

TENGRAPH® Study 2007



Department of
Industry and Resources

**Prepared by:
Research Solutions**

September 2007

CONTENTS

1.0	Executive Summary	1
1.1	Key Findings – Overall Satisfaction and use of TENGRAPH®	1
1.2	Key Findings – Satisfaction with TENGRAPH® Functions	2
1.3	Key Findings – Other Tenement Mapping Systems	4
1.4	TENGRAPH® Compared to Other Tenement Mapping Systems	5
1.5	Key Findings – Redeveloping TENGRAPH®	6
1.6	Conclusions and Recommendations	6
2.0	Introduction	10
2.1	Research Objectives	10
2.2	Research Method	10
2.3	Sampling Frame	12
2.4	Statistical Analysis	13
3.0	Overall Satisfaction and Use of TENGRAPH®	14
3.1	Overall Satisfaction	14
4.0	TENGRAPH® Functions: Use and Levels of Satisfaction	16
4.1	Enquiry	16
4.2	Selection	26
4.3	Process	42
4.4	i-button	46
4.5	View	50
4.6	File	51
4.7	Windows	54
4.8	Additional Comments	58
5.0	Other Tenement Mapping Systems	63
5.1	Systems TENGRAPH® is Compared to	63
6.0	Redevelopment and Review of TENGRAPH®	74
6.1	Suggestions for Improvements	74
6.2	DoIR’s Potential Ideas for Improvement to the System	77
6.3	Other Ideas and Suggestions for Improvement to the System	78
Appendix 1	The Questionnaire	
Appendix 2	Sampling Details	

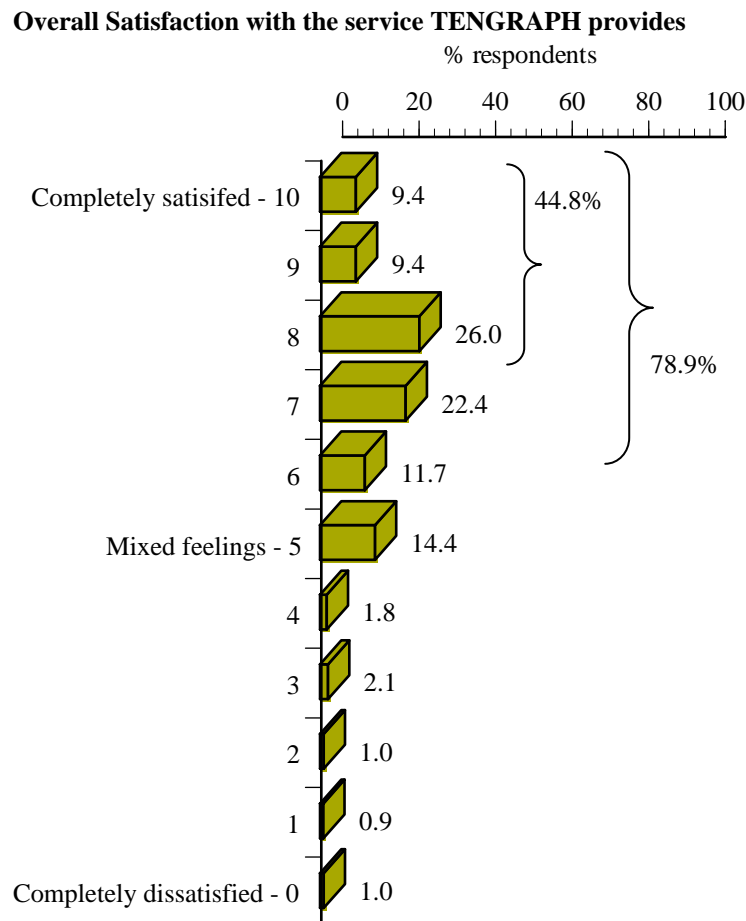
1.0 Executive Summary

This study was conducted to assist DoIR in planning the replacement of the TENGRAPH® system. An online survey was administered to customers who had used the system in the last 3 months, from which a sample of 778 respondents was achieved.

The study gauges the level of usage and satisfaction with the various TENGRAPH® functions, and identifies the areas where customers feel TENGRAPH® should be improved.

1.1 Key Findings – Overall Satisfaction and Use of TENGRAPH®

Overall satisfaction with the TENGRAPH® system is reasonably good with almost 80% of customers rating themselves as satisfied. However, only 44.8% of customers are very satisfied (8 to 10 out of 10) as shown in the figure below.



Q.3 Overall, how satisfied are you with the service TENGRAPH® provides. Please click on the number which best reflects your feelings (where 0 - Completely dissatisfied, 5 – Mixed feelings, and 10 - Completely satisfied).

1.1 Overall Satisfaction and Use of TENGRAPH® (continued)

The research indicates that the use of TENGRAPH® Online was evenly spread between frequent and moderate users with 40.4% of respondents using the service daily or at least once a week, and 41.6% using it 1 to 3 times a month. TENGRAPH® was usually used at the respondent's place of work / home rather than DoIR's public counters. The use of TENGRAPH® Enquiry at the computer terminals located at DoIR's public counters was very low, with the majority (65.1%) of respondents utilising this service less than once a month / never.

The research shows that the more frequent users (at least once a week or more often) were more satisfied with the TENGRAPH® system than less frequent users (1 – 3 times a month or less). Commentary made by those who rated the various features of the system low (0 to 4 out of 10) indicated that many had problems with understanding the system and being able to carry out their tasks efficiently. Since usage of many functions which rated poorly was low, one may hypothesise that regular users either avoid these functions or have found ways to work around the problems they are faced with.

Furthermore, respondents comparing TENGRAPH® to the GIS package they used were less satisfied with the TENGRAPH® system. These respondents are aware of what other systems can do and overall their comparisons clearly indicate that the system has fallen behind the others that they use and is in need of updating.

1.2 Key Findings – Satisfaction with TENGRAPH® Functions

Overall, levels of satisfaction with TENGRAPH® functions and features was good with the majority of respondents generally satisfied by rating 6 or more out of 10. The functions which were perceived to work best were;

- Enquiries Function
- File Function
- Windows Function

However, the levels of use for each of the functions and their features were quite varied. The lowest levels of usage for the features also correlated to the lowest levels of satisfaction.

Of all the functions and features, all the petroleum features were the least utilised and had lower levels of satisfaction (around 40% of very satisfied customers rating 8 – 10/10).

Enquiry Function

Overall, satisfaction with the Enquiry Function features was quite high with almost 2 out of 3 of the Enquiry Function's features achieving a very satisfied score the majority of the function's users.

1.2 Key Findings – Satisfaction with TENGRAPH® Functions (continued)

The features that scored the best were:

- Tenement.
- Holder
- Grid Co-ordinate Enquiries

The features that scored the worst were:

- Reserve By Land ID
- Petroleum Titles Enquiries

Selection Function

Only one in three Selection Function features scored a very satisfied rating from the majority of function users.

The features that scored the best were:

- Tenement Screen, Public Plan (ground available).
- Granted Boundaries Selections.

The features that scored the worst were:

- DIA Heritage Surveys.
- Petroleum Graticules – Territorial.
- Petroleum Graticules – Onshore and Offshore.

Process Function

Respondents' use of the Process Function and its features was even lower, and only Quick Appraisal Process received a satisfaction rating of 8 or more out of 10 from at least 50% of respondents using this function.

i-Button Function

Two of features received ratings of 8 – 10/10 from at least 50% of respondents using the function. These features were i-button on Tenements and i-button on WAMEX Tenements. The features that scored the worst were i-button on DIA Heritage Survey and i-button on Petroleum Titles.

View Function

The Historical View feature received ratings of 8 – 10/10 from almost 50% of respondents (49.2%).

1.2 Key Findings – Satisfaction with TENGRAPH® Functions (continued)

File Function

Respondents were most satisfied with this Function with 5 out of 6 features rated 8 – 10/10 by at least 50% of respondents who used the function. The features that scored the best were Clear Screen and Print Preview, while the worst feature was the Conversion Calculator.

Windows Function

The features that scored the best were Active Holders and Co-ordinates features. The features that scored below 50% were Admin Information and Legend features.

1.3 Key Findings – Other Tenement Mapping Systems

The use of an alternate tenement mapping system was low with around 1 in 5 respondents (21.2%) indicating that they used another system. Of these, 50.9% nominated another tenement mapping system (such as SARIG – Government of South Australia) and 44.2% indicated the GIS package (such as MapInfo) which they used over a tenement system.

While 51.2% of respondents comparing TENGRAPH® to the other tenement mapping system they use believed TENGRAPH® to be **better** (much better and a bit better), by contrast 54.8% of respondents comparing it to the GIS system they use felt that TENGRAPH® was **worse** (not quite as good and nowhere as good).

Ratings for TENGRAPH® Against the Best System That You Use (n=165)

	Other Tenement Mapping Systems % n=84	GIS Systems % n=73	Other % n=8	Total % n=165
Better	51.2	26.0	50.0	40.0
Similar	21.4	19.2	12.5	20.0
Worse	27.4	54.8	37.5	40.0
Total	100.0	100.0	100.0	100.0%

Q8: How do you rate TENGRAPH® against the best system that you use? (Not sure and Don't Knows excluded)

1.4 TENGRAPH® Compared to Other Tenement Mapping Systems

Other tenement mapping systems which were compared to TENGRAPH® and perceived to be **better** include:

- SARIG
- Landgate's Smartplan
- GEOVIC
- IRTM
- UK DEAL
- TIS
- Minview
- Geoview

No one particular system stood out as being the best / most preferable, however the main reasons why respondents found these systems better than TENGRAPH® were:

- Information is not easily deciphered
- Not up to date / accurate
- Limited search fields
- Not user friendly or intuitive / Harder to use
- Slow and clunky service
- Not a universal system
- GIS compatible / integrated

TENGRAPH® compared to GIS packages

The GIS packages that respondents compared TENGRAPH® were:

- Arcview, Arcmap and ArcGIS
- MapInfo
- Eureka

The majority of respondents comparing TENGRAPH® with the GIS package they use felt that TENGRAPH® was worse, and the main reasons included the following:

- Lack of 'useability' / being able to manipulate data
- Old, slow and clunky
- Does not have the same flexibility
- Needs to connect to the Internet
- Limited ability to integrate with other datasets

1.5 Key Findings – Redeveloping TENGRAPH®

Almost 40% of respondents provided their suggestions for improvements in the redevelopment of TENGRAPH® that would better meet their needs. Of importance were improvements to the following issues:

	%
• Logging on / Timing out / Freezing	2.0
• Training / Help	3.3
• Speed of the system / “Clunky”	3.1
• Compatibility / Coordination / Integration with GIS	6.2
• Links	1.4
• Citrix / Server	1.0
• Mac and Vista users	0.5

Note: The percentages are indicative as this question asked for suggestions and some respondents had already included their suggestions in previous comments for Questions 6. Percentages are based on the whole sample (n=778)

As part of the TENGRAPH® review process, DoIR developed a number of potential ideas for improvement to the system. The most attractive of these were:

- The provision of image data
- Online digital downloads (the most popular and scoring in the 90s).

There was praise for these proposed improvements, but respondents also reiterated the need for help and training for users and some added features. There were also a few respondents who voiced their concerns about the added extras such as geology or satellite imagery making the system slower.

1.6 Conclusions and Recommendations

It is clear from the research that although the TENGRAPH® system is satisfying the majority of users at present, there is certainly the need to replace the system as soon as possible and move away from the client server based system to a more user friendly web-based GIS application. DoIR is currently assessing ArcGIS Server for the new system and should this go well, the TENGRAPH® system may be rebuilt.

The report contains many comments on individual functions and suggestions for improvements and these have been detailed mainly through respondent commentary in the relevant sections of the report. It is evident that the more frequent users are more satisfied than the less frequent users and as suggested earlier, this may be an indication of the frequent users perhaps only using limited functions/features that work for them, and/or frequent users have possibly worked out how to use the system and get around problems.

1.6 Conclusions and Recommendations (continued)

Some respondents also commented that whilst participating in the survey, they actually identified a number of functions and features that they had previously not been aware of.

As this is the first TENGRAPH® satisfaction survey for some time and in the absence of some in depth discussion with users at the commencement of the study, there are still gaps in the research as to truly understanding the customer and how the system may better meet their needs. The diversity of users and purposes for using TENGRAPH® as well as the large number of features has meant that we do not have a comprehensive understanding of all areas of improvement.

Therefore, as a next step DoIR may consider conducting workshops / or forums (as also suggested below) with users from each category to better understand their issues. Furthermore, it is suggested that staff and the developers are involved in these workshops which may assist DoIR further in the planned replacement of the system.

Some of the issues/features however, such as export function, downloading and overlaying/underlaying are areas which will be solved when the TENGRAPH® system can be replaced.

1. Training and Communications with Users

The results and commentary from respondents seem to indicate that the service is not being utilised to its full potential. As pointed out by some respondents, it was whilst participating and completing the survey that they actually realised the number of functions and features available that they were not aware. DoIR may therefore consider in the short term;

- Advertising the availability of training sessions / workshops on its site similar to SARIG
- Including Frequently Asked Questions (FAQs) button on the front page of the website
- Introducing user group forums or “networking” sessions on how to best utilise the on-line system

For the new system DoIR should also provide on line Help similar to Landgate.

There was also mixed feedback as to the helpfulness or the extent to which staff could help. DoIR may consider involving the staff more in the above suggested training / workshop sessions and forums.

These workshops may also be an excellent opportunity to establish why certain functions and features are not being utilised as much, and how users are getting around the problems and issues.

1.6 Conclusions and Recommendations (continued)

2. Timing out and Freezing out

DoIR needs to manage customer expectations in relation to timing out – both in relation to TENGRAPH® and accessing it via dial up etc. It should investigate the potential to allow customers to stay logged on all day on the new system.

In relation to freezing out, DoIR should encourage customers to report this with a view to investigating its cause.

3. Issues with Citrix

Citrix is not recommended to connect via a dial-up internet connection nor to connect via a Directway satellite Internet connection (<http://support.citrix.com/forums>); however, this type of connection is used by many customers and would account for those users having problems such as screen blurring when scrolling and extremely long wait times for printing and saving.

It is understood that in redeveloping TENGRAPH® that DoIR is moving to a web-based GIS environment which will support web-services and do away with the need to use Citrix.

