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Oskarshamn site investigation

Boremap mapping of telescopic drilled borehole KLX15A

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Keywords: KLX15A, Geology, Drill core mapping, Boremap, Fractures, BIPS, Laxemar.

Abstract

This report presents the Boremap mapping of KLX15A, which is a c. 1,000 m long telescopic core drilled borehole. The borehole was drilled with the orientation 199/–54°. The mapping was conducted between 2007-04-05 and 2007-05-10.

The documentation of geological structures and lithologies intersecting borehole KLX15A was made using the drill core and BIPS-images. Geological structures are correctly oriented in space along the borehole with the Boremap system.

The lithology in KLX15A (Table 5-1) is dominated by quartz monzodiorite (501036). Subordinate rock types comprise Ävrö granite (501044), fine-grained granite (511058), fine-grained diorite-gabbro (505102), pegmatite (501061) and granite (501058).

Twelve sections have been highlighted based on increased fracture frequencies, alterations and structural features. These sections cover the following intervals: 193.1–197.9 m, 250.5–254.6 m, 260.5–265.6 m, 379.3–385.5 m, 401.9–409.1 m, 502.5–505.6 m, 602.2–608.7 m, 629.4–634.9 m, 675.0–682.9 m, 711.4–744.1 m, 772.6–774.2 and 978.4–1,000.4 m.

Sammanfattning

Denna rapport presenterar boremapkarteringen av KLX15A som är ett ca 1 000 meter långt kärnborrhål. Borrhålet borrades med orienteringen 199/–54° och karterades mellan 2007-04-05 och 2007-05-10.

Dokumentationen av geologiska strukturer och litologi som genomskär borrhål KLX15A har utförts med borrkärna och BIPS-bilder. Geologiska strukturer har orienterats i rummet längs med borrhålet med Boremap systemet.

KLX15A domineras av kvartsmonzodiorit (501036). Underordnade bergarter utgörs av Ävrö granit (501044), finkornig granit (511058), finkornig diorit-gabbro (505102), pegmatit (501061) och granit (501058).

Tolv sektioner i KLX15A kan urskiljas baserat på förhöjd sprickfrekvens, bergets omvandlingar och geologiska strukturer. Dessa sektioner återfinns i följande intervall: 193,1–197,9 m, 250,5–254,6 m, 260,5–265,6 m, 379,3–385,5 m, 401,9–409,1 m, 502,5–505,6 m, 602,2–608,7 m, 629,4–634,9 m, 675,0–682,9 m, 711,4–744,1 m, 772,6–774,2 och 978,4–1 000,4 m.

Contents

1 Introduction

This report gives a brief presentation of the data gained from the mapping of KLX15A in the Laxemar area, which is one of the activities performed within the site investigation at Oskarshamn. The work was carried out in accordance with activity plan AP PS 400-07-046. In Table 1-1 controlling documents for performing this activity are listed. Both activity plan and method descriptions are SKB's internal controlling documents. Rock type nomenclature that has been used is shown in Table 1-2.

SKB investigates two potential sites for a deep repository for nuclear waste in the Swedish Precambrian basement at approximately 500 m depth. These places are Forsmark in northern Uppland and Oskarshamn in eastern Småland. In order to make a preliminary evaluation of the rock mass down to a depth of about 1,000 m at these sites, SKB has initiated a drilling program using core drilled boreholes. Every borehole usually starts with a percussion drilled part the first 100 m, where only drill cuttings are examined together with BIPS, followed by core drilling.

Table 1-1. Controlling documents for the performance of the activity.

Activity plan	**Number**	**Version**
Boremapkartering av KLX15A	AP PS 400-07-046	1.0
Method descriptions	**Number**	**Version**
Nomenklatur vid Boremapkartering	SKB MD 143.008	1.0
Method Description for Boremap mapping	SKB MD 143.006	2.0
Mätsystembeskrivning för Boremap	SKB MD 146.005	1.0
Instruktion: Regler för bergarters benämningar vid platsundersökning I Oskarshamn	SKB MD 132.004	1.0
Instruktion för längdkalibrering vid undersökningar i kärnborrhål	SKB MD 620.010	2.0

Table 1-2. Rock type nomenclature for the site investigation at Oskarshamn.

Rock type	**Rock code**	**Rock description**
Dolerite	501027	Dolerite
Fine-grained Götemar granite	531058	Granite, fine- to medium-grained, (”Götemar granite”)
Coarse-grained Götemar granite	521058	Granite, coarse-grained, (”Götemar granite”)
Fine-grained granite	511058	Granite, fine- to medium-grained
Pegmatite	501061	Pegmatite
Granite	501058	Granite, medium- to coarse-grained
Ävrö granite	501044	Granite to quartz monzodiorite, generally porphyritic
Quartz monzodiorite	501036	Quartz monzonite to monzodiorite, equigranular to weakly porphyritic
Diorite/gabbro	501033	Diorite to gabbro
Fine-grained dioritoid	501030	Intermediate magmatic rock
Fine-grained diorite-gabbro	505102	Mafic rock, fine-grained
Sulphide mineralization	509010	Sulphide mineralization
Sandstone	506007	Sandstone

Borehole KLX15A is situated within the Laxemar area (Figure 1-1). KLX15A is a c. 1,000 m long telescopic borehole with the orientation 199/–54°. Mapping of the borehole was performed between 2007-04-05 and 2007-05-10.

Detailed mapping of the drill cores is essential for a three dimensional modelling of the geology at depth. The mapping is based on the use of BIPS-image (Borehole Image Processing System) of the borehole wall and by the study of the drill core itself. The BIPS-image enables the study of orientations, since the Boremap software calculates strike and dip of planar features such as foliations, rock contacts and fractures.

