8.7 .4
TEXT "RESEARCH"
MOVE 8.7 .2
TEXT "COUNCIL"
TEXTFONT 0
TEXTCOLOR 1
WEND

ALABEL MENU1
&TYPE "1-HWY, 2-MINE SEAM 1, 3-MINE SEAM 2, 4-HV. GEOLOGICAL MAP,
 &TYPE "5-HV. STRUCTURAL CONTOUR SEAM 1, 6-HV. SOUTH:LOWER SHALE,
 &TYPE "7-HV. SOUTH:BASE OF DISTURBED BEDROCK, 8-PERMIT AREAS, 9-SURFACE MINES,
 &TYPE "10-LICENCED AREAS, 11-WELL STATUS, 12-MINED AREAS, 13-PRINTER,
 &TYPE "14-WABAMUN MENU, 15-MAIN MENU, 16-EXIT, 17-TTY."
&ASK 1 "PLEASE ENTER YOUR CHOICE " 18
&GOTO HWY &IF &EQ %1 1
&GOTO SEAM1 &IF &EQ %1 2
&GOTO SEAM2 &IF &EQ %1 3
&GOTO GEO1 &IF &EQ %1 4
&GOTO SC1 &IF &EQ %1 5
&GOTO HSLS &IF &EQ %1 6
&GOTO BBED &IF &EQ %1 7
&GOTO PERM &IF &EQ %1 8
&GOTO SURF &IF &EQ %1 9
&GOTO LIC &F &EQ %1 10
&GOTO STAT &IF &EQ %1 11
&GOTO MINED &IF &EQ %1 12
&GOTO PRINTER &IF &EQ %1 13
&GOTO WABAMUN &IF &EQ %1 14
&GOTO MAIN &IF &EQ %1 15
&GOTO EXIT &IF &EQ %1 16
&GOTO TTY &IF &EQ %1 17
&GOTO MENU1

ALABEL TTY
TTY
&JUMP MENU1

ALABEL HWY
MBEGIN
LINEC 6
ARCS HWY
WEND
&JUMP OVERLAY

ALABEL SEAM1
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 6
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT "TWP:5 52 4" TEXTCOLOR 2
TEXTSIZE .1 .07
TEXTFONT 8
MOVE .1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT "ALBERTA"
MOVE 0.7 .6
TEXT 'ALBERTA'
MOVE 0.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE .12 .1
MOVE 6 4.8
TEXT 'HIGHVALE, COAL SEAM 2'
KEYPOSITION 6 1.8
KEYSEPARATION 15 .15
TEXTSIZE 1 .88
KEYBOX .15 .15
KEYSHADE HIS02.KEY
RESEL HIS02 POLYS CLASS = 3
POLYGONSHADES HIS02 42
CLEARSEL
RESEL HIS02 POLYS CLASS = 4
POLYGONSHADES HIS02 46
CLEARSEL
RESEL HIS02 POLYS CLASS = 5
POLYGONSHADES HIS02 78
CLEARSEL
RESEL HIS02 POLYS CLASS = 6
POLYGONSHADES HIS02 2
CLEARSEL
LINEC 1
ARCS HIS02
MEND
AJUMP OVERLAY
ALABEL GEOL
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNE whole PLOT"
MODELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 6
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TWP.5 52 4'
TEXTCOLOR 2
TEXTSIZE 1 .07
TEXTFONT 8
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 0.7 .6
TEXT 'ALBERTA'
MOVE 0.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE .12 .1
MOVE 6 4.8
TEXT 'NORTH HIGHVALE MINE'
MOVE 6 4.6
TEXT 'GEOLOGICAL MAP'
KEYPOSITION 6 2.3
KEYSEPARATION .15 .15
TEXTSIZE 1 .88
KEYBOX .15 .15
KEYSHADE HNGEO1.KEY
RESEL HNGEO1 POLYS LEVEL = 100
POLYGONSHADES HNGEO1 65
CLEARSEL
RESHEL HNGEOI POLYS LEVEL = 80
POLYGONSHADES HNGEOI 42 CLEARSEL
RESHEL HNGEOI POLYS LEVEL = 80
POLYGONSHADES HNGEOI 3 CLEARSEL
RESHEL HNGEOI POLYS LEVEL = 60
POLYGONSHADES HNGEOI 2 CLEARSEL
RESHEL HNGEOI POLYS LEVEL = 35
POLYGONSHADES HNGEOI 67 CLEARSEL
LINEC 1
ARCS HNGEOI MEND
&JUMP OVERLAY

&LABEL SC1
MSEL ALL
CLEAR
&TYPE "ENTER <Y> FOR THE FOLLOWING REQUESTS TO AVOID UNEQUAL PLTTS"
MODElete
MBEGIN
LINEC 1
BOX 0 0 9 6 5 6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 6
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT "TWP 6 52 4"
TEXTCOLOR 2
TEXTSIZE .1 .07
TEXTFONT 8
MOVE .1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT ' ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE .12 .1
MOVE 6 4.8
TEXT 'NORTH KINVALE'
MOVE 5.8 4.6
TEXT 'STRUCTURAL CONTOUR SEAM 1'
KEYPOSITION 6 4.2
KEYSEPARATION .15 .15
TEXTSIZE .1 .08
KEYBOX .15 .15
KEYSHADE HNSCI.KEY
RESHEL HNSCI POLYS CLASS = 3
POLYGONSHADES HNSCI 42 CLEARSEL
RESHEL HNSCI POLYS CLASS = 4
POLYGONSHADES HNSCI 46 CLEARSEL
RESHEL HNSCI POLYS CLASS = 5
POLYGONSHADES HNSCI 50 CLEARSEL
RESHEL HNSCI POLYS CLASS = 6
POLYGONSHADES HNSCI 2 CLEARSEL
RESHEL HNSCI POLYS CLASS = 7
POLYGONSHADES HNSCI 43 CLEARSEL
RESHEL HNSCI POLYS CLASS = 8
POLYGONSHADES HNSCI 47 CLEARSEL
RESHEL HNSCI POLYS CLASS = 9
POLYGONSHADES HMSC1 51
CLEAR
RESEL HMSC1 POLYS CLASS = 10
POLYGONSHADES HMSC1 3
CLEAR
RESEL HMSC1 POLYS CLASS = 11
POLYGONSHADES HMSC1 44
CLEAR
RESEL HMSC1 POLYS CLASS = 12
POLYGONSHADES HMSC1 48
CLEAR
RESEL HMSC1 POLYS CLASS = 13
POLYGONSHADES HMSC1 52
CLEAR
RESEL HMSC1 POLYS CLASS = 14
POLYGONSHADES HMSC1 4
CLEAR
RESEL HMSC1 POLYS CLASS = 15
POLYGONSHADES HMSC1 41
CLEAR
RESEL HMSC1 POLYS CLASS = 16
POLYGONSHADES HMSC1 45
CLEAR
LINEC 1
ARCS HMSC1
MEND
&JUMP OVERLAY