The Department has a policy to provide limited support to Mac users – while this constitutes a very small number of TENGRAPH® these customers' expectations need to be managed. Compatibility with Vista needs to be achieved as soon as possible as those who have upgraded their computers to Vista, expressed their frustration at Citrix and the 'glitches' with their software, and this problem is set to increase as customers upgrade their systems.

4. Speed / “Clunky”

Many respondents highlighted the need for improvements to the speed of the system. In addressing this and also the system being perceived as 'clunky', DoIR should adopt a simpler interface which may make the system easier to navigate and faster. DoIR must also take into consideration the inclusion of any potential improvements (such as satellite imagery etc.) and ensure that these do not make the system slower

5. Usability and GIS Integration / Coordination / Links

The research has shown that TENGRAPH® users, particularly those comparing the system to the GIS package they use, require data in a format they can download and use. This expectation needs to be managed not only with TENGRAPH®, but also with the use of web services where DoIR's custodial data will reside on its website and it is the personalised settings which will be saved.

DoIR's future tenement mapping system must be compatible with GIS programs so that information can be downloaded and viewed within them.

1.6 Conclusions and Recommendations (continued)

Future tenement mapping systems should also have the ability to easily interact with other publicly available information such as geological maps and geophysical data such as GSWA map sheets and not just WAMEX and Minedex.

6. DoIR's Potential Ideas for Improvement

While the provision of image data and online digital downloads were the most attractive of DoIR's potential improvements to the system, DoIR should consider all four, especially the ability to save 'user defined' constructions on the screen. This is important for future tenement systems and should complement the added features such as image data and online digital downloads as users will be able to save their settings as they overlay / underlay information on to their maps.

The detailed findings of the study are contained in the following pages of this report.

2.0 Introduction

TENGRAPH® Enquiry and On line displays the position of Western Australian mining tenements and petroleum titles in relation to other land information and provides an easy means of determining land available for mineral exploration.

TENGRAPH® also provides textual information from other departmental databases: Mineral Titles Online (Mining tenement), PETMAN (Petroleum title), WAMEX (mining tenement open file exploration reports), MINEDEX (Mine site and mineral deposit). Registration for TENGRAPH® is free and can be done online.

In August 2007, the General Manager of Business Systems, Mineral and Title Service Division at DoIR engaged the services of Research Solutions to conduct an online survey on DoIR's behalf to gauge user satisfaction with the TENGRAPH® service and to determine what improvements need to be made.

2.1 Research Objectives

DoIR is in the process of planning the replacement of TENGRAPH® and hence the aim of the survey was to assist in the decision making by:

- Providing a better understanding of the level of usage of the various components within TENGRAPH®
- Determining the user satisfaction with TENGRAPH®, both overall and for its individual components
- Highlighting areas where TENGRAPH® could potentially be improved from a customer perspective

2.2 Research Method

The research was administered in an online format to 1884 of DoIR customers who have registered their email address and details with DoIR and have used the TENGRAPH® database within the last 3 months.

An email was sent to all customer contacts before the survey from the Director of the Mineral and Title Services Division on the 1st August 2007 to explain that the survey was taking place, what the results would be used for, and to encourage everyone to take part. The purpose of the introductory email was to also elevate response rates to the survey by providing evidence of the legitimacy and credibility (particularly in an online environment of SPAM).

Research Solutions emailed each customer a unique link to the survey and invited them to participate on Wednesday 22nd August 2007.

After removing duplicate emails addresses (4) and the email addresses that bounced back (112), a total of 1884 customers were sent the survey to complete.

1.2 Research Method (continued)

It was initially intended that the survey be kept open for around two weeks. A reminder was sent to respondents who had yet to complete the survey in the second week of the survey and by the end of the two week period (2nd September 2007), a sample of 567 respondents / participants had been achieved.

Although this was a satisfactory response, Research Solutions recommended that the survey be reopened and extended for an additional week, as there was feedback from many customers that they had been out in the field and therefore unable to complete the survey.

The survey was reopened for an additional week until the 9th September 2007, and customers who had not completed the survey were sent a notification of the extension. An additional 211 responses were collected during this period, bringing the final sample to 778 participants.

2.2.1 Questionnaire Design

In close consultation with representatives from DoIR, Research Solutions developed the questionnaire to measure TENGRAPH® customer satisfaction.

The first section of the survey gauged the usage and overall satisfaction with TENGRAPH®, and levels of satisfaction with the various functions of the service. The second half of the survey focused upon comparing TENGRAPH® to other tenement mapping systems and gathering information on improvements for the redevelopment of TENGRAPH®.

The final section of the questionnaire asked for information regarding the respondent's occupation / profession (details reported in Appendix 2 of the report). Respondents were also asked if they would like someone from DoIR to personally contact them to discuss the issues and comments they raised in the survey. 33.8% of respondents wished to be contacted, and a list of their names and contact details was forwarded to the General Manager of Business Systems, Mineral and Title Service Division at DoIR.

Note that in a previous question (Question 4), respondents that checked the Less Often / Never option for a function were able to opt out and be filtered out of the function and questions on its features in Question 6. This was to make this section of the questionnaire manageable for respondents.

For example, 151 respondents chose Less Often / Never in Question 4 and were able to opt out and be filtered out of the Function and questions on its features in Question 6 (and therefore 627 respondents go through to Question 6 on Enquiry Function and features).

A copy of the questionnaire (approved by DoIR prior to study commencement) is appended to this report.

2.3 Sampling Frame

A sample size of 778 provides a maximum forecasting error of $\pm 2.7\%$ at the 95% level of confidence based on a total population of 1884 respondents. This means that any statistics given for the sample could, in the worst case scenario, actually be 2.7% higher or lower than this for the entire population of all users of TENGRAPH®.

2.3.1 Customer Profile: Frequency of Use

Use Online

Respondents were asked a series of questions to gauge how frequently they use TENGRAPH® online, and their use of TENGRAPH® Enquiry at the computer terminals at DoIR's public counters.

The majority of customers (82.0%) use TENGRAPH® online once a month or more frequently and half of these use it at least once a week.

Table 1: Use of TENGRAPH® Online (n=778)

Daily/At least Once a Week (Frequent) %	1 – 3 times a month (Moderate) %	Less than once a month / Never (Low) %	Total %
40.4	41.6	18.0	100.0

Q.1 Firstly, how frequently do you use TENGRAPH®. Online - Is it Daily, At least once a week, 1 – 3 times a month or Less than once a month/never?

1.3.2 Use of DoIR's Computer Terminals

When asked about their use of TENGRAPH® at the computer terminals located at DoIR's public counters, less than 1 in 3 customers (27.1%) said that they had done so.

Of these, and as shown in Table 2, again only 1 in 3 customers (34.9%) used DoIR's computer terminals once a month or more frequently, making a total of 9.5% of all customers.

Table 2: Use of TENGRAPH at the computer terminals located at DoIR's public counters (n=211)

Daily/At least Once a Week (Frequent) %	1 – 3 times a month (Moderate) %	Less than once a month / Never (Low) %	Total %
6.6	28.3	65.1	100.0

Q.2 Do you ever use TENGRAPH® at the computer terminals located at DoIR's public counters; If yes - Is it Daily, At least once a week, 1 – 3 times a month or Less than once a month/never?

The sample profile of respondents by profession/occupation is detailed in Appendix 2 of the report.

2.4 Statistical Analysis

The collected data was entered into SPSS (a statistical software package). It was checked for accuracy and robustness before any statistical analysis was conducted. The data was analysed using a number of statistical techniques in order to address the specified research objectives.

Statistical techniques used included descriptive statistics, cross tabulations, and various tests of significance. The results for this analysis for the survey are presented in this report.

More detailed information (in accordance with AS 4752 – Market and Social Research) regarding data collection specifics is included as Appendix 3 to this report.

3.0 Overall Satisfaction and Use of TENGRAPH®

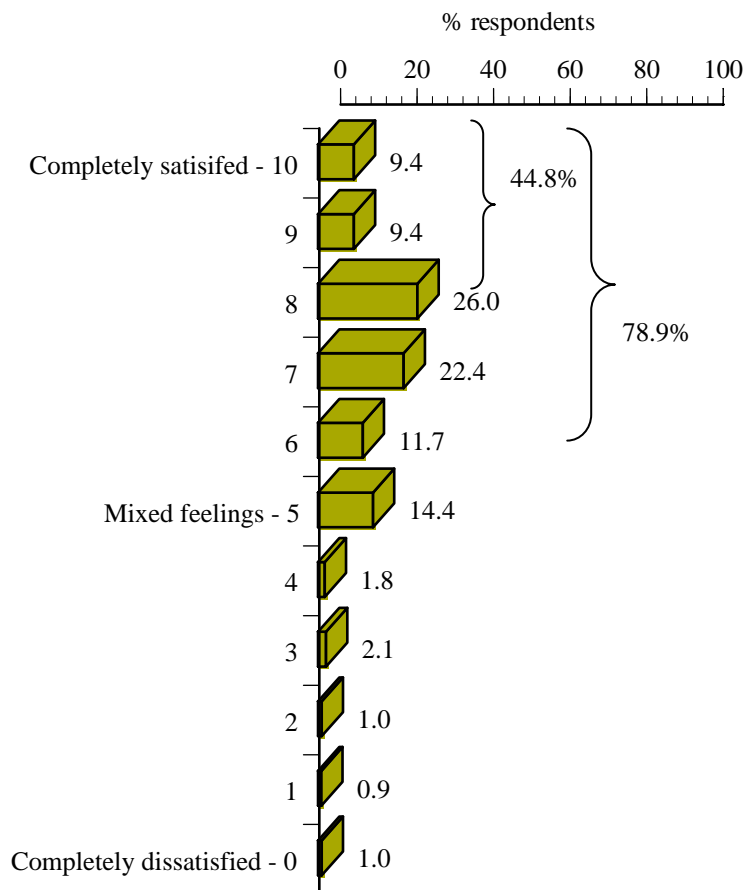
Satisfaction with the TENGRAPH® system is reasonably high with almost 80% of customers rating themselves as satisfied, and about 1 in 3 very satisfied. The more frequent users were the most satisfied.

3.1 Overall Satisfaction

Respondents were asked to rate their level of satisfaction with the service TENGRAPH® provides. The overall satisfaction was good with 80.0% of customers rating their satisfaction at 6 or more out of 10.

From a more advanced customer excellence based perspective, where results at a very high level (8 to 10 out of 10) are measured customer satisfaction, a slightly different picture emerges, which shows (as per Figure 1 below) that 1 in 2 customers currently rate their satisfaction at a very good or outstanding level.

Figure 1: Overall Satisfaction with the service TENGRAPH provides



Q.3 Overall, how satisfied are you with the service TENGRAPH® provides. Please click on the number which best reflects your feelings (where 0 - Completely dissatisfied, 5 – Mixed feelings, and 10 - Completely satisfied).

3.1 Overall Satisfaction (continued)

The research indicates that the more frequent users are more satisfied with 50.0% of customers using TENGRAPH® once a week or more often very satisfied, compared to around 40.0% of less frequent users (1- 3 times a month or less often).

Table 3: Satisfaction and Frequency of Use (n=778)

Satisfaction	Frequency of Use			
	Daily % n=89	At least once a week % n=225	1 – 3 times a month % n=324	Less than once a month/Never % n=140
Dissatisfied 0 – 4/10	4.5	8.0	4.3	12.1
Mixed Feelings 5/10	9.0	13.8	15.4	16.4
Satisfied 6 – 7/10	38.2	27.6	38.9	30.7
Very Satisfied 8 – 10/10	48.3	50.7	41.4	40.7
Total	100.0	100.0	100.0	100.0

Q.1 How frequently do you use TENGRAPH® online? and Q3: Overall, how satisfied are you with the service TENGRAPH® provides. Please click on the number which best reflects your feeling s(where 0 - Completely dissatisfied, 5 – Mixed feelings, and 10 - Completely satisfied).

Further, respondents who used other tenement mapping systems were less satisfied with TENGRAPH® than those who did not use another tenement mapping system.

There were also differences between occupation/professions where Tenement Managers(self employed), Prospectors and Surveyor/cartographers were the most likely to rate TENGRAPH® at 8 or more out of 10 (i.e. very satisfied) than the other categories.

4.0 TENGGRAPH® Functions: Use and Levels of Satisfaction

Overall, levels of satisfaction with TENGGRAPH® functions were good with the majority of respondents rating the features as 6 or more out of 10.

All the petroleum features were the least utilised and had lower levels of satisfaction.

Note that in a previous question (Question 4), respondents that checked the Less Often / Never option for a function were able to opt out and be filtered out of the function and questions on its features in Question 6 (see Section 2.2.1).

Hence, the use of the feature (in the function) is of all respondents (778). In producing statistics on the use of the feature we have based the sample on everyone. The sample for the satisfaction score is based upon those who use that section of the system, and those who use the feature less often / never were given the option to select Not Applicable (N/A) if they were unable to comment on satisfaction.

4.1 Enquiry

4.1.1 Tenement Enquiry

77.6% of all respondents use the tenement enquiry system at least once a month or more frequently.

Satisfaction is high with around 9 in 10 customers (89%) rating 6 or more out of 10 and two thirds rating it very satisfied (8 – 10/10).

Table 4: Satisfaction with Tenement Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=616
3.9	7.1	22.6	66.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=11)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, were asked to provide reasons why they felt that way. Issues/comments for this feature included:

1. The filing system is not logical and there is no easy index to refer to
2. Selection is slow and counter intuitive
3. Graphics are hard to follow
4. Not reliable as I don't get the same answers every time
5. Need more user control over scrolling over to neighbouring tenements
6. Is a pretty restrictive system and clunky to move around
7. Many historical tenements appear to be missing
8. Cross hatching obscures detail
9. Some confusion with overlapping tenements
10. Symbolology is very poor and search function is limited so can't filter easily

3.1 Enquiry (continued)

11. The figure layout and the representation of information in the figures is unclear
12. The overall map sheets could be bigger
13. The Print Object Details has never worked satisfactorily
14. The whole interface is poor and not windows standard
15. There are no clear easily accessible clear instructions on how to do anything with Tengraph
16. Very slow over the 2 way satellite
17. When using tenement you get all types e.g. E,M,P then to get to say a P you have to go and disable to E and Ms
18. When looking for a previous tenements underlying a current tenement, you have to click all around the current tenement to find them all
19. While topo is on the Tengraph maps it is still difficult to spatially locate the tenement

4.1.2 Map Sheet Enquiry

48.6% of all respondents use this feature at least once a month or more frequently.

