In order to use BSQ imagery in ESRI ArcGIS 8.x ArcMap follow the steps below:

1. **Rename Your .L1G File:** For ArcView to recognize the .L1G Landsat bands as legitimate images, they need to be renamed with a .bsq extension. Right click the .L1G bands and rename them with the same file name, substituting only the ".L1G" extension with ".bsq". Note that this step reflects a limitation of ArcView, not of the imagery provided.
2. **Create a "World File" to Allow ArcGIS to Import the Bands:** In the case of our sample image [bookmark above], open the .glcf file you downloaded. It should list all the information you will need for basic image display and analysis. Create a text file with the extension .hdr. The file should appear similar to the example shown below but you will need to change the parameter information based on the documentation for each of the data files:

```
Image BSQ header file
nrows 7041
ncols 7921
nbands 1
nbits 8
layout bsq
skipbytes 0
ulxmap 147300
ulymap 1704900
xdim 28.5
ydim 28.5
```

3. **Start ArcMap:** In MS Windows this will generally be through either a desktop icon or an entry under the "Start -> Program Files ->ArcGIS" section of the Windows menu. Open "A New Empty Map" when the program initializes.
4. **Activate the Appropriate Extensions:** In order to retrieve spatial data from an image *it is necessary to have the Spatial Analyst* extension installed. In ArcView go to "File -> Extensions" and ensure that Spatial Analyst support is installed and checked.
5. **Add and Display as Raster Imagery**: Highlight a blank data frame and select "File -> Add Data". Navigate to the location where the land cover data set is located, it will display with a beige icon next to it. Highlight the data set and click "Add". It will display as a grayscale image in your data frame.
6. **Save your Work:** "File -> Save As", indicate a path and name and click "OK".

A Note on Spatial Reference Data in ArcGIS: The user will need to enter the projection and spatial data information manually. To do this right click the data frame and select "Properties". Navigate to the "Coordinate System" tag. Enter the appropriate data and click "OK". It may be necessary to reconcile the projections of the image and any shapefiles/layers with which it will be used.

A Note on RGB Color Composites and ArcGIS: Many users find that it is easier to composite image bands and conduct robust image processing functions prior to importing data into ArcGIS. An example is using ERDAS to do layer stacking and exporting the resultant RGB composite as a GeoTIFF which is then used in ArcGIS. The user may

optionally also convert the bands to GRIDs to access some of the higher-end features of ArcGIS.

A Note on MrSID and ArcGIS: A useful feature of ArcGIS is that ArcCatalog is able to export rasters of up to 50MB to MrSID format. This can prove helpful in reducing the size of derived products.