&LABEL BBED
RESEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNECLAER PLOTS"
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 6
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TWP:5 52 4'
TEXTCOLOR 2
TEXTSIZE 1 .07
TEXTFONT 8
MOVE 1 1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE .12 .1
MOVE 6 4.8
TEXT 'SOUTH HIGHVALE MINE'
MOVE 5.6 4.6
TEXTSIZE 1 .08
TEXT 'ISOPACH SURFACE TO TOP LITHOLOGY'
MOVE 5.6 4.4
TEXT '500 (BASE OF DISTURBED BEDROCK)'
KEYPOSITION 6.0 2.0
KEYSEPARATION .15 .15
KEYBOX .2 .2
KEYSHADE HSDBED KEY
RESEL HSDBED POLYS CLASS = 1
POLYGONSHADES HSDBED 42
CLEAR
RESEL HSDBED POLYS CLASS = 2
POLYGONSHADES HSDBED 46
CLEAR
RESEL HSDBED POLYS CLASS = 3
&LABEL MINED
MBEGIN
POLYGONSHADES MINED 6
LINEC 1
ARCS MINED
MEND
&JUMP OVERLAY

&LABEL PERM
MBEGIN
POLYGONSHADES PERM 31
LINEC 1
ARCS PERM
TEXT SIZE .11 .09
MOVE 1.5 0.5
TEXT "PERM # C77-20"
MEND
&JUMP OVERLAY

&LABEL SURF
MBEGIN
POINTMARKERS SURF 85
POINTMARKER UNDER 86
TEXT SIZE .09 .065
MOVE 2.1.5
TEXT "SURFACE MINE:1715"
MOVE 2.1.35
TEXT "LOCATION: CORRECT"
MOVE 1.2 3.55
TEXT "SURFACE MINE:1592"
MOVE 1.2 3.4
TEXT "LOCATION: UNCERTAIN"
MOVE 0.6 4.2
TEXT "SURFACE MINE:424"
MOVE 0.6 4.05
TEXT "LOCATION: UNCERTAIN"
MOVE 1.9 3.9
TEXT "UNDERGROUND MINE:519"
MOVE 1.9 3.75
TEXT "LOCATION: UNCERTAIN"
MEND
&JUMP OVERLAY

&LABEL LIC
MBEGIN
POLYGONSHADES LIC 20
LINEC 1
ARCS LIC
TEXT SIZE .11 .09
MOVE 0.6 3
TEXT "LIC # 82-47"
MOVE 0.6 2.0
TEXT "LIC # 82-63"
MEND
&JUMP OVERLAY

&LABEL STAT
MBEGIN
POINTMARKERS STAT 89
&LABEL ASK2
&ASK 3 "1-ALL THE WELL ID & STATUS, 2-INDIVIDUAL WELL ID & STATUS, 3-EXIT" 4
&GOTO ALL &IF &EQ %3 1
&GOTO OVERLAY &IF &EQ %3 3
&GOTO IDENT &IF &EQ %3 2
&GOTO ASK2
&LABEL ALL
RESEL STAT POINTS MAPEX
LIST STAT POINTS WELL_ID DESCRIPTION
CLEARSEL
&JUMP ASK2
&LABEL DENT
IDENTIFY STAT POINTS + WELL_ID DESCRIPTION
&GOTO ASK2

&LABEL PRINTER
CLEAR
&SETVAR 5 'PRINTER'
&RUN %5
MAP END
FILE -> WABAMUN\TWPS\T5255\MANUAL.SML

&REM ***************************************************
&REM THIS MENU WILL DISPLAY ALL THE COVERAGES IN THE T5255 DIRECTORY.
&REM USERS CAN PRODUCE ANY PRINTOUTS ANYTIME DURING THE PROCESS.
&REM THIS MANUAL IS CALLED BY THE WABAMUN AND THE MAIN MENU.
&REM WRITTEN BY D.CHAO SEPT 19.1988
&REM ***************************************************
&LABEL MAP
PAGESIZE 9.6 5.6
MAP MAP1
MAP EX ATS HIS01 HIS02 HNGEOC HNSC1 STAT
&LABEL MENU
CLEAR
BEGIN
LNEC 1
BOX 0 0 9.6 5.6
MAPANGLE -1.5
LNEC 9
ARCS ATS
LNEC 12
ARCS LAK
LNEC 6
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TWP 5 52.5'
TEXTSIZE .1 .07
TEXTFONT 9
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXT FONT 0
MEND
&LABEL MENU1
&TYPE "1-HV, 2-HV, MINE SEAM 1, 3-HV, MINE SEAM 2, 4-HV, GEOLOGICAL MAP,"
&TYPE "5-HV, STRUCTURAL CONTOUR SEAM 1, 6-PERMIT AREAS, 7-SURFACE MINES,"
&TYPE "8-LICENSED AREAS, 9-WELL STATUS, 10-PRINTER, 11-WABAMUN MENU, 12-MAIN"
&ASK 1 "MENU, 13-EXIT, 14-TTY. PLEASE ENTER YOUR CHOICE" 15
&GOTO HWY &IF &EQ %1 1
&GOTO SEAM1 &IF &EQ %1 2
&GOTO SEAM2 &IF &EQ %1 3
&GOTO GEO &IF &EQ %1 4
&GOTO SCI &IF &EQ %1 5
&GOTO PERM &IF &EQ %1 6
&GOTO SURF &IF &EQ %1 7
&GOTO LIC &IF &EQ %1 8
&GOTO STAT &IF &EQ %1 9
&GOTO PRINTER &IF &EQ %1 10
&GOTO WABAMUN &IF &EQ %1 11
&GOTO MAIN &IF &EQ %1 12
&GOTO EXIT &IF &EQ %1 13
&GOTO TTY &IF &EQ %1 14
&GOTO MENU1