Satisfaction with map sheet is high with around 1 in 2 customers using map sheet enquiry say they were very satisfied (rating of 8 – 10 /10).

Table 5: Satisfaction with Map Sheet Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=499
5.6	14.0	27.3	53.1	100.0

Q6b: How satisfied are you with it out of 10? (N/A=128)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, were asked to provide reasons why they felt that way. Issues/comments for this feature include:

1. Amateur prospectors may not have map sheet access
2. Can be tricky to use
3. Restrictive system and clunky
4. Restricts view to one map sheet at a time which makes it difficult to view large 200blk tenement details
5. Selection is slow and counter intuitive
6. The whole interface is poor not windows standard
7. Very slow over 2 way satellite

4.1.3 Gazetteer Location Enquiry

35.6% of all respondents use this feature at least once a month or more frequently.

3.1 Enquiry (continued)

Almost 75% of respondents were satisfied with the gazetter location, however, 18% have mixed feelings with 50% satisfied.

Table 6: Satisfaction with Gazetter Location Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=433
7.4	18.0	24.0	50.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=194)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to find historical alluvial gold locations information
2. Gazetted locations are too sparse in relation to maps
3. Hard to identify locations once selected
4. Restrictive and clunky
5. No list to chose from – if the name is not exactly right there is no response
6. Not enough landmarks on the database
7. Not listed sometimes
8. The whole interface is poor and not windows standard
9. Too many similar names
10. Very slow over 2 way satellite

4.1.4 Graticule Enquiry

34.2% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, 78.6% of respondents were satisfied with graticule enquiry and rated it 6 or more out of 10.

Table 7: Satisfaction with Graticule Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=425
5.4	16.0	27.3	51.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=202)

3.1 Enquiry (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided reasons why they felt that way. Their issues/comments for this feature include:

1. Lines are too thick
2. Restrictive system and clucky to move around
3. Needs to be more user friendly
4. Very slow over 2 way satellite

4.1.5 Latitude and Longitude Enquiry

44.0% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, levels of satisfaction are high with just over 80% of customers rating the feature at 6 or more out of 10. Furthermore, over half of the respondents were very satisfied.

Table 8: Satisfaction with Latitude/Longitude Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=479
5.0	14.2	24.4	56.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=148)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to use / Don't know how to use it
2. Can be confusing to get correct co-ordinates
3. Grid co-ordinates are better
4. Easier to centre maps with Lat/Long
5. Need a proper GIS system similar to geoviewer
6. Need UM co-ordinates as a choice (missing "T")
7. Very slow responding
8. Working out the northings and southings input requirements is a pain
9. Would prefer to be able to open viewer at a specified co-ordinate

3.1 Enquiry (continued)

4.1.6 Grid Co-ordinates Enquiry

51.8% of all respondents use this feature at least once a month or more frequently.

Satisfaction levels are high with 82.3% of customers rating Grid co-ordinates at 6 or more out of 10.

Table 9: Satisfaction with Grid Co-ordinates Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=507
6.1	11.6	24.7	57.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=120)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided reasons why they felt that way. Their issues/comments for this feature include:

1. Cannot export as a string file- they have to be printed off and then re-entered into your own system
2. Couldn't find where they were
3. Difficult to work out what is required
4. Difficulty moving these from the one screen
5. Need to put the "zone number" in and not always known
6. Needs to be more interactive – perhaps a grid function like mining software
7. Very slow responding
8. Would like to be able to get an output file (CSV) of grid co-ordinates to transfer into Vulcan

4.1.7 Reserve Enquiry

33.7% of all respondents use this feature at least once a month or more frequently.

Satisfaction with this feature is lower with 72.1% of customers rating it 6 or more out of 10 and only 42.3% very satisfied.

Table 10: Satisfaction with Reserve Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=426
8.0	20.0	29.8	42.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=201)

3.1 Enquiry (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided reasons why they felt that way. Their issues/comments for this feature include:

1. AJAX style drop down lists would be useful
2. Could do with a display screen explaining what the reserve is and to have further information about it
3. Information is limited and it is sometimes difficult to inquire for information if you have searched by tenement
4. Insufficient detail for all reserve types, including the class of reserve
5. Not enough reserve numbers in system
6. Rarely provides up-to-date information
7. The method of layering reserves and the selection is nonsense. I have at times entered a reserve number that is stated in my license conditions only to be told that it doesn't exist. The whole system should be a modern GIS format
8. Could not find the reserve I was looking for – did not know the context to use
9. Without knowing the reserve code prior to starting you can't search with this system
10. Would like to know about limits regarding reserves

4.1.8 Minesite Enquiry

42.0% of all respondents use this feature at least once a month or more frequently.

Around 3 in 4 customers (78.1%) of customers were satisfied and rated this feature 6 or more out of 10.

Table 11: Satisfaction with Minesite Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=466
6.0	15.9	26.8	51.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=161)

3.1 Enquiry (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to use
2. Location can be confusing
3. Minesite boundaries are not clearly marked
4. Minesite data is unreliable
5. Need flexibility in search window
6. Not enough detail and accuracy
7. Not enough information available
8. Rarely provides up-to-date information
9. Some difficult to locate
10. Spelling of minesite may vary depending on what reference source is used
11. Would love more historic minesites

4.1.9 Holder Enquiry

65.0% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, satisfaction is high with 86% of customers rating 6 or more out of 10, with almost 60% rating the feature at 8 or more out of 10.

Table 12: Satisfaction with Holder Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=563
4.4	9.6	26.5	59.5	100.0

Q6b: How satisfied are you with it out of 10? (N/A=64)

Respondents who rated holder enquiry system at 0 to 4 out of 10, provided reasons why they were dissatisfied. Their issues/comments for this feature include:

1. Difficult to identify and group holders in efficient manner
2. If the holder holds a lot of different mining leases, then the list is a mile long and there is no way to sort, search and refine it
3. Needs more flexible searching
4. Not always easy to find all stakeholders on land (e.g. pastoralists)
5. Spelling has to be spot on and it is difficult to filter through long lists
6. Very often names are not accessible or cannot be selected
7. Would help if it included owner as holder

3.1 Enquiry (continued)

4.1.10 Release Enquiry

25.2% of all respondents use this feature at least once a month or more frequently.

72.3% of respondents were satisfied with the release enquiry, with 47.4% very satisfied (rating of 8 – 10/10).

Table 13: Satisfaction with Release Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=386
6.2	21.5	24.9	47.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=241)

Respondents that gave a satisfaction rating of 0 to 4 out of 10, provided reasons why they felt that way. Their issues/comments for this feature include:

1. Don't use it much as I don't understand it
2. Takes weeks for ELA to show up
3. The plots are confusing

4.1.11 Mouse Position Enquiry

50.8% of all respondents experienced this feature at least once a month or more frequently.

The level of satisfaction is high with 82.7% respondents rating mouse position at 6 or more out of 10; almost 60% were very satisfied.

Table 14: Satisfaction with Mouse Position Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=498
4.4	12.9	24.7	58.0	100.0

Q6b: How satisfied are you with it out of 10? (N/A=129)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't copy and paste co-ordinates
2. Can be confusing with multiple close spaced tenements
3. I click on a point and it keeps telling me the data point is outside of the search area and asks me to reload the database. If I click yes or no, nothing happens
4. Seems to load slowly and not always in the correct position

3.1 Enquiry (continued)

4.1.12 By Land Name Enquiry

31.7% of all respondents use this feature at least once a month or more frequently.

Almost 3 in 4 (73.6%) respondents were satisfied with by land name enquiry.

Table 15: Satisfaction with By Land Name Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=402
8.2	18.2	29.1	44.5	100.0

Q6b: How satisfied are you with it out of 10? (N/A=225)

Respondents who gave a rating of 0 to 4 out of 10 for the feature provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Sometimes find it very hard to identify which pastoral station overlies the area in the viewer
2. Need to know the details before you enquire
3. Needs an index page to refer to
4. Often not been able to find the land name especially using Landgate names
5. There should be a map of locations for searches by land name – it's not intuitive, too hard to match with maps
6. Too many properties with the same name

4.1.13 By Land ID Enquiry

31.4% of all respondents use this feature at least once a month or more frequently.

Similarly to the by land name enquiry, 73.6% of respondents rated the land ID feature 6 or more out of 10.

Table 16: Satisfaction with By Land ID Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=406
7.4	19.0	29.3	44.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=221)

3.1 Enquiry (continued)

Respondents who rated the by land ID as 0 to 4 out of 10 provided the following reasons why they felt that way. Their issues/comments for this feature include:

1. Confusing / difficult to use
2. Does not give station contact information
3. Provides little ownership information
4. Always have issues trying to get pastoral lease boundary maps
5. I deal with Crown Land and there is no function to inquire on Crown Land PIs
6. Unless you have the exact information, it is extremely difficult to get the information out.

4.1.14 Petroleum Titles Enquiry

Only 6.7% of all respondents use this feature at least once a month or more frequently.

Petroleum titles received the lowest level of satisfaction of all fourteen Enquiry features, with 60.3% rating the feature at 6 or more out of 10 (as shown below).

Table 17: Satisfaction with Petroleum Titles Enquiry (n=627)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=287
9.8	30.0	21.3	39.0	100.0

Q6b: How satisfied are you with it out of 10? (N/A=340)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to use
2. Limited information available compared to mineral titles

4.2 Selection

4.2.1 Applied for Boundaries Selection

45.9% of all respondents use feature at least once a month or more frequently.

The level of satisfaction was high with 80.7% of respondents rating 6 or more out of 10 for the feature, over 50% rating it 8-10 out of 10.

Table 18: Satisfaction with Applied for Boundaries Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=451
4.9	14.4	29.5	51.2	100.0

Q6b: How satisfied are you with it out of 10? (N/A=129)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Always with other tenement data / Gets buried with other types of tenements
2. Because of the mining act and the multi pegging and overlapping same ground by mainly larger companies (mainly real estating) the maps can be a shambles in some cases and you don't know what tenement you are out on the ground
3. Hard to understand when colour blind
4. Not reliable as different results are common
5. Overlays squash others underneath
6. Should be a proper windows style GIS interface
7. Would like to be able to get electronic export of co-ordinates

4.2.2 Granted Boundaries Selection

55.3% of all respondents use this feature at least once a month or more frequently.

The majority of respondents (84.8%) were satisfied with this factor with over 1 in 2 rating 8 – 10/10.

Table 19: Satisfaction with Granted Boundaries Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=493
4.1	11.2	30.2	54.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=87)

4.2 Selection (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to use / Hard to define
2. Find it confusing and time consuming
3. Doesn't provide information on the name of the pastoralist or what the name of the lease is
4. Often displayed with insufficient detail of the actual ground to which it applies (i.e. doesn't account for exclusions/excisions)
5. Would like to be able to export off co-ordinates

4.2.3 Public Plan (Ground Available) Selection

43.8% of all respondents use this feature at least once a month or more frequently.

The level of satisfaction was high with just over 80% of respondents rating the public plan at 6 or more out of 10.

Table 20: Satisfaction with Public Plan (Ground Available) Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=240
4.1	15.0	26.2	54.7	100.0

Q6b: How satisfied are you with it out of 10?(N/A=439)

Dissatisfied respondents (rating it 0 to 4 out of 10), provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Badly defined – always with tenement data
2. Because the ground doesn't always appear on the system in time to check it out before it is too late to get an application, especially if the land is not in the immediate area
3. Not easily located / not clearly marked
4. Should be a proper windows style GIS interface

4.2 Selection (continued)

4.2.4 Marking Out Screen Selection

26.1% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, levels of satisfaction are good with around 3 in 4 customers rating the factor at 6 or more out of 10.

Table 21: Satisfaction with Marking Out Screen Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=358
6.7	18.4	28.2	46.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=222)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't see the purpose of it
2. Difficult to get meaningful graphics
3. Difficult / hard to use
4. Not easy to correct co-ordinates if a mistake is made

4.2.5 Recent Activity Screen Selection

33.8% of all respondents use this feature at least once a month or more frequently.

76.8% of respondents were satisfied (rating of 6 or more out of 10) with this feature.

Table 22: Satisfaction with Recent Activity Screen Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=184
5.8	17.4	28.4	48.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=380)

Issues include:

1. Appears to be currently out of date / Not confident that it is up to date
2. Don't know how to access
3. Need more information on the activity
4. Never had any luck with the activity show

4.2 Selection (continued)

4.2.6 Tenement Screen Selection

67.4% of all respondents use this feature at least once a month or more frequently.

Levels of satisfaction were high with almost 60% of respondents rating 8 to 10/10 for the Tenement screen feature.

Table 23: Satisfaction with Tenement Screen Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=553
4.7	9.4	27.5	58.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=27)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Awkward to read and manipulate data – needs to be in a GIS system like Geoviewer and have geology as a layer.
2. The current layer is outdated / Could be laid out better
3. Difficult to get meaningful graphics
4. Difficult to see my selection if I use the Print Object Details function – slow
5. Even if you put in a smaller tenement ID number you have to multi-zoom to be able to highlight it as the surrounding larger blocks will highlight instead
6. Limited access to download information, clarity is generally poor
7. Too cluttered – when you down load in critical areas like near a town we get the lot – water reserve, vcl town site map, etc. It ties the system up too much
8. Visualisation, custom symbology, layer control and selection are all difficult to use – much worse than Landgate, the various Idelve maps (e.g. DEC's webpage)
9. The scale is hard to scroll around and look at nearby tenements when they are large

4.2.7 Land Screen Selection

38.7% of all respondents use this feature at least once a month or more frequently.

4.2 Selection (continued)

78.9% of respondents were satisfied (rating of 6 or more out of 10) with Land screen.

Table 24: Land Screen Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=414
5.3	15.7	31.6	47.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=166)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Doesn't say who the pastoralist is or what the name of the lease is
2. Scale issue – cadastral information
3. Would like more information
4. Visualisation, custom symbology, layer control and selection are all difficult to use – much worse than Landgate, the various Idelve maps (e.g. DEC's webpage)

4.2.8 Survey Screen Selection

35.1% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, 78.3% of respondents were satisfied with the Survey screen feature. Around 1 in 2 customers gave a rating of 8 – 10/10.