&LABEL TTY
&TTY
&JUMP MENU1

&LABEL HWY
MBEGIN
LINEC 2
ARCS HWY
MEND
&JUMP OVERLAY

&LABEL SEAM1
M3EL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 12
ARCS LAK
LINEC 6
ARCS RIV
MOVE 6.5 5
TEXTSIZE .10 .13
TEXT "TWP-5 52-5"
TEXTSIZE .10 .07
TEXTFONT 0
TEXTCOLOR 2
MOVE .1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
TEXTSIZE .12 .1
MOVE 6.4 8
TEXT "HIGHLAND COAL SEAM 1"
KEYPOSITION 0 .4 0
KEYSEPARATION .15 .15
TEXTSIZE .1 .08
KEYBOX .15 .15
KEYSHADE HIS01 KEY
RESEL HIS01 POLYS CLASS = 5
POLYGONSHADES HIS01 18
CLEARSEL
RESEL HIS01 POLYS CLASS = 6
POLYGONSHADES HIS01 66
RESSEL HISG2 POLYS CLASS = 2  
POLYGONSHADES HISG2 66  
CLEARSEL  
RESSEL HISG2 POLYS CLASS = 3  
POLYGONSHADES HISG2 2  
CLEARSEL  
RESSEL HISG2 POLYS CLASS = 4  
POLYGONSHADES HISG2 67  
CLEARSEL  
RESSEL HISG2 POLYS CLASS = 5  
POLYGONSHADES HISG2 3  
CLEARSEL  
RESSEL HISG2 POLYS CLASS = 6  
POLYGONSHADES HISG2 4  
CLEARSEL  
LINEC 1  
ARCS HISG2  
MEND  
\&JUMP OVERLAY  
\&LABEL GEOL  
\WS EL ALL  
CLEAR  
\&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"  
\MODELE  
\MB EGIN  
LINEC 1  
BOX 0 0 9.6 5.6  
LINEC 9  
ARCS ATS  
LINEC 12  
ARCS RIV  
LINEC 6  
ARCS LAK  
MOVE 6.5 5  
TEXTSIZE .15 .13  
TEXT "TWP: 5 52 5"  
TEXTSIZE .1 .07  
TEXTFONT 8  
TEXTCOLOR 2  
MOVE .1 .1  
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"  
MOVE 0.7 6  
TEXT "ALBERTA"  
MOVE 0.7 4  
TEXT "RESEARCH"  
MOVE 0.7 2  
TEXT "COUNCIL"  
TEXTCOLOR 1  
TEXTFONT 0  
MEND  
\MB EGIN  
TEXTSIZE .12 .1  
MOVE 6 4.8  
TEXT "NORTH HIGHVALE MINE:"  
MOVE 6 4.6  
TEXT "GEOLOGICAL MAP"  
KEYPOSITION 6 2.3  
KEYSEPARATION .15 .15  
TEXTSIZE .1 .08  
KEYBOX :15 .15  
KEYSHADE HNGEO1.KEY  
RESSEL HNGEO1 POLYS LEVEL = 100  
POLYGONSHADES HNGEO1 66  
CLEARSEL  
RESSEL HNGEO1 POLYS LEVEL = 80  
POLYGONSHADES HNGEO1 2  
CLEARSEL  
RESSEL HNGEO1 POLYS LEVEL = 60  
POLYGONSHADES HNGEO1 67  
CLEARSEL  
RESSEL HNGEO1 POLYS LEVEL = 40  
POLYGONSHADES HNGEO1 3  
CLEARSEL  
RESSEL HNGEO1 POLYS LEVEL = 35  
CLEARSEL  
LINEC 1  
ARCS HNGEO1  
MEND
&END
&JUMP OVERLAY

&LABEL MINE
MBEGIN
POLYGONSHADES MINE 5
LINES 1
ARCS MINE
MEND
&JUMP OVERLAY

&LABEL PERM
MBEGIN
POLYGONSHADES PERM 10
LINES 1
ARCS PERM
TEXTSIZE .11 .09
MOVE 3.9 4
TEXT "PERM: C77-20"
MEND
&JUMP OVERLAY

&LABEL SURF
MBEGIN
POINTMARKERS SURF 85
TEXTSIZE .09 .07
MOVE 2.5 1
TEXT "SURFACE MINE ID:1603"
MOVE 2 4.9
TEXT "LOCATION:CORRECT"
MEND
&JUMP OVERLAY

&LABEL LIC
MBEGIN
POLYGONSHADES LIC 20
LINES 1
ARCS LIC
TEXTSIZE .11 .09
MOVE 0.5 4.6
TEXT "LIC#: CB2-70"
MOVE 2.2 3
TEXT "LIC#: CB1-10"
MEND
&JUMP OVERLAY

&LABEL STAT
MBEGIN
POINTMARKERS STAT 89
&LABEL ASK2
ASK 3 "1-ALL WELL ID & STATUS, 2-INDIVIDUAL WELL ID & STATUS, 3-EXIT" 4
GOTO ALL &IF &EO %3 1
GOTO OVERLAY &IF &EO %3 3
GOTO IDENT &IF &EO %3 2
GOTO ASK2
&LABEL ALL
RESEL STAT POINTS MAP EX
LIST STAT POINTS WELL_ID DESCRIPTION
CLEARSEL
&JUMP ASK2
&LABEL IDENT
IDENTIFY STAT POINTS * WELL_ID DESCRIPTION
GOTO ASK2

&LABEL PRINTER
CLEAR
&SETVAR 5 "PRINTER"
&RUN %5
MAP END
KILLMAP MAP 1
DISPLAY 4 2 3

&LABEL ASK3
ASK 6 "1-NEW MAP, 2-WABAMUN MENU, 3-MAIN MENU, 4-EXIT" 5
GOTO NAME &IF &EO %6 1
GOTO WABAMUN &IF &EO %6 2
GOTO MAIN &IF &EO %6 3
GOTO EXIT &IF &EO %6 4
GOTO ASK3
&REM  ***********************************************************************
&REM  THIS MENU WILL DISPLAY ALL THE COVERAGES IN THE TS145 DIRECTORY.
&REM  USERS CAN PRODUCE ANY PRINTOUTS ANYTIME DURING THE PROCESS.
&REM  THIS MANUAL IS CALLED BY THE WABAMUN AND THE MAIN MENU.
&REM  WRITTEN BY D.CHAP SEPT 19,1988
&REM  ***********************************************************************
&LABEL NAME
PAGESIZE 9.6 5.6
MAP MAP1
MAPEX ATS HIS01 HSO2 STAT HSDBED HLS5
&LABEL MENU
CLEAR
LINEC 1
BOX 8 8 9 9 5.6
MBEOM
MAPANGLE -1 5
LINEC 9
ARCS ATS
LINEC 9
ARCS R/V
ARCS LAK
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TWP: 5 51 4'
TEXTSIZE .1 .87
TEXTFONT 0
TEXTCOLOR 2
MOVE 1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .6
TEXT 'RESEARCH'
MOVE 8.7 2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MENU
&LABEL MENU1
&TYPE "1-HV. MINE SEAM 1, 2-HV. MINE SEAM 2, 3-HV. SOUTH:BASE OF DISTURBED"
&TYPE "BEDROCK, 4-HV. SOUTH:LOWER SHALE, 5-PERMIT AREAS, 6-OIL & GAS WELLS"
&TYPE "STATUS, 7-PRINTER, 8-WABAMUN MENU, 9-MAIN MENU, 10-EXIT, 11-TTY"
&ASK 1 "PLEASE ENTER YOUR CHOICE " 12
&GOTO SEAM1 &IF &EQ %1 1
&GOTO SEAM2 &IF &EQ %1 2
&GOTO HLS &IF &EQ %1 4
&GOTO BBED &IF &EQ %1 3
&GOTO PERM &IF &EQ %1 5
GOTO STAT & IF & EO %1 6
GOTO PRINTER & IF & EO %1 7
GOTO WABAMUN & IF & EO %1 8
GOTO MAIN & IF & EO %1 9
GOTO EXIT & IF & EO %1 10
GOTO TTY & IF & EO %1 11
GOTO MENU 1