Table 25: Satisfaction with Survey Screen Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=397
4.8	16.9	28.7	49.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=183)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to use / confusing
2. Scale issue – hard to see what's been done and what hasn't
3. Should be a proper windows style GIS interface
4. Would like to be able to export off co-ordinates

4.2 Selection (continued)

4.2.9 Access Exploration Report (WAMEX Screen) Selection

37.4% of all respondents use this feature at least once a month or more frequently.

Levels of satisfaction are good with almost 3 in 4 (73.5%) customers rating this feature at 6 or more out of 10.

Table 26: Satisfaction with Access Exploration Report (WAMEX Screen) Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=423
9.2	17.3	29.3	44.2	100.0

Q6b: How satisfied are you with it out of 10? (N/A=157)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to use / confusing
2. Can't find / access reports easily, many not mounted
3. Western Australia is way behind in getting the exploration reports available online. It is also way behind in getting past publications of the GSWA and Mines Department available online
4. Confusing with several overlapping layers and trying to select the different layers
5. Hangs on OSX 10
6. Don't seem to be able to get to the site
7. Incomplete dataset and coverage, the WAMEX tenement layer is vastly different from the Dead tenements because the WAMEX layer only shows tenements where records have been input into the system thus a full manual search is still required
8. Just plain clunky, the whole system needs to be a modern GIS layout with numerous selectable layers
9. Many of the tenements are missing – the link between here and WAMEX is great though
10. Never works – can't ever get access to an information for any tenement I've tried
11. Not enough information, and no clear instructions
12. Very slow to access on occasion
13. WAMEX, Tengraph and Geoviewer need to be combined
14. When you select the information button the abstract that comes up begins half way down the page. In order to see the item number and information at the top you have to scroll up

4.2 Selection (continued)

4.2.10 Access Mine and Mineral Deposit Information (MINEDEX Screen) Selection

38.4% of all respondents use this feature at least once a month or more frequently.

Around 3 in 4 customers (75.2%) rated MINEDEX screen at 6 or more out of 10.

Table 27: Satisfaction with Access Mine and Mineral Deposit Information (MINIDEX Screen) Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=420
7.6	17.1	29.5	45.7	100.0

Q6b: How satisfied are you with it out of 10? (N/A=160)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't figure out how this works – would love to use it but can't use it correctly
2. Instructions not evident enough
3. Have to move to another screen
4. Don't seem to be able to get to the site without getting out of Tengraph and go to it separately
5. Information is incomplete / unavailable / not useful
6. The MINIDEX reports are not tenement specific, they tend to group too many tenements together on the one report
7. Too complicated to get what you want

4.2.11 DIA Heritage Surveys Selection

28.3% of all respondents use this feature at least once a month or more frequently.

Levels of satisfaction were slightly lower than the other features in this section, with just over 70% of respondents rating it at 6 or more out of 10. As shown in the table below, 1 in 10 respondents were dissatisfied.

Table 28: Satisfaction with DIA Heritage Surveys Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=374
10.7	18.7	31.3	39.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=206)

4.2 Selection (continued)

Dissatisfied respondents (rating of 0 to 4 out of 10), provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Better interface required
2. Boundaries not clear
3. Confusing and time consuming (legend and colours)
4. Data often not precise
5. Doesn't seem to ever give any results
6. Incomplete information database – does not register surveyed areas adequately
7. Not clear exactly where sacred sites are located
8. Very noisy – difficult to display overlapping claims in such a way as to be visible

4.2.12 Native Title Screen Selection

37.4% of all respondents use this feature at least once a month or more frequently.

Almost 3 in 4 respondents (74.1%) were satisfied (rating of 6 or more out of 10) with the Native title screen selection.

Table 29: Satisfaction with Native Title Screen Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=417
7.9	18.0	30.5	43.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=163)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Due to the recent act and the allowing of roads, etc. as traditional boundaries combined with multiple overlapping claims, it's made the maps a joke
2. The legend is confusing
3. Although the shapes are shown, there do not appear to be any labels and clicking on the information button freezes up the application
4. Areas with more than one claim can become very confusing
5. Trouble turning the native title colouring off when I want to continue
6. More up to date easy to use information
7. Not clear to use – no instructions / not self explanatory
8. Scale too small

4.2 Selection (continued)

4.2.13 Petroleum Screen Selection

4.9% of all respondents use this feature at least once a month or more frequently.

Levels of satisfaction were lower for this factor with 65.2% of respondents rating 6 or more out of 10 and only just over 40% rating it 8 to 10 out of 10.

Table 30: Petroleum Screen Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=244
8.2	26.6	24.2	41.0	100.0

Q6b: How satisfied are you with it out of 10? (N/A=336)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. No access
2. Should be proper windows style GIS interface

4.2.14 Tailor Display – Tenements Selection

54.8% of all respondents use this feature at least once a month or more frequently.

Satisfaction was high with 80.2% of respondents rating 6 or more out 10, and over 50% rating 8 – 10/10.

Table 31: Tailor Display – Tenements Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=503
6.4	13.5	29.0	51.1	100.0

Q6b: How satisfied are you with it out of 10? (N/A=77)

4.2 Selection (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. After making changes during a session, if you leave where you are to look at different tenement when you try to come back to where you were all the colours, fill etc. has changed
2. Difficult and not easily copied
3. Difficult to understand graphic display
4. Find it confusing and time consuming
5. Help function is difficult to use, so struggle to get full use of this function
6. I use these settings most times and have to reselect them every time I log in, it would be good if we could have personal settings as they could be remembered the next time users log on
7. Not easy to do multiple leases
8. Not flexible enough – limited fills
9. Not interactive enough – too time consuming
10. Not user friendly, no instructions
11. Options are limited
12. Screen and prints are hard to read / follow
13. Screen should be able to be built up not down in its current form
14. Sometimes it doesn't give full functionality or options I require
15. Too hard to set up
16. Would prefer no fill at first screen

4.2.15 Tailor Display – Petroleum Selection

4.6% of all respondents use this feature at least once a month or more frequently.

The levels of satisfaction were slightly lower for this factor, with 65.1% of respondents rating 6 or more out of 10. Over 1 in 4 respondents had mixed feelings.

Table 32: Satisfaction with Tailor Display – Petroleum Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=249
8.4	26.5	23.7	41.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=331)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. No access
2. Difficult to use
3. Scale too large
4. Should be a proper windows style GIS interface

4.2 Selection (continued)

4.2.16 Tailor Display – Cadastral Selection

37.1% of all respondents use this feature at least once a month or more frequently.

Over 3 in 4 respondents were satisfied (76.4%) with this feature.

Table 33: Tailor Display – Cadastral Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=423
6.9	16.8	27.7	48.7	100.0

Q6b: How satisfied are you with it out of 10? (N/A=157)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, were asked to provide the reasons why they felt that way. Their issues/comments for this feature include:

1. Built up not down – all of us small users feel we just need the basics and if we are in high traffic areas we can then overlay the relevant information
2. Don't know how to use it
3. I find the whole tailor display function difficult to use
4. Use these settings most times and have to reselect them every time when logging in – it would be good if we could have personal settings and they could be remembered the next time a user logs in
5. Insufficient detail
6. Not clear to use – no instructions
7. Not enough Cadastral information
8. Scale issue for cadastral information – critical for access but can't print sensibly at a broad scale
9. Struggle to find name of pastoral lease in the viewer
10. Tenure information (e.g. reserve boundaries) is not clear enough or accurate

4.2.17 Tailor Display – Misc Selection

38.9% of all respondents use this feature at least once a month or more frequently.

Levels of satisfaction for Tailor display – misc, are good with 73.0% of respondents rating 6 or more out of 10 for the feature.

Table 34: Tailor Display – Misc Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=441
8.8	17.5	27.9	45.8	100.0

Q6b: How satisfied are you with it out of 10? (N/A=139)

4.2 Selection (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. A bit hard to figure out / Difficult to use
2. Do not know how to access it
3. Does not provide the full functionality or options required
4. More choices of display would be better
5. Need the heritage sites for the local indigenous people more clearly defined
6. Not flexible enough – limited fills
7. Poor colour and pattern choice and basically not very user friendly needs a better thematic display
8. Prints badly
9. Better functionality could be provided
10. Too hard to set up

4.2.18 Custom colouring Selection

41.1% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, 74.2% of respondents were satisfied (rating 6 or more out of 10) with this feature.

Table 35: Custom colouring Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=442
8.4	17.4	27.6	46.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=138)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't get a clear legible product at A4
2. Can be painful to use – have to keep clicking which tenement you want to select to make your own map. When you make a mistake there is only delete which gets rid of all your work and you have to start fresh
3. Colours not consistent over the whole tenement unless using high density, but only sometimes
4. Difficult to understand graphic display
5. Don't get the colouring in the areas indicated
6. Navigation is unwieldy
7. Need to be able to specify tenements by number for customer colouring
8. Not flexible enough – limited fills
9. Should be colour on the start up so that we can paint the picture
10. Sometimes shades the whole area instead of just the selected tenement

4.2 Selection (continued)

11. This appears to have changed in the last year or so – if I shade/ fill our company’s live tenements, then shade the applications individually, the applied tenement’s colouring sit over the top of the original request upon printing. It didn’t used to!
12. Too hard to set up

4.2.19 Colour Tenements for Holder Selection

48.1% of all respondents use this feature at least once a month or more frequently.

Almost 80% of respondents were satisfied with the Colour tenements for holder feature and nearly half very satisfied.

Table 36: Colour Tenements for Holder Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=477
7.1	13.4	30.6	48.8	100.0

Q6b: How satisfied are you with it out of 10? (N/A=103)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can’t distinguish between granted and application for same holder
2. Difficult to understand graphic display
3. It would be handy to be able to colour code the different tenement types owned by one holder
4. Need to be able to colour tenements for multiple holders on one screen
5. Not user friendly – no instructions
6. There wasn’t much selection when there were several holders in one area and not enough variation in colours
7. Too complex – would have been nice to have a drop-down menu of holders to choose from rather than having to know exact names
8. Unable to switch between holder and custom without losing the other capability

4.2 Selection (continued)

4.2.20 Mining Graticule – GDA Selection

43.3% of all respondents use this feature at least once a month or more frequently.

Satisfaction for this feature was high with 84.0% of respondents rating 6 or more out of 10.

Table 37: Mining Graticule – GDA Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=431
4.4	11.6	26.5	57.5	100.0

Q6b: How satisfied are you with it out of 10? (N/A=149)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Restrictive and clunky
2. Should be a proper windows style GIS interface

4.2.21 Mining Graticule – AGD Selection

32.4% of all respondents use this feature at least once a month or more frequently.

Satisfaction was slightly lower than Mining graticule – GDA with 78.6% of respondents rating this feature at 6 or more out of 10.

Table 38: Mining Graticule – AGD (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=378
5.6	15.9	27.5	51.1	100.0

Q6b: How satisfied are you with it out of 10? (N/A=202)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to establish
2. Have been confused in the past by co-ordinates
3. The old system worked better

4.2 Selection (continued)

4.2.22 Petroleum Graticules – Onshore Selection

3.5% of all respondents use this feature at least once a month or more frequently.

62.8% of respondents were satisfied and rated this feature at 6 or more out of 10, 40.2% very satisfied.

Table 39: Petroleum Graticules – Onshore Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=239
9.2	28.0	22.6	40.2	100.0

Q6b: How satisfied are you with it out of 10? (N/A=341)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature was:

1. Difficult to use
2. Should be a proper windows style GIS interface

4.2.23 Petroleum Graticules – Offshore Selection

3.0% of all respondents use this feature at least once a month or more frequently.

61.7% of respondents were satisfied (rating of 6 or more out of 10) with the Petroleum graticules – offshore feature.

Table 40: Petroleum Graticules – Offshore Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=240
8.3	30.0	21.3	40.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=340)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature was:

1. Difficult to use
2. Should be a proper windows style GIS interface

4.2 Selection (continued)

4.2.24 Petroleum Graticules – Territorial Selection

2.8% of all respondents use this feature at least once a month or more frequently.

This feature received the lowest ratings of the 25 features in Selection Enquiry, with just over 60% of respondents rating this feature at 6 or more out of 10; almost 1 in 10 respondents were dissatisfied.

Table 41: Petroleum Graticules – Territorial Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=240
9.6	29.6	20.8	40.0	100.0

Q6b: How satisfied are you with it out of 10? (N/A=340)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature was:

1. Difficult to use
2. Should be a proper windows style GIS interface
3. Clunky

4.2.25 Remove Fill Pattern Selection

44.2% of all respondents use this feature at least once a month or more frequently.

Almost 80% of respondents gave ratings of 6 or more out of 10 for this feature.

Table 42: Remove Fill Pattern Selection (n=580)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=452
5.3	15.3	25.7	53.8	100.0

Q6b: How satisfied are you with it out of 10? (N/A=128)

4.2 Selection (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to use
2. Doesn't always work the way it's supposed to, or the way it's anticipated to work
3. It should not be remove fill – there should be no fill to start as this will speed the system and give the option to derive a pattern and give us the ability at the start to have a clean screen
4. Not user friendly – no instructions
5. Pattern is pixilated

4.3 Process

4.3.1 Quick Plot Process

26.6% of all respondents use this feature at least once a month or more frequently.

Levels of satisfaction are good with 76.5% of respondents rating 6 or more out of 10 for this feature.

Table 43: Quick Plot Process (n=407)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=281
3.9	19.6	30.2	46.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=126)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Difficult to operate / to use
2. Do not like having to send to email.
3. Require more immediacy in this function
4. Help function not useful, so am probably not using function to full extent
5. Scale does not plot as required
6. Never really know how it will come out – hard to select area to plot
7. Allows only certain functions if plotting more than one item on the same screen
8. Not easily transferable
9. System does not recognise next logical point

4.3 Process (continued)

4.3.2 Quick Appraisal Process

26.9% of all respondents use this feature at least once a month or more frequently.

Over 80% of respondents are satisfied (rating 6 or more out of 10); 50.7% were very satisfied.

Table 44: Quick Appraisal Process (n=407)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=282
2.1	16.7	30.5	50.7	100.0

Q6b: How satisfied are you with it out of 10? (N/A=125)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that the feature was:

1. Difficult to use
2. PDF forced – which takes much too long to queue output
- 3.

4.3.3 Enhanced Plot – Point Process

16.7% of all respondents use this feature at least once a month or more frequently.