&LABEL TTY
&TTY
&JUMP MENU 1

&LABEL SEAM 1
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS RIV
ARCS LAK
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT "TOP 51 4"
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE 1 1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT "ALBERTA"
MOVE 9.7 .4
TEXT "RESEARCH"
MOVE 9.7 .2
TEXT "COUNCIL"
TEXTFONT 9
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE 12 .1
MOVE 6 4.8
TEXT "HIGHVALE: COAL SEAM 1"
KEYPOSITION 6 4.3
KEYSEPARATION 12 12
TEXTSIZE .09 .06
KEYBOX 13 .13
KEYSHADE HIS01.KEY
RESSEL HIS01 POLYS CLASS = 1
POLYGONSHADES HIS01 18
CLEARSEL
RESSEL HIS01 POLYS CLASS = 2
POLYGONSHADES HIS01 34
CLEARSEL
RESSEL HIS01 POLYS CLASS = 3
POLYGONSHADES HIS01 70
CLEARSEL
RESSEL HIS01 POLYS CLASS = 4
POLYGONSHADES HIS01 2
CLEARSEL
RESSEL HIS01 POLYS CLASS = 5
POLYGONSHADES HIS01 19
CLEARSEL
RESSEL HIS01 POLYS CLASS = 6
POLYGONSHADES HIS01 35
CLEARSEL
RESSEL HIS01 POLYS CLASS = 7
POLYGONSHADES HIS01 71
CLEARSEL
RESSEL HIS01 POLYS CLASS = 8
POLYGONSHADES HIS01 3
CLEARSEL
RESSEL HIS01 POLYS CLASS = 9
POLYGONSHADES HIS01 20
CLEARSEL
RESSEL HIS01 POLYS CLASS = 10
RESEL HS02 POLYS CLASS = 7
POLYGONSHADES HS02 35
CLEAREL
RESEL HS02 POLYS CLASS = 8
POLYGONSHADES HS02 3
CLEAREL
RESEL HS02 POLYS CLASS = 9
POLYGONSHADES HS02 4
CLEAREL
LINEC 1
ARCS HS02
MEND
&JUMP OVERLAY

&LABEL BBED
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS LAK
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TWP:5 51 4' TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 8
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE .12 1
MOVE 6 4.8
TEXT 'SOUTH HIGHVALE MINE'
MOVE 5.6 4.6
TEXTSIZE .1 .08
TEXT 'ISOPACH SURFACE TO TOP LITHOLOGY'
MOVE 5.6 4.4
TEXT '500 (BASE OF DISTURBED BEDROCK)'
KEYPOSITION 6.0 4.0
KEYSEPARATION .15 .15
KEYBOX .2 .2
KEYSHADE HSDBED.KEY
RESEL HSDBED POLYS CLASS = 1
POLYGONSHADES HSDBED 18
CLEAREL
RESEL HSDBED POLYS CLASS = 2
POLYGONSHADES HSDBED 34
CLEAREL
RESEL HSDBED POLYS CLASS = 3
POLYGONSHADES HSDBED 70
CLEAREL
RESEL HSDBED POLYS CLASS = 4
POLYGONSHADES HSDBED 2
CLEAREL
RESEL HSDBED POLYS CLASS = 5
POLYGONSHADES HSDBED 19
CLEAREL
RESEL HSDBED POLYS CLASS = 6
POLYGONSHADES HSDBED 35
CLEAREL
RESEL HSDBED POLYS CLASS = 7
POLYGONSHADES HSDBED 71
CLEAREL
RESEL HSDBED POLYS CLASS = 8
POLYGONSHADES HSDBED 3
CLEARSEL
RESEL HSDBED POLYS CLASS = 9
POLYGONSHADES HSDBED 36
CLEARSEL
RESEL HSDBED POLYS CLASS = 10
POLYGONSHADES HSDBED 72
CLEARSEL
RESEL HSDBED POLYS CLASS = 11
POLYGONSHADES HSDBED 4
CLEARSEL
LINEC 1
ARCS HSDBED
MEND
&JUMP OVERLAY

&LABEL HSLS
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MODELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS LAK
ARCS RIV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TWP:5 S14 E'
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE 1 1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 6.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 8
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE 12 1
MOVE 6 4.8
TEXT 'SOUTH HIGHLAND'
MOVE 5.8 4.6
TEXTSIZE .1 .08
TEXT 'ISOCHON OF THE LOWER SHALE'
MOVE 5.8 4.4
TEXT 'UNIT 80'
KEYPOSITION 6.0 3.6
KEYSEPARATION .12 .12
KEYBOX .15 .15
KEYSHADE HSLS.KEY
RESEL HSLS POLYS CLASS = 1
POLYGONSHADES HSLS 18
CLEARSEL
RESEL HSLS POLYS CLASS = 2
POLYGONSHADES HSLS 34
CLEARSEL
RESEL HSLS POLYS CLASS = 3
POLYGONSHADES HSLS 90
CLEARSEL
RESEL HSLS POLYS CLASS = 4
POLYGONSHADES HSLS 2
CLEARSEL
RESEL HSLS POLYS CLASS = 5
POLYGONSHADES HSLS 19
CLEARSEL
RESEL HSLS POLYS CLASS = 6
POLYGONSHADES HSLS 35
CLEARSEL
RESEL HSLS POLYS CLASS = 7
POLYGON SHADES HLS 71
CLEAR SEL
RESEL HLS 5 POLY'S CLASS = 5
POLYGON SHADES HLS 3
CLEAR SEL
RESEL HLS 9 POLY'S CLASS = 9
POLYGON SHADES HLS 20
CLEAR SEL
RESEL HLS 10 POLY'S CLASS = 10
POLYGON SHADES HLS 36
CLEAR SEL
RESEL HLS 11 POLY'S CLASS = 11
POLYGON SHADES HLS 70
CLEAR SEL
RESEL HLS 12 POLY'S CLASS = 12
POLYGON SHADES HLS 4
CLEAR SEL
LINEC 1
ARCS HLS 5
MEND
&JUMP OVERLAY

&LABEL PERM
WBEGIN
POLYGON SHADES PERM 31
LINEC 1
ARCS PERM
TEXTSIZE .1 .07
MOVE 3.8 1.5
TEXT 'PERM#:C77-20'
MEND
&JUMP OVERLAY

&LABEL STAT
WSEL ALL
CLEAR
WDELETE
WBEGIN
LINEC 1
BOX 0 0 9.6 8.6
LINEC 9
ARCS ATS
LINEC 6
ARCS LAK
ARCS RV
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'THW:5 51 4'
TEXTSIZE 1 .07
TEXTFONT 0
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MEND
WBEGIN
TEXTSIZE .12 .1
MOVE 6.5 4.8
TEXT 'SOUTH HIGHVALE'
MOVE 6.5 4.6
TEXTSIZE 1 .07
TEXT 'OIL & GAS WELL STATUS'
KEYPOSITION 6 2.4
KEYSEPARATION .15 .15
KEYBOX .2 .2
KEYMARKER STAT.KEY NOBOX
&LABEL ASK6
CLEAR SEL
&ASK 6 "8-EXIT. PLEASE ENTER YOUR CHOICE" 9
&GOTO STAT1 &IF #EQ %6 1
&GOTO STAT2 &IF #EQ %6 2
&GOTO STAT3 &IF #EQ %6 3
FILE -> WABAMUN\TWPS\TS155\MANUAL_SML

&REM  *****************************************************
&REM THIS MENU WILL DISPLAY ALL THE COVERAGE IN THE TS155 DIRECTORY.
&REM USERS CAN PRODUCE ANY PLOTS ANYTIME DURING THE PROCESS.
&REM  *****************************************************
&LABEL NAME
PAGESIZE 9.6 5.6
MAP MAP1
MAPEX ATS STAT
&LABEL MENU
CLEAR
LINEC 1
BOX 0 0 9.6 5.6
MBEGIN
MAPANGLE =1.5
LINEC 9
ARCS ATS
LINEC 6
ARCS R/W
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'WNP:5 51 5'
TEXTCOLOR 2
TEXTFONT 8
TEXTSIZE .1 .07
MOVE 1 1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 6
TEXT 'ALBERTA'
MOVE 8.7 4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MBEGIN
&LABEL MENU1
&TYPE "1-HWY, 2-WELL STATUS, 3-PRINTER, 4-WABAMUN MENU, 5-MAIN MENU"
&ASK 1 "B-EXIT, 7-TTY. PLEASE ENTER YOUR CHOOSE " 8
&GOTO HWY &IF &EO &R 1 1
&GOTO STAT &IF &EO &R 1 2
&GOTO PRINTER &IF &EO &R 1 3
&GOTO WABAMUN &IF &EO &R 1 4
&GOTO MAIN &IF &EO &R 1 5
&GOTO EXIT &IF &EO &R 1 6
&GOTO TTY &IF &EO &R 1 7
&GOTO MENU1

&LABEL TTY
&TTY
&JUMP MENU1

&LABEL HWY
MBEGIN
LINEC 5
ARCS HWY
MBEGIN
&JUMP OVERLAY
&LABEL STAT
MBEGIN
POINTMARKERS STAT 91
MOVE 5.8 4.7
KEYSEPARATION 12 12
TEXTSIZE 09 06
KEYBOX .13 .13
KEYSHADE HS01.KEY
RESSEL HS01 POLYS CLASS = 4
POLYGONSHADES HS01 18
CLEARSEL
RESSEL HS01 POLYS CLASS = 5
POLYGONSHADES HS01 34
CLEARSEL
RESSEL HS01 POLYS CLASS = 6
POLYGONSHADES HS01 78
CLEARSEL
RESSEL HS01 POLYS CLASS = 7
POLYGONSHADES HS01 2
CLEARSEL
RESSEL HS01 POLYS CLASS = 8
POLYGONSHADES HS01 19
CLEARSEL
RESSEL HS01 POLYS CLASS = 9
POLYGONSHADES HS01 35
CLEARSEL
RESSEL HS01 POLYS CLASS = 10
POLYGONSHADES HS01 71
CLEARSEL
RESSEL HS01 POLYS CLASS = 11
POLYGONSHADES HS01 3
CLEARSEL
RESSEL HS01 POLYS CLASS = 12
POLYGONSHADES HS01 36
CLEARSEL
RESSEL HS01 POLYS CLASS = 13
POLYGONSHADES HS01 72
CLEARSEL
RESSEL HS01 POLYS CLASS = 14
POLYGONSHADES HS01 4
CLEARSEL
LINEC 1
ARCS HS01
WEND
&JUMP OVERLAY

&LABEL: SEAM2
&WSEL ALL
&CLEAR
&type "ENTER <Y> TO AVOID UNCLEAR PLOTS"
&WDELET
&WBEGIN
&LINEC 1
&BOX 9 9 9.6 5.6
&LINEC 9
&ARCS ATS
&LINEC 6
&ARCS MIV
&LINEC 12
&ARCS LAK
&MOVE 6.5 5
&TEXTSIZE .15 .13
&TEXT "TWP:5 50 4"
&TEXTSIZE .1 .07
&TEXTFONT 8
&TEXTCOLOR 2
&MOVE 1 1
&TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
&MOVE 8.7 .6
&TEXT "ALBERTA"
&MOVE 8.7 .4
&TEXT "RESEARCH"
&MOVE 8.7 2
&TEXT "COUNCIL"
&TEXTFONT 0
&TEXTCOLOR 1
&WEND
&WBEGIN
&TEXTSIZE .12 1
&MOVE 6 4.8
&TEXT "HIGHVALLE: COAL SEAM 2"
&KEYPOSITION 6 2.5
&KEYSEPARATION .15 .15
ALABEL BBED
WSEL ALL
CLEAR
ATYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
\DELETE
\BEGIN
\LINEC 1
\BOX 0 0 9.6 5.6
\LINEC 9
\ARCS ATS
\LINEC 6
\ARCS RIV
\LINEC 12
\ARCS LAK
\MOVE 6.5 5
\TEXTSIZE 15 13
\TEXT "TOP: 5 59 4"
\TEXTSIZE .1 .07
\TEXTCOLOR 2
\MOVE 1 .1
\TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
\MOVE 8.7 .6
\TEXT "ALBERTA"
\MOVE 8.7 .4
\TEXT "RESEARCH"
\MOVE 8.7 .2
\TEXT "COUNCIL"
\TEXTCOLOR 0
\MOVE 8.7 .1
\TEXT "SOUTH HIGHVALE MINE"
\MOVE 5.6 4.6
\TEXTSIZE .08
\TEXT "ISOPACH SURFACE TOP LITHOLOGY"
\MOVE 5.6 4.4
\TEXT "500 (BASE OF DISTURBED BEDROCK)"
\KEYPOSITION 6.0 2.5
\KEYSEPARATION .15 .15
\KEYBOX .2 .2
\KEYSHADE HSDBED. KEY
\RESEL HSDBED POLYS CLASS = 1
\POLYGONSHADES HSDBED 42
\CLEARSEL
\RESEL HSDBED POLYS CLASS = 2
\POLYGONSHADES HSDBED 70
CLEARSEL
LINEC 1
ARCS HSLS
MEND
&JUMP OVERLAY