The level of satisfaction with this feature is good with 72.5% of respondents rating it 6 or more out of 10.

Table 45: Enhanced Plot – Point Process (n=407)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=239
4.2	23.4	30.1	42.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=168)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Could not understand how to use it
2. Difficult to operate / use
3. Difficult to correct
4. Very cumbersome process

4.3 Process (continued)

4.3.4 Enhanced plot – Line Process

16.5% of all respondents use this feature at least once a month or more frequently.

This feature has a similar result to the previous feature, with 72.8% of respondents satisfied (rating 6 or more out of 10).

Table 46: Enhanced Plot – Line Process (n=407)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=236
5.1	22.0	29.2	43.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=171)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their comments about this feature include:

1. Clumsy
2. Difficult to operate / use
3. The lines could be generated automatically at the tick of a box
4. A very cumbersome process

4.3.5 Enhanced Plot – Polygon Process

15.8% of all respondents use this feature at least once a month or more frequently.

Similarly to the previous two results, 72.2% of customers were satisfied (rating 6 or more out of 10) with this feature.

Table 47: Enhanced Plot – Polygon Process (n=407)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=234
4.7	23.1	29.5	42.7	100.0

Q6b: How satisfied are you with it out of 10? (N/A=173)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature was:

1. Difficult to operate / use
2. Not clearly understood
3. Very cumbersome process

4.3 Process (continued)

4.3.6 Enhanced Plot – Label Process

15.9% of all respondents use this feature at least once a month or more frequently.

71.0% of respondents gave a rating of 6 or more out of 10 for this feature, 40.3% rated it 8 to 10 out of 10.

Table 48: Enhanced Plot – Label Process (n=407)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=238
5.0	23.9	30.7	40.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=169)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature was:

1. Difficult to operate / use
2. Very cumbersome process

4.3.7 Enhanced Plot – Graticular Polygon Process

14.0% of all respondents used this feature at least once a month or more frequently.

The level of satisfaction is lower for this feature, with 68.5% respondents satisfied (rating of 6 or more out of 10). One in four customer expressed mixed feelings about the feature.

Table 49: Enhanced Plot – Graticular Polygon Process (n=407)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=232
4.3	27.2	26.7	41.8	100.0

Q6b: How satisfied are you with it out of 10? (N/A=175)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature was:

1. Clumsy
2. Difficult to operate / use
3. One should be able to select the blocks and primary names etc. from collectively selecting graticules to compile the Schedule 1 & 2

4.4 i-button

The majority of respondents who made comment regarding their low ratings for (4.4.2) i-button on SPCL cited the lack of information as a major issue.

4.4.1 i-button on Tenements

62.9% of all respondents use this feature at least once a month or more frequently.

Satisfaction with this feature was almost 90% with 88.5% of respondents rating their satisfaction at 6 or more out of 10; almost 60% rated it 8 – 10/10).

Table 50:i-button on Tenements (n=544)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=519
2.3	9.2	29.5	59.0	100.0

Q6b: How satisfied are you with it out of 10? (N/A=25)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the following reasons why they felt that way:

1. Archaic, slow and non-intuitive
2. Difficult to use
3. Needs toggle link to MITAS
4. Not always current information
5. Too many clicks to get what you really want
6. “Host Error” issues where the information is not available due to some system problem

4.4.2 i-button on SPCL (for Reserve, FNA, S19, CPL)

20.6% of all respondents use this feature at least once a month or more frequently.

Satisfaction for this feature was lower, with just over 70% of respondents satisfied (rating 6 or more out of 10).

Table 51:i-button on SPCL (n=544)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=331
7.9	21.1	25.4	45.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=213)

4.4 i-button (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature was:

1. Needs more information linked under the information button
2. Difficult to use
3. Insufficient information e.g. PNR & Pastoral give no information
4. Limited information – information box does not show all available information on occasion
5. No panning ability

4.4.3 i-button on Petroleum Titles

4.8% of all respondents use this feature at least once a month or more frequently.

65.1% of respondents were satisfied (rating of 6 or more out of 10) with this feature.

Table 52:i-button on Petroleum Titles (n=544)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=241
8.3	26.6	20.3	44.8	100.0

Q6b: How satisfied are you with it out of 10? (N/A=303)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature:

1. Was difficult to use
2. Had limited information available compared to mineral titles

4.4 i-button (continued)

4.4.4 i-button on Minedex Sites

28.8% of all respondents use this feature at least once a month or more frequently.

Although 76.1% of customers rated 6 or more out of 10 for this feature, almost 50% were very satisfied.

Table 53:i-button on Minedex Sites (n=544)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=372
5.6	18.3	26.6	49.5	100.0

Q6b: How satisfied are you with it out of 10? (N/A=172)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 commented that this feature:

1. Was difficult to use
2. Doesn't provide enough information, i.e. production history or resource information
3. Has too many pages and clicks to go through to reach what you really wanted

4.4.5 i-button on Wamex Tenements

34.8% of all respondents use this feature at least once a month or more frequently.

Over 3 in 4 customers were satisfied (rating 6 or more out of 10) with this feature; 1 in 2 were very satisfied.

Table 54:i-button on Wamex Tenements (n=544)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=398
5.5	17.1	27.1	50.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=146)

4.4 i-button (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 made the following comments:

1. It's not so much the button itself (although overlapping tenements have caused problems in the past) – it's more the lack of OFRs available through this facility
2. Need more history of tenement
3. Never seems to work – a Wamex search through Tengraph always comes up blank even where I know exploration reports have been submitted to DoIR in the past
4. Screen opens half way down the page. It's a great function but don't need all the information because you can get the same information in WAMEX Online Item Query screen
5. This function is unreliable due to lack of data
6. Slow and doesn't display all information
7. This information should be with the tenement details without an extra button

4.4.6 i-button on DIA Heritage Survey

23.3% of all respondents use this feature at least once a month or more frequently.

70.0% of customers were satisfied and rated this feature 6 or more out of 10.

Table 55: i-button on DIA Heritage Survey (n=544)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=340
7.6	22.4	25.9	44.1	100.0

Q6b: How satisfied are you with it out of 10? (N/A=204)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Data seems to be missing
2. Difficult to use / Don't know how to use
3. Not enough information provided
4. Way out of date, too much time and too long to get to the point
5. Unreliable

4.5 View

4.5.1 Historical View

42.9% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, 77.0% of respondents rated it 6 or more out of 10.

Table 56: Historical View (n=778)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=571
6.0	17.0	27.8	49.2	100.0

Q6b: How satisfied are you with it out of 10? (N/A=207)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Confusing / Can't understand what's what
2. Difficult to use / Find it difficult to show relevant information
3. Sometimes a bit hard to tell tenement boundaries
4. Historical information not available in the system
5. Don't have any historical views that I can load
6. Every time I start Tengraph I have to start again, do a search and modify the scale, colours etc.
7. Trouble knowing what is current and what is historical – the system is very complex
8. Maps cluttered
9. Not compatible with GIS format
10. The historical view leaves out many significant tenements (e.g. GMLs) a this option does not seem to go far enough back in time
11. Unable to gain access after registration
12. With so much information on the screen, generally can't read it
13. Would like more information

4.6 File

4.6.1 Clear Screen

37.5% of all respondents use this feature at least once a month or more frequently.

Satisfaction is high with 83.5% of respondents rating 6 or more out of 10, and almost 60% rating 8 or more out of 10 for this feature.

Table 57: Clear Screen (n=505)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=368
1.6	14.9	24.5	59.0	100.0

Q6b: How satisfied are you with it out of 10? (N/A=137)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Most of the time I clear the screen just to better show what is near the side of screen. It would be much better for the user if we could pan as far as we want
2. Never sure if what has been asked to clear has been done (sometimes it hangs up as well)
3. The selection setting are lost and have to be re-entered

4.6.2 A1 Plot to PDF File

21.9% of all respondents use this feature at least once a month or more frequently.

Satisfaction is lower for this printing feature with 74.0% of respondents rating 6 or more out of 10; However, there are still over 50% of customers rating it 8 – 10/10.

Table 58:A1 Plot to PDF File (n=505)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=308
5.2	20.8	23.4	50.6	100.0

Q6b: How satisfied are you with it out of 10? (N/A=197)

4.6 File (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Better GIS style functionality for large plots would be useful
2. Can't get it to work, always an error message
3. Cumbersome and hard to see what is printed
4. Doesn't work for me
5. Labelling is hopeless as can't enter basic text
6. Lack of immediacy and not user friendly
7. The page margin is unnecessarily large and the legend takes up too much space which leaves less room for the actual map
8. Very slow

4.6.3 Print to PDF File

52.8% of all respondents use this feature at least once a month or more frequently.

Despite the number of issues/comments listed below, just over 80% of respondents are satisfied with this feature; Furthermore, 55.7% rated 8 – 10/10.

Table 59: Print to PDF File (n=505)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=454
6.8	12.8	24.7	55.7	100.0

Q6b: How satisfied are you with it out of 10? (N/A=51)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't get it to work, there's always an error message
2. Clunky – took a long time to work out
3. It is not streamlined – Tengraph operates like it's 20 year old technology
4. I lose some lines or sections of lines / Print out is not as clear or as high quality / Substandard
5. I preferred the old system where I could simply click print on the screen and my image would immediately print. I do not like the new email system of printing / Like to print straight to own printer
6. I use internet cafes etc. and would like web based print as it was previously
7. Email system not reliable as sometimes the pdf does not go through to my email
8. Scale was wrong, and no action on my complaint
9. The process is slower than before and less real time interactive because of email / Too slow to queue

4.6 File (continued)

4.6.4 Print Object Details to PDF File

43.4% of all respondents use this feature at least once a month or more frequently.

Similarly to the previous feature, just over 80% of respondents rated 6 or more out of 10 to Print object details to PDF file.

Table 60: Print object Details to PDF File (n=505)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=408
5.4	14.0	27.9	52.7	100.0

Q6b: How satisfied are you with it out of 10? (N/A=97)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't get it to work – always an error message
2. Function works but it's not streamlined. Tengraph operates like it's 20 years old technology
3. It would be easier to print it directly off Tengraph as before
4. Limited functionality
5. Low quality
6. Most print jobs don't need to save as PDF and would prefer to print straight to own printer
7. Email system not reliable
8. Never easy to use
9. No flexibility to be able to print a sensible map
10. Excellent information on screen but can't use it in a useable manner which really detracts from site
11. The printed page is not the same size as the screen and the print preview does not show the top and bottom of the final printed version
12. Too slow to queue

4.6.5 Conversion Calculator

12.9% of all respondents use this feature at least once a month or more frequently.

Just under 70% of respondents were satisfied (rating or 6 or more out of 10) with this feature.

Table 61: Conversion Calculator (n=505)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=257
4.7	25.7	23.3	46.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=248)

4.6 File (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10 made the following comments:

1. Don't understand it / Haven't figured out how it works yet
2. Would be nice to have it convert AGD to GDA as well

4.6.6 Print Preview

48.8% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, satisfaction with this feature is high with 83.3% of respondents rating 6 or more out of 10; 58.4% rated 8 – 10/10.

Table 62: Print Preview (n=505)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=437
3.4	13.3	24.9	58.4	100.0

Q6b: How satisfied are you with it out of 10? (N/A=68)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't get it to work, always an error message
2. Not streamlined
3. Low quality
4. On one colour printer I lose about the last 5% of the page. On another I cannot get much depth of colour
5. With colouring on screen and Citrix drop outs, it can take a while to see and get it right before printing

4.7 Windows

4.7.1 Co-ordinates

56.0% of all respondents use this feature at least once a month or more frequently.

82.2% of respondents were satisfied and gave a rating of 6 or more out of 10 for this feature.

Table 63: Co-ordinates (n=778)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=642
5.9	11.8	27.1	55.1	100.0

Q6b: How satisfied are you with it out of 10? (N/A=136)

4.7 Windows (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't cut co-ordinates and paste them in a new document
2. Datum Co-ordinate system options would be helpful
3. Difficult to use /Not user friendly
4. Does not snap to objects
5. How accurate is it?
6. Spent over an hour trying to access tenement boundary co-ordinates and gave up
7. Need to get to UM co-ordinates
8. Need to learn the system better to use the functions
9. Not in compatible GIS format
10. Only a single co-ordinate may be viewed at a time. There should be an option to view all coordinates of a feature on a listview
11. Unable to gain access after registration
12. Wish to open viewer at pre-determined co-ordinate

4.7.2 Centre on Point

50.5% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, satisfaction is high with 81.7% of respondents rating it 6 or more out of 10.

Table 64: Centre on Point (n=778)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=606
5.4	12.9	28.7	53.0	100.0

Q6b: How satisfied are you with it out of 10? (N/A=172)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. A bit hard to click
2. A bit slow, moving with a hand as per pdf would be good
3. Difficult to re-size screen – no easy zoom in or out function, e.g. mouse control
4. Doesn't always centre on the selected point
5. Hard to understand
6. How accurate is it?
7. Not in compatible GIS format
8. The method is slow, would like to see more dynamic zoom, pan and centre options

4.7 Windows (continued)

9. User interface and movement around screen is slow and cumbersome
10. Screen not easy to read and scales not set
11. Can zoom in on point but difficult to zoom out

4.7.3 Active Holders

66.1% of all respondents use this feature at least once a month or more frequently.

As shown in the table below, satisfaction is high with 56.3% of respondents rating 8 – 10/10 for this feature.

Table 65:Active Holders (n=778)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=682
4.7	11.1	27.9	56.3	100.0

Q6b: How satisfied are you with it out of 10? (N/A=96)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Can't always pick up the points I am looking for i.e. if one tenement is behind another – especially true for miscellaneous licences along transit routes
2. Difficult to use / difficult to show relevant information
3. Gave up trying to identify lease holders as the system did not recognise any of the tenement identifiers I used.
4. Gets buried by other overpegged tenements e.g. Es over an M
5. Not enough information
6. Not compatible in GIS format
7. Rarely provides up to date information

4.7.4 Admin Information

34.2% of all respondents use this feature at least once a month or more frequently.

Satisfaction is good with 3 in 4 respondents rating 6 or more out of 10 for the feature Admin information.