&LABEL PERN
MBEGIN
POLYGONSHADES PERN 31
LINEC 1
ARCS PERN
TEXTSIZE .107
MOVE 3.2 5
TEXT 'PERM#C77-20'
MEND
&JUMP OVERLAY

&LABEL STAT
WSEL ALL
CLEAR
MDELETE
MBEGIN
LINEC 1
BOX 8 8 9.6 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS RIV
LINEC 12
ARCS LAK
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TEMP 5 50 4'
TEXTSIZE .107
TEXTFONT 0
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 0
TEXTCOLOR 1
MEND
MBEGIN
TEXTSIZE 12 1
MOVE 6.5 4.6
TEXT 'SOUTH HIGHVALE'
MOVE 6.5 4.6
TEXTSIZE .1 .07
TEXT 'OIL & GAS WELL STATU'
KEYPOSITION 6 2.4
KEYSEPARATION .15 .15
KEYBOX 2.2
KEYMARKER STAT KEY NOBOX
&LABEL ASK6
CLEARSEL
&ASK 6 "B-EXIT. PLEASE ENTER YOUR CHOICE - 9
&GOTO STAT1 &IF &EQ %6 1
&GOTO STAT2 &IF &EQ %6 2
&GOTO STAT3 &IF &EQ %6 3
&GOTO STAT5 &IF &EQ %6 4
&GOTO STAT6 &IF &EQ %6 5
&GOTO STAT7 &IF &EQ %6 6
&GOTO STAT8 &IF &EQ %6 7
&GOTO CUIT &IF &EQ %6 8
&GOTO ASK6
&LABEL STAT1
RESSEL STAT POINTS STAT = 1
POINTMARKERS STAT 45
&JUMP ID
&LABEL STAT2
RESSEL STAT POINTS STAT = 2
POINTMARKERS STAT 46
&JUMP ID
&LABEL STAT3
RESEL STAT POINTS STAT = 3
POINTMARKERS STAT 47
&JUMP ID
&LABEL STAT5
RESEL STAT POINTS STAT = 5
POINTMARKERS STAT 89
&JUMP ID
&LABEL STAT6
RESEL STAT POINTS STAT = 6
POINTMARKERS STAT 90
&JUMP ID
&LABEL STAT7
RESEL STAT POINTS STAT = 7
POINTMARKERS STAT 91
&JUMP ID
&LABEL STAT8
RESEL STAT POINTS STAT = 8
POINTMARKERS STAT 92
&JUMP ID
&LABEL QUIT
&JUMP OVERLAY

&LABEL ID
&ASK 8 "1-# of all the wells, 2-# of each well, 3-EXIT" 4
&GOTO ASK6 &IF &EQ %B 3
&GOTO &ALL &IF &EQ %B 1
&GOTO EACH &IF &EQ %B 2
&JUMP ID
&LABEL EACH
IDENTIFY STAT POINTS = WELL_ID
&GOTO ID
&LABEL ALL
LIST STAT POINTS WELL_ID
&JUMP ID

&LABEL PRINTER
CLEAR
&SETVAR 5 "PRINTER"
&RUN %5
MAP END
KILLMAP MAP1
DISPLAY 4 2 2
&LABEL ASK3
&ASK 6 "1-NEW MAP, 2-WABAMUN MENU, 3-MAIN MENU, 4-EXIT" 5
&GOTO NAME &IF &EQ %E 1
&GOTO WABAMUN &IF &EQ %E 2
&GOTO MAIN &IF &EQ %E 3
&GOTO EXIT &IF &EQ %E 4
&GOTO ASK3

&LABEL HWY
MEBEGIN
LINEC 2
ARCS HWY
MEND
&JUMP OVERLAY

&LABEL WABAMUN
MAP END
KILLMAP MAP1
CLEAR
&SYSTEM "CD C:\WABAMUN\SAREA"
&RUN MANUAL.SML

&LABEL MAIN
MAP END
KILLMAP MAP1
CLEAR
&SYSTEM "CD C:\PROJ1"
&RUN OLTAB.SML

&LABEL OVERLAY
&QUERY 7 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE" &F
&GOTO MENU1 &IF &EQ %7 Y
DELETE
MFRESH
&GOTO MENU1
&LABEL EXIT
FILE -> WABAMUN\TWPS\TS835\MANUAL.SEL

&REM ******************************************************
&REM THIS MENU WILL DISPLAY ALL THE COVERAGEs IN THE TS835 DIRECTORY.
&REM USERS CAN PRODUCE ANY PRINTOUTS ANYTIME DURING THE PROCESS.
&REM THIS MANUAL IS CALLED BY THE WABAMUN AND THE MAIN MENU.
&REM WRITTEN BY D. CHAP SEPT 27, 1986.
&REM ******************************************************

&LABEL NAME
PAGESIZE 9.6 5.6
MAP MAP1
MAPEX ATS STAT GDRILL GSCLM GDCLM GACHS CACLM GSCHS GOTC
&LABEL MENU
CLEAR
LINEC 1
BOX 0 0 9.6 5.6
MBEGIN
MAPANGLE -1.5
LINEC 9
ARCS ATS
LINEC 6
ARCS RIV
LINEC 12
ARCS LAK
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT "TWP: 5 50 3"
MOVE 6.2 4.7
TEXT 'GENESEE MINE'
TEXTSIZE .7 0.7
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
END