Table 66:Admin Information (n=778)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=536
7.3	17.7	30.8	44.2	100.0

Q6b: How satisfied are you with it out of 10? (N/A=242)

4.7 Windows (continued)

Respondents who gave a satisfaction rating of 0 to 4 out of 10, provided the reasons why they felt that way. Their issues/comments for this feature include:

1. Admin information is shown in different formats for different leases, often it's difficult to find the information you want
2. Cannot always pick up the points I am looking for i.e. if one tenement is behind another
3. Cumbersome process
4. Difficult to use / not easy to understand
5. It isn't simple and easy to find, not able to display map and admin information at the same time
6. Would be useful if we could change what information is loaded, e.g. take out some of the layers
7. More WAMEX data should be linked to this function
8. Received poor customer service and relayed to several people to answer basic usage queries
9. Have to go to other data base to get all basic information

4.7.5 Legend

39.1% of all respondents use this feature at least once a month or more frequently.

Around 3 in 4 (75.5%) were satisfied (rating 6 or more out of 10) with this feature.

Table 67: Satisfaction with Legend (n=778)

Dissatisfied 0 – 4 %	Mixed Feelings 5 %	Satisfied 6 – 7 %	Very Satisfied 8 – 10 %	Total % n=550
7.3	17.3	31.3	44.2	100.0

Q6b: How satisfied are you with it out of 10? (N/A=228)

There were no comments or issues made about this feature.

4.8 Additional Comments

At the end of the Section, respondents were asked if they had any other comments on any specific feature. These are listed below under various themes/features and accompanied by selected comments.

Positive Comments

- Leading best practice service in Australia!
- Thanks for the great programme. I am a gold prospector, and have recently purchased a Vista laptop and while in the goldfields was unable to get the Tengraph up and running. It would be appreciated if there was a bit more help with windows vista thanks
- Tengraph is a reliable system for me to check and validate lease details
- The new print to PDF feature is great!
- In all, an excellent tool for mining companies. Keep up the good work
- The system is excellent and was visionary at the time other states are still trying to catch up. However we (as a state) need to keep on improving to keep ahead
- I use mines department databases in other States of Australia and believe our WA databases both Mitis and Tengraph are the best in Australia for accessing tenement information
- Overall I believe the Tengraph system is very good especially if in comparison to a number of Eastern States systems - Tengraph is much easier to use gives more information and options

However;

1. Printing

- Print function to own printer instead of creating a PDF file to be emailed would be preferable, due to email not being reliable
- Difficulty with printing on occasions - doesn't always recognise printer at my location
- Print pdf file is an advantage for shifting data to other software i.e. Ozi-Explorer. However, those of us with limited patience like the old system of selecting a map and hitting print.
- Should have a choice to print to a geotiff or geo-referenced jpg
- The fact that I can no longer print maps direct to my printer, but have to wait for the pdf file to be emailed back to me causes an annoying delay

2. Colour

- It seems if you use custom colour and tailor display at the same time the system crashes more frequently
- main improvement would be to improve the selection of tenement fill colours/hatching or no fill at all. I find this function difficult to use at times in terms of selection of tenements i wish to highlight

4.8 Additional Comments (continued)

3. Native Title

- I would like to be able to identify specific native title claims. The current display shows that 2 or 3 claims are involved, but do not tell you which ones they are. The tenement numbers can be very difficult to read on small titles such as Ps and Ls. I find the cross hatching very confusing, but I realise from this survey that it can be turned off and I have not learned how to do that
- The lack of native title information and historical info in the new format
- On the native title side of things I believe information relative to the NTA should be available such as has s29 advertising been done and if so on what date, native title objection details should also be accessible as well as various other related info

4. Petroleum Tenements

- Petroleum tenement maps and appraisal details very slow to load because of depth of info. Search function for petroleum tenements not good

5. Legend

- Legend - it is pretty useless. To find out what symbols and abbreviations and colours mean I have downloaded the separate legend pdf. But it would be useful to have a legend that you could pop up relevant to whatever is on the screen

6. Pan

- It is a nuisance when you pan across a map & get into the dotted peripheral area. It would be good to be able to pan seamlessly. It would be good to be able to import & export data digitally - eg positions of corners of tenements
- Tengraph really needs a "pan" function so users can drag the screen across. Although it is an excellent database of information the graphical interface is clunky and non-intuitive. The pervasive cross-hatching is annoying when producing plots

7. Export Function

- The export function is difficult to read. A direct export of current tenements to a GIS format such as DXF would be great
- An export facility for selected tenements / information to be used in well known GIS packages (MapInfo etc) would be excellent, and increase the usefulness of the Tengraph system tenfold

4.8 Additional Comments (continued)

8. More information / More data

- More data to be included on maps such as wells bores and 4wd tracks
- Names of homesteads, windmills and minor localities to be labelled
- Movement from the current view to adjoining areas is difficult if you do not know the names of the adjoining maps sheets. It would be quicker and easier if Tengraph displayed map sheet names at the boundary of the current view or had a pop up window that displayed a minimap with the adjoining maps sheets displayed on a grid
- I would like to be able to get contact details for the larger mining companies from the same site like a e-mail address
- More information on the reserves would be useful, i.e. some don't show vested authorities. Also information on reserves and lots within townsite boundaries would be great

9. Download

- Would be great to have aerial images and the ability to download Tengraph maps as GIS files
- an ability to download the cadastral data as per tenure would be very helpful
- Make downloads available via the Tengraph interface

10. Screen / View (including scrolling and zooming)

- Would like to be able to quickly see on a screen where geophysical surveys have occurred in say the last 5 years or last 10 years, so that any "holes" are easy to see
- Make zoom in and zoom out toot better
- Would be nice to move around and zoom using mouse
- Restricted to viewing maximum of 1:250000 map size is a pain. the message....It will take a very long time to display.....is superfluous

11. WAMEX

- Perhaps there could be more WAMEX content added to the Tengraph map view to allow quick assessment of the area being viewed / The WAMEX data should be available from the Tengraph screen.
- Why can't the pdf documents in WAMEX be accessed online?

4.8 Additional Comments (continued)

12. Overlaying / Underlaying

- Need more overlays like GIS. The QLD system is great
- It's a pain having to bring up another map page all the time. You should be able to move your mouse and have a continuous mosaic type map with no boundaries. I have met so many people prospecting that don't use the system because they have trouble relating the print out to a map. I think the system could benefit by overlaying the system onto a hema style map. I know people have told me that they would then be less confusing for them to use and they could see exactly where they need to go
- I would like to be able to bring the geology in to Tengraph as an optional underlay to the tenement information
- I would like Tengraph to display the underlying freehold and crown tenure to determine the impact a mining tenement has on the underlying tenure
- Viewing option in Google earth would be an excellent addition with the tenement overlay

13. Other Features

- Would like to type in lat & long and have the point shown on the map
- I would like to be able to register /and pay for application for a Tenement...Prospecting ,exploration via the site
- Tenement holders should be made to provide legitimate contact details
- It took me for ever to work out that all TRs are deemed to be in the SW district! Even some of your staff don't know this. In the tenement information table the word "current" is used inappropriately. For instance when an annotation is made on the "Dead" line it has a date in the "From" column but then in the "To" column it says "Current". To the infrequent user this is confusing! There should be no annotation in the "To" column in this case. Similarly if a tenement is live or pending there should be no annotation in the "To" column. The "To" column is only relevant when the tenement has stepped up in status. Please take note of the comment made earlier about searching for old tenements as this is a really serious deficiency in the system. What you should be able to do is highlight a tenement a then work down through the layers to pick up all old tenements on the highlighted tenement

4.8 Additional Comments (continued)

14. Other – General

- Overall Tengraph is better than any other in the country. However, note that when using the recent activity screen that some information appears to not be updated regularly - I normally select 1 month and find the same dead tenements showing 2-3 months after first appearing.
- While compared to many systems, or rather lack of systems in the world, the system is not that bad. However, compared to other similar graphical systems it does seem very outdated resulting in a fairly slow interface and slow speeds.
- Tengraph is extremely frustrating to use even as a GIS user. It must be nearly impossible for somebody who is not familiar with mapping applications. The lack of decent layer control and symbology makes it time consuming to identify individual boundaries in complex areas. Search functions are hard to use and are sensitive to formatting issues. General navigation functionality like zoom and pan are slow and clunky compared to most other web maps. It should be possible to smoothly drag around the page and search areas by eye. The lack of decent topography makes it difficult to visualise where tenements and land boundaries actually are. Layer zoom scale ranges should be applied to make it easy to zoom right out and in without performance being affected.

5.0 Other Tenement Mapping Systems

After completing the sections regarding TENGRAPH®, respondents were then asked if they used any other tenement mapping systems. Of the whole sample, just over 1 in 5 respondents (21.8%) indicated that they did use another system.

5.1 Systems TENGRAPH® is Compared to

The respondents who indicated that they did use another system, were then asked which systems they were, and then to draw a comparison with TENGRAPH®.

Almost half of these respondents have nominated another tenement mapping system, and over 40% have indicated the GIS package(s), such as MapInfo, which they use over a tenement system.

Table 68: Respondents' Use of Other Systems

Response	% n=165
Other tenement mapping system	50.9
GIS	44.2
Other	4.8
Total	100.0

Q7a. and Q7b: Do you use any other tenement mapping systems other than TENGRAPH®. If yes: Which systems do you use?

5.1 Systems TENGRAPH® is Compared to (continued)

5.1.1 Which is better or worse

Overall, respondents were reasonably evenly divided between whether TENGRAPH® was better or worse than the other system they used. Systems perceived to be better than TENGRAPH® included:

- SARIG
- GEOVIEW
- IRTM
- TIS
- Uk DEAL
- MinView
- GeoView
- Landgate's Smartplan
- ArcView, ArcMap, ArcGIS
- MapInfo
- Eureka

There are significant differences between the occupations in terms of overall ratings for TENGRAPH® being better or worse against the other system(s) they used and occupation/profession;

- Tenement Managers (both company and self employed) and prospectors were more likely than the other categories to rate TENGRAPH® as **better** than the other system
- Geologists, Surveyor/Cartographers and those involved in environment-based occupations were most likely to rate TENGRAPH® **worse** compared to the other system they used

Table 69: Ratings for TENGRAPH® Against the Best System That You Use (n=165)

Rating	Other Tenement Mapping Systems % n=84	GIS Systems % n=73	Other % n=8	Total % n=165
Better	51.2	26.0	50.0	40.0
Similar	21.4	19.2	12.5	20.0
Worse	27.4	54.8	37.5	40.0
Total	100.0	100.0	100.0	100.0%

Q8: How do you rate TENGRAPH® against the best system that you use? (Not sure and Don't Knows excluded)

There is a significant difference between respondents comparing another tenement mapping system to TENGRAPH® and those comparing it to the GIS packages they use. As shown in the table above, over half of the respondents comparing TENGRAPH® (51.2%) to the other tenement mapping system they use, believed TENGRAPH® to be **better** (much better and a bit better).

5.1 Systems TENGRAPH® is Compared to (continued)

By contrast, 54.8% of respondents comparing TENGRAPH® to the GIS system they use, felt that TENGRAPH® was **worse** (not quite as good and nowhere near as good).

In order to uncover the issues that may be affecting those respondents making comparisons between the other tenement mapping system and TENGRAPH® vis-à-vis the those making comparisons with the GIS system they use, these two groups have been discussed and analysed separately in the following subsections, 4.1.2 and 4.1.3.

5.1.2 TENGRAPH® and Other Tenement Mapping Systems

As noted above in Section 5.1.1, over half of the respondents who use another tenement mapping system believed that TENGRAPH® was better. Table 70 lists the other systems respondents' used and includes the provider and description for each system.

Table 70: Systems and providers of other tenement mapping systems

System	Provider	Description
TIS STRIKE	Northern Territory Minerals and Exploration	TIS – Titles Information Service is a tool for the public to monitor mining and exploration in the Northern Territory and conveys spatial information about the land in the NT through a MapInfo Mapx web interface http://dmetis.nt.gov.au/tis/ STRIKE – Spatial Territory Resource Information Kit for Exploration, enables internet users to view, query and download relevant geoscientific data http://apps.minerals.nt.gov.au/strike
IRTM QDEX	Queensland Department of Natural Resource and Water	IRTM – Interactive resource and tenure maps allow users to zoom, pan, search and display geological data with mining and exploration tenure information for the whole of Queensland QDEX – Spatial search tool for the Queensland Digital Exploration Reports system www.nrw.qld.gov.au/science/geoscience/tenure_maps
SARIG	South Australia: Minerals and Energy Resources within Primary Industries and Resources South Australia (PIRSA)	An online web application that enables user to search, view and download information relating to minerals and petroleum exploration in South Australia. It also provides mineral exploration companies with the ability to apply online for mineral exploration licenses. www.pir.sa.gov.au/minerals/sarig

5.1 Systems TENGRAPH® is Compared to (continued)

TASMAP	New South Wales: Minerals & Petroleum within Primary Industries	TASMAP – enables the public to access and view frequently updated titles mapping information across NSW at the scale of their choice www.dpi.nsw.gov.au/minerals/titles/online-services/tasmap
SIXViewer	The Department of Lands	SIX Viewer – Spatial Information eXchange Viewer, enables users to integrate and view a wide selection of NSW spatial datasets, including property, cadastral and topographic information satellite data and aerial photography www.maps.nsw.gov.au/six_viewer.html
Minview	Minerals & Petroleum within Primary Industries	Minview – enables users to display, query and download Geoscience and Exploration Titles information www.minview.minerals.nsw.gov.au
GEOVIC	Victoria: Minerals and Petroleum Division within Primary Industries	GEOVIC – Web mapping application which allows users to search the Division’s geospatial databases and display the results as maps or tables www.dpi.vic.gov.au
Intierra	Canada & Australia	Intierra – Intierra subsidiary, Mineral Information Maps, specialise in the compilation, tracking, and production of international mineral exploration tenement maps www.intierra.com
UK DEAL	UK	Maps the geographical information held by DEAL www.ukdeal.co.uk
SmartPlan	Western Australia Landgate	SmartPlan – Spatial Cadastral Database www.landgate.was.gov.au
GeoVIEW	Western Australia DoIR	GeoVIEW – online browser based visual tool for exploring GSWA’s geoscience datasets www.doir.was.gov.au

The main reasons why respondents found TENGRAPH® **worse** than the other tenement mapping system they used included;

- Information is not easily deciphered
- Not up to date / accurate
- Limited search fields
- Not user friendly or intuitive / Harder to use
- Slow and clunky service
- Not a universal system

5.1 Systems TENGRAPH® is Compared to (continued)

Respondents' comments and issues are listed below according to the system they are comparing TENGRAPH® to, and whether they believe it is better or not in comparison.