&LABEL MENU1
&TYPE "1- TOP OF HIGHEST SEAM CONTOUR, 2- DRILLHOLE DISTRIBUTION, 3- TOP OF UPPER"
&TYPE "4- MAIN, 5- SULPHUR (LOWER MAIN), 6- SULPHUR (HIGH SEAM)
&TYPE "7- ASH (LOWER MAIN), 8- TOP OF LOWER MAIN CONTOUR, 9- DEPTH OF COVER TO"
&TYPE "LOWER MAIN, 10- OVERBURDEN THICKNESS, 11- LICENCED AREAS, 12- PERMIT AREA"
&TYPE "13- HWY, 14- MINE DISTRIBUTIONS, 15- WELL STATUS, 16- PRINTER"
&TYPE "17- WABAMUN MENU, 18- MAIN MENU, 19- EXIT, 20- TTY"
&ASK 1 "PLEASE ENTER YOUR CHOICE " 20
&GOTO GMSC &IF &EO &X1 1
&GOTO GDRILL &IF &EO &X1 2
&GOTO GTUM &IF &EO &X1 3
&GOTO GSCLM &IF &EO &X1 4
&GOTO GACHS &IF &EO &X1 5
&GOTO GACLM &IF &EO &X1 6
&GOTO GTLM &IF &EO &X1 7
&GOTO GDCLM &IF &EO &X1 8
&GOTO GSCLM &IF &EO &X1 9
&GOTO GOTC &IF &EO &X1 10
&GOTO LIC &IF &EO &X1 11
&GOTO PERM &IF &EO &X1 12
&GOTO HWY &IF &EO &X1 13
&GOTO MINE &IF &EO &X1 14
&GOTO STAT &IF &EO &X1 15
&GOTO PRINTER &IF &EO &X1 16
&GOTO WABAMUN &IF &EO &X1 17
&GOTO MAIN &IF &EO &X1 18
&GOTO EXIT &IF &EO &X1 19
&GOTO TTY &IF &EO &X1 20
&GOTO MENU1
&LABEL TTY
&TTY
&JUMP MENU1

&LABEL GMSC
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MODELE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS RIV
LINEC 12
ARCS LAK
TEXTSIZE .15 .13
MOVE 6.5 5
TEXT "TWP:5 50 3"
MOVE 6.2 4.7
TEXT "GENESEE MINE"
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE 1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT ' ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT ' COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
TEXTSIZE .1 .07
MOVE 5.8 4.5
TEXT 'TOP OF THE HIGHEST SEAM CONTOUR'
LINEC 10
ARCS GMSC
MEND
&JUMP OVERLAY

&LABEL GTUM
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
MODELE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS RIV
LINEC 12
ARCS LAK
TEXTSIZE .15 .13
MOVE 6.5 5
TEXT "TWP:5 50 3"
MOVE 6.2 4.7
TEXT "GENESEE MINE"
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE 1 .1
TEXT "COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY"
MOVE 8.7 .6
TEXT ' ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT ' COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
TEXTSIZE 1 .07
MOVE 6.2 4.5
TEXT 'TOP OF UPPER MAIN'
LINEC 15
ARCS GTLM
MEND
&JUMP OVERLAY

&LABEL GTLM
MSEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNCLEAR PLOT"
MDELETE
MBEGIN
LINEC 1
BOX 0 0 9.5 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS RIV
LINEC 12
ARCS LAK
TEXTSIZE .15 .13
MOVE 6.5 5
TEXT 'TOP:5 50 3'
MOVE 6.2 4.7
TEXT 'GENESEE MINE'
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
TEXTSIZE .1 .07
MOVE 5.8 4.5
TEXT 'TOP OF LOWER MAIN CONTOURS'
LINEC 10
ARCS GTLM
MEND
&JUMP OVERLAY

&LABEL GDRILLH
MBEGIN
TEXTSIZE .1 .07
KEYPOSITION 6 4.2
KEYSEPARATION .15 .15
KEYBOX .2 .2
KEYMARKER GDRILLH.KEY NOBOX
&LABEL ASK10
&ASK 10 "5-EXIT - 6"
&GOTO TYPE1 &IF &EQ %10 1
&GOTO TYPE2 &IF &EQ %10 2
&GOTO TYPE3 &IF &EQ %10 3
&GOTO TYPE4 &IF &EQ %10 4
&GOTO OVERLAY &IF &EQ %10 5
&JUMP ASK10
&LABEL TYPE1
RESEL GDRILLH POINTS TYPE = 1
POINTMARKERS GDRILLH 89
CLEARSEL
&JUMP ASK10
&LABEL TYPE2
RESEL GDRILLH POINTS TYPE = 2
POINTMARKERS GDRILLH 90
CLEARSEL
&JUMP ASK10
&LABEL TYPE3
RESEL GDRILLH POINTS TYPE = 3
POINTMARKERS GDRILLH 91
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
MOVE 6.2 4.5
TEXTSIZE .1 .07
TEXT 'ASH (HIGH SEAM)'
KEYPOSITION 6.0 2.4
KEYSEPARATION .12 .12
KEYBOX 2 .2
KEYSHADE GACHS KEY
RESEL GACHS POLYS CLASS = 1
POLYGONSHADES GACHS 18
CLEARSEL
RESEL GACHS POLYS CLASS = 2
POLYGONSHADES GACHS 46
CLEARSEL
RESEL GACHS POLYS CLASS = 3
POLYGONSHADES GACHS 70
CLEARSEL
RESEL GACHS POLYS CLASS = 4
POLYGONSHADES GACHS 2
CLEARSEL
RESEL GACHS POLYS CLASS = 5
POLYGONSHADES GACHS 47
CLEARSEL
RESEL GACHS POLYS CLASS = 6
POLYGONSHADES GACHS 71
CLEARSEL
RESEL GACHS POLYS CLASS = 7
POLYGONSHADES GACHS 3
CLEARSEL
LNEC 1
ARCS GACHS
MEND
&JUMP OVERLAY
&LABEL GACLM
MSEL ALL
CLEAR
_ATYPE "ENTER <Y> TO AVOID UNCLEAR PLOTS"
DELETE
MBEGIN
LNEC 1
BOX 0 0 9.6 5.6
LNEC 9
ARCS ATS
LNEC 6
ARCS RIV
LNEC 12
ARCS LAK
MOVE 6.5 5
TEXTSIZE .15 .13
TEXT 'TWP: 5 50 3'
MOVE 6.2 4.7
TEXT 'GENESEE MINE'
TEXTSIZE .1 .07
TEXTFONT 0
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTCOLOR 1
TEXTFONT 0
MEND
MBEGIN
MOVE 6.2 4.5
TEXT SIZE .1 .07
TEXT 'ASH (LOWER MAIN)'
KEYPOSITION 6.0 2.4
KEYSEPARATION .12 .12
KEYBOX .2 .2
KEYSHADE GCCLM KEY
RESEL GCCLM POLYS CLASS = 1
POLYGONSHADES GCCLM 46
CLEARSEL
RESEL GCCLM POLYS CLASS = 2
POLYGONSHADES GCCLM 76
CLEARSEL
RESEL GCCLM POLYS CLASS = 3
POLYGONSHADES GCCLM 2
CLEARSEL
RESEL GCCLM POLYS CLASS = 4
POLYGONSHADES GCCLM 47
CLEARSEL
RESEL GCCLM POLYS CLASS = 5
POLYGONSHADES GCCLM 71
CLEARSEL
RESEL GCCLM POLYS CLASS = 6
POLYGONSHADES GCCLM 3
CLEARSEL
LINEC 1
ARCS GCCLM
MEND
&JUMP OVERLAY