Table 71: TENGRAPH® is Better

System(s)	Reason(s) why TENGRAPH® is Better
All other state government systems	<ul style="list-style-type: none"> • High level of information Integration with official DoIR register good tenement history pdf downloads are excellent • Can easily get much more info off Tengraph, especially combined with Mineral Titles Online • User friendly and easy to navigate • Great functionality, easy to use and provides greater querying ability • The other systems I use in the Qld, SA and NT departments are a disgrace and are so far short of Tengraph that they are a joke • Mostly easier to operate with more features and perhaps more complete data sets. Tengraph is still vastly superior to all other state based web served public sector sites
TIS	<ul style="list-style-type: none"> • Ease of operation flexibility of the system and data available on screen • Better cadastral information, much easier to use • Access to more information • A lot faster • User interface is simpler and provides much more detail and information without having to think to hard about how to use it • Easier to use, does more and provides a lot more information. Tengraph is a very good system and with a few "tweaks" would be an excellent system • Tengraph is a lot easier and quicker to move around and the Titles Information System doesn't seem to have a Quick Appraisal function which is very useful when you what to find out what your client's tenement affects and by how much.
IRTM DNRM	<ul style="list-style-type: none"> • Functionality of Tengraph is much easier • User interface is simpler and provides much more detail and information without having to think to hard about how to use it.
GEOVIC	<ul style="list-style-type: none"> • Tengraph creates an instant - up to date tenement map that can easily be used for navigation on the ground. • Tengraph easily shows old tenements & connects through WAMEX to historical exploration reports • Tengraph has more detail

5.1 Systems TENGRAPH® is Compared to (continued)

Table 71 - TENGRAPH® is better (continued)

NSW Tasmap	<ul style="list-style-type: none"> Easier to use, and overall more up-to-date tenement status, more comprehensive tenement, land and native title information available, better quality map outputs easy to get historical tenement details Easy to use, accessible information, ability to create polygons and customise maps. Tengraph is still better used in conjunction with Mineral Titles Online Tengraph has a far superior search for holder or tenement function - it always seems to work. I have had a lot of trouble with the other state resources departments mapping systems just to find one tenement location and holder information.
SIX Viewer	<ul style="list-style-type: none"> It gives me exactly the information I am after tenements wise

Table 72: TENGRAPH® is Similar

System	Reason(s) why TENGRAPH® is Similar
Other state government systems	<ul style="list-style-type: none"> All have good and bad features, it is a shame that one Australia wide system has not been developed Changing from one to another and keeping up with changes on each is irritating
TIS	<ul style="list-style-type: none"> TIS is easier to navigate graphically - and produces good plots, but searching for tenements or holders is not as easy as Tengraph.
QDEX	<ul style="list-style-type: none"> Neither system is completely user friendly or intuitive I can download necessary data for exploration from your Tengraph as like other systems of the other states QDEX is more flexible and responsive
GEOVIC	<ul style="list-style-type: none"> Each has its place as all cannot be done by one in my opinion
Geoview	<ul style="list-style-type: none"> Geoview is superior or at least equal to same and provides the other thematics and info not made available in Tengraph. I see the pair as complementary at this time.
SARIG SA	<ul style="list-style-type: none"> SARIG provides GIS layers such as geological maps, infrastructure, townships, cadastral, etc but searching for specific tenements/holders is too complicated and the plotting/reporting is not as good/easy as Tengraph. About the same degree of ease I have similar problems and similar wins
Intierra	<ul style="list-style-type: none"> Intierra has similar information and easier to access on one screen, but Tengraph is easier to distinguish application and granted tenure.
TasMap	<ul style="list-style-type: none"> I can download necessary data for exploration from your Tengraph as like other systems of the other states

5.1 Systems TENGRAPH® is Compared to (continued)

Table 73: TENGRAPH® is Worse

System	Reason(s) why TENGRAPH® is Worse
Other state government systems	<ul style="list-style-type: none"> Information is not easily deciphered when scrolling through the 'next' and 'prev' buttons while viewing tenements. More tenement information should be linked to the 'info' button, instead of having to go to MTO For the casual user it is easier to get a clearer view of title situation without the multitude of line work on tengraph. Better display options.
LANDGATE's Smartplan	<ul style="list-style-type: none"> Limited search fields
SARIG	<ul style="list-style-type: none"> The SARIG system is easy and intuitive to use but the state is smaller so there is less data to supply. I like the interactive geophysics system as it is good to pinpoint areas of interest before pegging leases.
GEOVIC	<ul style="list-style-type: none"> Other state systems are far more complete in the historic or WAMEX equivalent areas. In house systems do not have the tenement power of Tengraph or are up to date LIVE, but are complete GIS packages with geol/geophy etc Poor, low resolution graphics. Not a universal system such as HTML. No geological or topographic layers Much harder to use, slower
IRTM	<ul style="list-style-type: none"> QLD system allows for display of raster images not just vector layers, and is structured much more similarly to modern commercial GIS packages, allowing for far greater ease of interrogation and also provides a data export facility More complex and unwieldy; does not provide direct link to WAMEX reports on a point selection by mouse (like IRTM)
Uk deal	<ul style="list-style-type: none"> As indicated previously- slow service, clunky GUI, obscure to navigate, simply not straightforward. Takes too long to get a simple answer
TIS	<ul style="list-style-type: none"> Tengraph's draw back seems be that it uses Citrix the window appears very "old style" and very "busy" at times
Minview	<ul style="list-style-type: none"> It is not user friendly or intuitive. I can't find what I am looking for when I search a lat/long or grid
Geoview	<ul style="list-style-type: none"> Has active GIS systems where you can bring in other datasets such as geology or orthophotos

5.1 Systems TENGRAPH® is Compared to (continued)

5.1.3 TENGRAPH® Compared to GIS packages

As noted in Section 5.1.1, only 26.0% of respondents comparing TENGRAPH® with the GIS package they use, felt that TENGRAPH® was better.

The main reasons why respondents found TENGRAPH® **worse** than the other system (GIS package) they used included;

- Lack of ‘useability’ / being able to manipulate data
- Old, slow and clunky
- Does not have the same flexibility
- Needs to connect to the internet
- Limited ability to integrate with other datasets

The various GIS packages cited by respondents and their commentary on whether TENGRAPH® is better, similar or worse follow in Tables 74, 75 and 76 respectively.

Table 74: TENGRAPH® is Better

Package	Reasons why TENGRAPH® is better
ARChGIS	Only because you can add data layers on screen
Mapinfo	<ul style="list-style-type: none"> • Very user friendly • More technical options • Some other data (e.g. FNAs, etc.) is only found on Tengraph. • Tengraph has more functionality than a straight GIS for tenement specific functions & enquiries. There is more info within Tengraph than is supplied in the DoIR GIS ready files. • Tengraph has more functionality than a straight GIS for tenement specific functions & enquiries. There is more info within Tengraph than is supplied in the DoIR GIS ready files. • the ability to access the system remotely, 24/7, and also from any mines dept office without the need for expensive software is very good • I find it easier to extract useful information from than MapInfo (which is more powerful - for those who need it, not me!) • I like using MapInfo to manipulate the tenements - add/delete features, colours, it's more user friendly but the information that Tengraph provides from each tenement is necessary and important. For example it lists more than just tenements on Tengraph which I find very useful - roads, environmental boundaries, etc.
GPIInfo	<ul style="list-style-type: none"> • It's easy to use - essentially intuitive - and provides both cosmetically useable products and associated enquiry capability that is quick and efficient, and HIGHLY flexible.
Google Earth	<ul style="list-style-type: none"> • It's faster. Google earth requires a very good internet connection but it looks better. • Accuracy and up to date

5.1 Systems TENGRAPH® is Compared to (continued)

Table 75: TENGRAPH® is the Same

Package	Reasons why TENGRAPH® is the Same
MapInfo	<ul style="list-style-type: none"> • They contain similar information and functions • It has different functionality and different data sets. Tengraph is my preferred option for quick reference, while mapinfo would be preferred for outputs such as maps • They are both difficult to use if you have not had any assistance in using them before. Again, not much help information for new users. • Each system has its own different purpose for me therefore it's hard to make a direct comparison • They can do different things and be good at different things
Geoview and Iomaps	<ul style="list-style-type: none"> • Each system has its benefits. For instance Geoview can view the entire state whilst Tengraph only pulls up a maximum of 250 000 sheet. Also Geoview can highlight many tenements ad get info. Tengraph has some outstanding search and display functions. The map printing is also outstanding

5.1 Systems TENGRAPH® is Compared to (continued)

Table 76: TENGRAPH® is Worse

Package	Reasons Why TENGRAPH® is Worse
Any GIS system	<ul style="list-style-type: none"> • 10 years ago, Tengraph was at the forefront and easily the best system (and provided the best data) over any state in Australia or any other country that I was aware of at the time. Technology has caught up and passed the innovations of Tengraph and an upgrade is required to keep Tengraph at the "top of the pack." • Tengraph does not have the useability and is I am afraid to say, not very intuitive in its use. Plus the fact I need to combine our data with tenement information.
Arcview	<ul style="list-style-type: none"> • Tengraph old, clunky, slow, messy and sometimes illogical to use compared to modern GIS systems • Does not have the same flexibility as a Arcview. Also unable to add additional info themes (aerial photos etc). In relation to other online databases Tengraph remains on of the best • The ability to manipulate data in my own GIS package cannot be, in all likely hood, done in an on line system. I am very happy with Tengraph considering
Arcmap	<ul style="list-style-type: none"> • I can do more with Arcmap, better presentation of output • Using ArcMap the inquirer adds layers as required, whereas with Tengraph sometimes you get a lot of information up front and have to de-clutter by turning off features. Sometimes I would prefer to start with a simpler view, adding cadastral info and other specific selections and features as I go.
ArcGIS	<ul style="list-style-type: none"> • ArcGIS is much faster, easier to colour leases, no timeout, easier produce more legible plans • The system we use in house has more relevant information and imagery • Arc GIS has a lot more user tools that are easy to find. i.e. a decent toolbar with zoom and pan functions. Printing is also much easier • Just speed. Tengraph is online and slow to use. Often use in conjunction with GIS software

5.1 Systems TENGRAPH® is Compared to (continued)

Table 76: TENGRAPH® is Worse (continued)

Mapinfo	<ul style="list-style-type: none"> • Tengraph is not as clear and easy to use. It times out and you can't save the work you have already done. You can only save work as a pdf file (once completed) so can't use the digital files again in other programs • It would take a lot of time and money (that we don't have) to get all of the information contained in Tengraph into our own database • Mapinfo is completely flexible / Harder user interface • I find MapInfo much easier to use and I have more control over how the tenements are displayed. Plus I can copy individual tenements to a new table • Tengraph cannot be as easily tailored for viewing or printing as MapInfo and has no SQL • There is a lot more functionality with adding other layers in MapInfo • Tengraph is not an 'instinctive' package / Log in required • It is slow, clunky and not that easy to manipulate the right area on screen. Printing is another poor area. It does have good information though and is reasonably up to date which is good. Ideally it would be good to download selected info straight from Tengraph • Cannot overlay different datasets easily and is unreliable / Tengraph is too slow and cannot produce the same quality maps • Works all the time and no need to connect to Internet • Covers all States, plus overseas tenements • Tengraph has limited ability to integrate with my other datasets - including geophysics, satellite imagery etc
Eureka	<ul style="list-style-type: none"> • The appearance lets it down, making it difficult to interpret the information on screen.

6.0 Redevelopment and Review of TENGRAPH®

6.1 Suggestions for improvements

Almost 40% of respondents provided suggestions for improvements, many of which reiterated the issues/features detailed in Section 3.8. Further suggestions / issues raised are listed below with the percentage of respondents who raised them. These are also detailed with selected respondents' comments.

Note: The percentages are indicative as this question asked for suggestions and some respondents had already included their suggestions in previous comments for previous Questions. Percentages are based on the whole sample (n=778)

1. Logging on / Timing out / Freezing – 2.0%

- I find the logon process for Tengraph (the "single sign-on") to be a pain and don't know why we have to log-on anyway. Why can't it be like Geoview which doesn't require logging on?
- Logging on is a long winded process. We get kicked off several times a day through inactivity & need to log back in
- Increase time an additional 15 minutes before online Tengraph resets/disconnects - too short at the moment - or at least recreate the last session screen
- The inactive period which triggers being timed out of Tengraph is too short - this needs to be increased.
- Have recently had trouble with Tengraph freezing. We thought at first it was because of system maintenance but have since found out this should not interfere with the use of Tengraph.
- In busy times the screen keeps on freezing/dropping out just when you're in the middle of some detailed exercise and you have to start again!! Obviously your system is not powerful enough because it can't cope!!!
- The most annoying thing is that I will print a map out and by the time I walk to the printer and back, the session has disconnected. This is very frustrating as I have to log back in every few minutes.

2. Training / Help – 3.3%

- Tengraph is really hard to learn. It desperately needs a training module. There needs to be more staff at DOIR trained in Tengraph that can help with queries when you ring. having only one member staffed who is unfriendly and unhelpful is quite daunting when phoning with a problem
- Some items indicated as unused are unused through lack of knowledge of how to use/access them. Clear user instructions easily accessed would be a boon.
- For amateur prospectors like myself, I find the whole setup a bit confusing. Much like the staff at your field offices who all have different opinions about what things mean on the Tengraph system & prospecting laws in general. Some simple explanations of map meanings and prospecting laws are in order

6.1 Suggestions for Improvements (continued)

- Try and make access and wording simpler from going from point A to B.C.D. etc. Your staff work with it every day we are not. Some are not so efficient with computers. Need to treat some users as 1st week learners.
- I would use Tengraph considerably more often if it was more user friendly. At the moment it is too difficult to use and the online instructions are not helpful. We have asked DoIR to present our office a seminar on how to use the program because we're tired of telephoning for assistance. Tengraph is a great concept and would be a very valuable tool if it were easier to use.