&LABEL GCCLM
&SEL ALL
CLEAR
&TYPE "ENTER <Y> TO AVOID UNEQUAL PLOTS"
&DELETE
MBEGIN
LINEC 1
BOX 0 0 9.6 5.6
LINEC 9
ARCS ATS
LINEC 6
ARCS RIV
LINEC 12
ARCS LAK
MOVE 6.0 5
TEXTSIZE 15 13
TEXT 'TWP.5 50 3'
MOVE 6.2 4.7
TEXT 'GENESEE MINE'
TEXTSIZE .1 .07
TEXTFONT 8
TEXTCOLOR 2
MOVE .1 .1
TEXT 'COAL GEOLOGY GROUP, ALBERTA GEOLOGICAL SURVEY'
MOVE 8.7 .6
TEXT 'ALBERTA'
MOVE 8.7 .4
TEXT 'RESEARCH'
MOVE 8.7 .2
TEXT 'COUNCIL'
TEXTFONT 1
TEXTCOLOR 1
MEND
MBEGIN
MOVE 6.0 .45
TEXTSIZE 1 .07
TEXT 'DEPTH OF COVER TO LOWER MAIN'
KEYPOSITION 6.0 2.8
KEYSEPARATION .12 .12
KEYBOX .15 .15
KEYSHADE GCCLM KEY
RESEL GCCLM POLYS CLASS = 1
POLYGONSHADES GCCLM 18
CLEARSEL
RESEL GCCLM POLYS CLASS = 2
POLYGONSHADES GCCLM 46
CLEARSEL
RESEL GCCLM POLYS CLASS = 3
POLYGONSHADES GCCLM 70
CLEARSEL
CLEARSEL
&ASK 6 "8-EXIT. PLEASE ENTER YOUR CHOICE " 9
&GOTO STAT1 &IF &EQ %6 1
&GOTO STAT2 &IF &EQ %6 2
&GOTO STAT3 &IF &EQ %6 3
&GOTO STAT4 &IF &EQ %6 4
&GOTO STAT5 &IF &EQ %6 5
&GOTO STAT6 &IF &EQ %6 6
&GOTO QUIT &IF &EQ %6 7
&GOTO ASK6
&LABEL STAT1
RESEL STAT POINTS STAT = 1
POINTMARKERS STAT 45
&JUMP ID
&LABEL STAT2
RESEL STAT POINTS STAT = 2
POINTMARKERS STAT 46
&JUMP ID
&LABEL STAT3
RESEL STAT POINTS STAT = 3
POINTMARKERS STAT 47
&JUMP ID
&LABEL STAT5
RESEL STAT POINTS STAT = 5
POINTMARKERS STAT 59
&JUMP ID
&LABEL STAT6
RESEL STAT POINTS STAT = 6
POINTMARKERS STAT 90
&JUMP ID
&LABEL STAT7
RESEL STAT POINTS STAT = 7
POINTMARKERS STAT 91
&JUMP ID
&LABEL STAT8
RESEL STAT POINTS STAT = 8
POINTMARKERS STAT 92
&JUMP ID

&LABEL QUIT
&JUMP OVERLAY

&LABEL O
&ASK B "1-OL OF ALL THE WELLS, 2-ID OF EACH WELL, 3-EXIT " 4
&GOTO ALL &IF &EQ %8 1
&GOTO ASK6 &IF &EQ %8 3
&GOTO EACH &IF &EQ %8 2
&JUMP ID
&LABEL EACH
IDENTIFY STAT POINTS * WELL_ID
&GOTO ID
&LABEL ALL
LIST STAT POINTS WELL_ID
&JUMP ID

&LABEL MINE
MBEGIN
POINTMARKERS SURF 88
TEXTSIZE .08 .05
MOVE 4.2 3.3
TEXT 'SURFACE MINE#178B'
MOVE 4.2 3.15
TEXT 'LOC:UNCERTAIN'
MOVE 2.8 2.8
TEXT 'SURFACE MINE#1595'
MOVE 2.8 2.65
TEXT 'LOC:UNCERTAIN'
MEND
&JUMP OVERLAY

&LABEL HWY
MBEGIN
LINEC 2
ARCS HWY
MEND
&JUMP OVERLAY

&LABEL PRINTER
CLEAR
&SETVAR 5 "PRINT"
&RUN %5
MAP END
KILLMAP MAP1
DISPLAY 4 2 3
&LABEL ASK3
&ASK 6 "1=NEW MAP, 2=WABAMUN MENU, 3=MAIN MENU, 4=EXIT" 5
&GOTO NAME &IF &EO %6 1
&GOTO WABAMUN &F &EO %6 2
&GOTO MAIN &F &EO %6 3
&GOTO EXIT &F &EO %6 4
&GOTO ASK3

&LABEL WABAMUN
MAP END
KILLMAP MAP1
CLEAR
&SYSTEM "CD C:\WABAMUN\SAREA"
&RUN MANJAL.SML

&LABEL MAIN
MAP END
KILLMAP MAP1
CLEAR
&SYSTEM "CD C:\PROJ1"
&RUN OLTAB.SML

&LABEL OVERLAY
&QUERY 7 "OVERLAY THIS DISPLAY ONTO THE NEXT ONE " &F
&GOTO MENU1 &IF &EO %7 Y
DELETE
FRESH
&GOTO MENU1

&LABEL EXIT
MAP END
KILLMAP MAP1

DISPLAY 1
PAGESIZE 9.6 5.6
PLOT MAP1
MAP
&RETURN

FILE -> SAME PROGRAM FOR ALL DIRECTORIES