3. Speed of the system / “Clunky” – 3.1%

- Find that we have to get on early in the morning as it is too slow coming up often through the day and evening. Probably as companies etc use through the working hours
- Main issues are the speed of the system and the frequency that it appears to be off-line
- I am pleased to know that Tengraph is available and would use it more frequently if not so clunky/awkward to use. As a consequence, I only use it when looking for new information. I think Tengraph needs a complete re-build for both aesthetic and user-friendly functionality
- It is a pretty restrictive system and clunky to move around
- I find the entire interface clunky, awkward, non-intuitive and simply difficult to rapidly negotiate and extract information. Other organisations manage this process more simply- have a look at www.ukdeal.co.uk Simpler interface, easier to navigate, faster

4. GIS: Compatibility / Coordination / Integration – 6.2%

- Run it as either ArcIMS or ArcServer to make it a bit more user friendly. Tengraph was great at the time, but technology has moved on
- Better GIS layer functions, incorporate the tenement info with the geology and geophysics to see where these features sit with respect to each other
- Really just that the maps are all a bit busy even when layers are removed. The format could be made compatible with GIS programs so information can be downloaded and viewed within them e.g. see DIA database shapefile downloads
- The Tengraph website is from the dark ages. It is very disappointing to see a mining industry website so far behind the times in what it should be providing. Tengraph should have the ability to easily interact with other publicly available information such as geological maps and geophysical data: i.e. GSWA map sheets, dtm's, magnetics; not just Wamex and Minedex. There is no interactivity with Google earth.
- The current Tengraph system is outdated and needs to be accessible in a GIS system. It needs to be integrated with WAMEX and Geoviewer. The integration of these packages would allow the user to easily access information without having to have several DOIR databases open. Tengraph is difficult to use, data manipulation is clumsy, and tenements can't be overlaid onto a geology layer. Easier access to all information is vitally important to the continual economic growth of WA.

6.1 Suggestions for Improvements (continued)

5. Links – 1.4%

- Live link to MITIS. Ability to select tenements for exporting to other GIS systems, or tenement data to spreadsheets etc. Link to cadastral information (eg details of land titles)
- Direct linking to expenditure reports (Tendex) via the holder function
- Improve cross-linking with other Department's datasets\
- Direct link to WAMEX item reports. Additional data layers like geology, topography etc

6. Citrix / Server – 1.0%

- We have had major problems with Citrix compatibilities
- The new Citrix program has made it impossibly slow for me to log on for the past month or so. I am trying to get some IT help to fix that problem
- The Citrix system and the hassle it causes trying to get Tengraph working on line
- I would use a different engine rather than CITRIX to make it work without dropouts
- Your server needs to be able to hold more users, as during working hours it likes to cut you off after about 4 searches
- A bigger server so it doesn't crash.

7. Issues for Mac and Vista users – 0.5%

- It needs to be Vista friendly. When I updated my computer in March to Vista I had all sorts of problems accessing Tengraph. Not enough technical info available. My help feature doesn't work
- Tengraph used to Work on Apple Mac OX10 using Firefox, but does not work since secure certificate changed from EQIFAX to UTNUSER
- Please provide better support to Macintosh computers! The current Tengraph system works fine with the Intel Macintosh Citrix Client, but does not work with the PowerPC Macintosh Citrix Client (and hasn't for at least a year - surely something can be done about this??). Please email me at <flytation@iprimus.com.au> if you have any help to offer
- With our windows vista pc logon is very difficult and links to pdf files cannot be accessed. We have followed recommendations on Tengraph site, but they don't seem to fix the problem.

6.2 DoIR's Potential Ideas for Improvement to the System

As part of the TENGRAPH® review process, DoIR developed a number of potential ideas for improvement to the system, which were then tested in the survey. Respondents were asked to indicate, using the scale provided, where 1 is not at all attractive and 4 is very attractive) how attractive each potential improvement would be to them.

As shown in the table below, all for potential improvements were attractive to respondents with the provision of image data and online digital downloads being the most popular and scoring in the 90s.

Table 77: Attractiveness of Potential Improvements (n=778)

	Not at All Attractive %	So/so %	Fairly Attractive %	Very Attractive %	Total %
Provision of geological information	3.1	13.4	27.5	56.0	100.0
Provision of image data, e.g. aerial photography and satellite imagery	1.3	6.2	17.4	75.2	100.0
Ability to save 'user defined' constructions on the screen	3.3	19.5	28.4	48.7	100.0
Online digital downloads of data	1.4	7.7	23.3	67.6	100.0

Q12. DoIR have developed a number of potential ideas for improvement to the system. Please indicate, using the scale provided, how attractive each potential improvement would be to you.

Frequent users of TENGRAPH® were particularly attracted to the **ability to save 'user defined' constructions on the screen** and **online digital downloads of data** more attractive than moderate or low users

Prospectors, Geologists, Engineer/Mining and Geotech/GIS found the **provision of geological information** most attractive as compared to the other categories.

Tenement Managers(self-employed, Geologists, Environment, Engineer/Mining and Geotech/GIS found the **provision of image data, e.g. aerial photography and satellite imagery** the most attractive as compared to the other categories.

Tenement Managers(self-employed), Exploration Managers/Team, Geologists and Geotech/GIS found the **online digital downloads of data** more attractive as compared to the other categories

There were no significant differences between the users of other tenement mapping systems and using GIS packages over TENGRAPH®.

6.3 Other Ideas and Suggestions for Improvement to the System

Once respondents had rated the attractiveness of DoIR's potential improvements, they were asked if they had any other ideas and suggestions for improvement to the system.

Respondents mainly highlighted and reiterated the issues detailed in previous sections, such as the speed of the system and logging on, etc. There was also some positive feedback regarding DoIR's potential improvements and DoIR staff. These are listed below;

Some Positive Comments....

- I believe the above improvements exceeded my expectation and have no added points to the list
- With the improvements suggested previously the Tengraph would be a world leader
- The ones you have are very good, especially they aerial / satellite images
- Just keep up the good work and thanks for all the help I have received when I ring to enquire – your staff are just fantastic and patient and a pleasure to deal with

Appendix 1

The Questionnaire

TENGRAPH® Survey
Mineral & Title Services Division
Department of Industry & Resources
August 2007

1. Firstly, how frequently do you use TENGRAPH® online?

- Daily ₁
- At least once a week ₂
- 1 – 3 times a month ₃
- Less often/never ₄

2. Do you ever use TENGRAPH® at the computer terminals located at DoIR’s public counters?

- Yes ₁
- No ₂

If yes:

- Daily ₁
- At least once a week ₂
- 1 – 3 times a month ₃
- Less often/never ₄

3. Overall, how satisfied are you with the service TENGRAPH® provides. Please click on the number which best reflects your feelings.

Completely dissatisfied			Mixed feelings				Completely satisfied			
0	1	2	3	4	5	6	7	8	9	10

4. Now thinking about specific TENGRAPH® functions, how often do you use each of the functions below? **(If Less Often/never, don’t proceed on that section to Q.6)**

As per Q1 and 2

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> Enquiry function Process function Selection (display of various items) i-button (information on selected features) File – print object details | <div style="border-left: 1px solid black; border-right: 1px solid black; height: 80px; margin: 0 auto;"></div> | <ul style="list-style-type: none"> Daily <input type="checkbox"/>₁ At least once a week <input type="checkbox"/>₂ 1 – 3 times a month <input type="checkbox"/>₃ Less often/never <input type="checkbox"/>₄ |
|--|--|--|

6. Now for each function which you use, we would like to know:

- a) How often you use it on the scale below, and
- b) How satisfied you are with it out of 10.

For each function, please click on a frequency and then type in your satisfaction score.

Enquiry	(a)				(b)	
	Daily	At least once a week	1-3 times a month	Less often/never	Satisfaction 0-10	N/A
Enquiry:						
Tenement	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Map sheet	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Gazetteer location	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Graticule	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Lat/long	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Grid co-ordinates	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Reserve	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Minesite	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Holder	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Release	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Mouse position	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
By land name	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
By land ID	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Petroleum titles	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Selection:						
Applied for boundaries	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Granted boundaries	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Public plan (ground available)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Marketing out screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Recent activity screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Tenement screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Land screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Survey screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Access exploration report (WAMEX screen)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Access mine and mineral deposit information (MINEDEX screen)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
DIA heritage surveys	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Native title screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Petroleum screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Tailor display – tenements	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Tailor display - petroleum	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Tailor display – cadastral	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Tailor display – misc	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Custom colouring	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Colour tenements for holder	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Mining graticule – GDA	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Mining graticule – AGD	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Petroleum graticule – onshore	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Petroleum graticules – offshore	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Petroleum graticules – territorial	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉
Remove fill pattern	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[_____]	<input type="checkbox"/> ₉

Enquiry	(a)				(b)	
	Daily	At least once a week	1-3 times a month	Less often/never	Satisfaction 0-10	N/A
Process:						
Quick plot	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Quick appraisal	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Enhanced plot – point	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Enhanced plot – line	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Enhanced plot – polygon	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Enhanced plot – label	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Enhanced plot – graticular polygon	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
i-Button:						
i-button on tenements	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
i-button on SPCL (for reserve, FNA, S19, CPL)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
i-button on petroleum titles	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
i-button on Minedex sites	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
i-button on Wamex tenements	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
i-button on DIA heritage survey	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
View						
Historical view	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
File						
Clear screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
A1 plot to PDF file	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Print to PDF file	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Print object details to PDF file	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Conversion calculator	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Print preview	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Windows						
Co-ordinates	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Centre on point	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Active holders	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Admin information	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉
Legend	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	[]	<input type="checkbox"/> ₉

c. If satisfaction rating of 0-4 chosen for any of the above, question to pop up]

Why do you feel that way?

.....

.....

.....

d) Are there any other comments on any specific factor you would like to make?

.....

.....

.....

7.a Do you use any other tenement mapping systems other than TENGRAPH®?

- Yes ₁
- No ₂ → Go to Q.11

7.b **If yes:** Please list the tenement mapping systems you use other than TENGRAPH®

[_____]

8. How do you rate TENGRAPH® against the best system that you use?

- Much better ₁
- A bit better ₂
- Similar ₃
- Not quite as good ₄
- Nowhere near as good ₅

9. Why do you say that? (please type in)

.....
.....
.....

10.a Which tenement mapping system are you comparing it to? (Please type in the other best system)

.....

10.b Who provides it?

- UK system ₁
- US system ₂
- Queensland ₃
- NSW ₄
- Victoria ₅
- South Australia ₆
- Northern Territory ₇
- Commercial third party software ₈

Other.....

11. If you were redeveloping TENGRAPH®, what improvements would you make to better meet your needs? (Please type in)

.....
.....
.....

12. As part of the TENGRAPH[®] review process, DoIR have developed a number of potential ideas for improvement to the system which are listed below.

Please indicate, using the scale provided, how attractive each potential improvement would be to you.

	Not at all attractive	So/so	Fairly attractive	Very attractive
Provision of geological information	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Provision of image data, e.g. aerial photography and satellite imagery	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Ability to save 'user defined' constructions on the screen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Online digital downloads of data	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

12.b What other ideas / suggestions for improvement to the system do you have? (Please type in)

.....

13. Lastly, some information about yourself. Are you:

- Tenement Manager (company) ₁
- Tenement Manager (self employed) ₂
- Law firm ₃
- Prospector ₄
- Exploration Manager/team ₅
- Geologist ₆
- Surveyor/cartographer ₇

Other (please type in)

Thank you for taking the time to complete this questionnaire. All of the responses you have provided will remain anonymous and confidential, with only overall findings reported back to DoIR by way of a report.

Would you like someone from DoIR to personally contact you to discuss the issues/comments you have raised in this survey? If so, it would be appreciated if you could provide your permission and contact details below.

Yes, I provide permission for my questionnaire to be identified and my individual results passed on to DoIR for someone to contact me and discuss further ₁

No I would prefer that my questionnaire remain confidential and anonymous ₂

If yes, please provide your contact details below. Thank you.

Name

Email address

Phone

Appendix 2

Sampling Details

Occupation/Area of Profession	% N=778
Tenement Manager (company)	7.3
Tenement Manager (self employed)	3.5
Law firm	2.2
Prospector	32.4
Exploration Manager / Team	13.6
Geologist	15.4
Surveyor / Cartographer	5.4
Government	3.7
Environment (including Native Title)	5.0
Engineer / Mining	1.8
Business Services (accountant, auditor, investor)	5.8
Geotech / GIS	1.0
Other	2.8
Total	100.0

Appendix 3

Data Collection Specifics

Component	Details
Research Solutions Contact:	Nicky Munro / Charmaine Samuel
Client Contact:	Geoff Spencer
Research Universe	Customers who have registered their emails addresses and details with DoIR and have used TENGRAPH® over the past 3 months
Data collection method	Online
Sampling Technique (including geographical coverage)	Census of all 1884 customers of TENGRAPH®
Sample Size	778
Quotas/weighting details	n/a
Field Company	Research Now
Field Company Credentials	IQCA accredited
Briefing Method	Detailed specifications and briefing notes sent via email
Pilot study date/s	22 nd August 2007
Changes made as result of pilot	None
Questionnaire length/administration time	10 – 15 minutes
Survey dates	23 rd August – 9 th September 2007
Times of day interviews took place	n/a
Incentives provided for respondents	None

Response Rate details:	41.3%
Validity and Reliability Issues;	Questionnaire passed through checking procedure at Research Solutions (2 person procedure) followed by client review and written authorisation to proceed to pilot study
Overall Sampling Error	$\pm 2.7\%$
Data coding	<p>Q6c, Q6d and Q12b: None undertaken – selected verbatim responses provided</p> <p>Q11: Procedure involved:</p> <ul style="list-style-type: none"> • Review of all comments to develop coding sheet based on common responses • Approval of coding sheet by Research Solutions Project Manager
Consistency checks	<ul style="list-style-type: none"> • Preliminary data file checked by Project Manager using SPSS; <ul style="list-style-type: none"> ○ Frequency counts ○ Relevant cross tabulations • Data outside the range/duplicates or abnormalities investigated with Field Company prior to coding and analysis
Treatment of missing data	<ul style="list-style-type: none"> • Excluded from analysis and/or noted where relevant • Individual cases with excessive missing data excluded from sample
Data file provided to client	Not requested