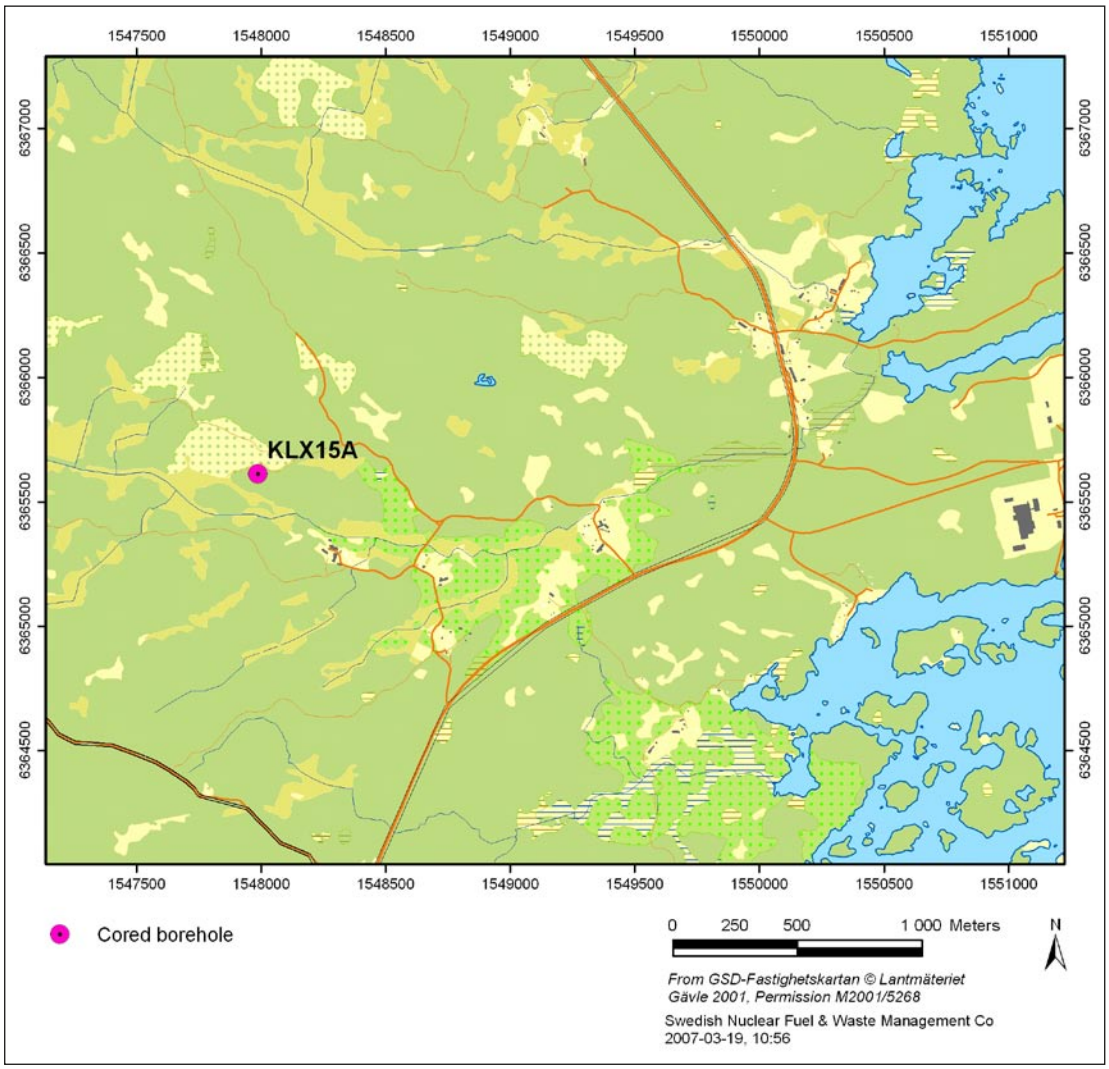


Figure 1-1. *Location of the core drilled borehole* KLX15A.

2 Objective and scope

The principal aim of the mapping activities presented in this report is to obtain a documentation of geological structures and lithologies intersecting borehole KLX15A. Geological structures will be correctly orientated in space along the borehole with the Boremap system. The result will serve as a platform for forthcoming investigations of the drill core, as well as various site descriptive modelling.

3 Equipment

3.1 Description of software

Software used for the mapping of KLX15A was Boremap v. 3.9 with bedrock and mineral standards of SKB. The data presentation was made using WellCad v. 4, Microsoft Access and Microsoft Excel. Boremap is the software that unites orthodox core mapping with modern video mapping, where Boremap shows the image from BIPS (Borehole Image Processing System) and extracts the geometrical parameters: length, width, strike and dip from the image.

3.2 Other equipment

The following equipment is used to facilitate the core mapping: folding rule, pen, diluted hydrochloric acid, knife, water-filled atomiser and hand lens.

3.3 BIPS-image video film sequences

The BIPS-image of KLX15A covers the interval 77.00 m–980.24 m.

3.4 BIPS-image video film quality

The visibility of thin fractures in BIPS depends on image resolution, image contrast and image quality.

3.4.1 BIPS-image resolution

Resolution of the BIPS-image is perhaps the principal reason why very thin fractures as well as very thin apertures are not visible in the BIPS-image and the resolution depends on the BIPS video camera pixel size and illumination angle.

3.4.2 BIPS-image contrast

Thick fractures are always visible in both drill core and the BIPS-image. However, the visibility of thin fractures depends strongly on the contrast between the fracture and the wall rock. A bright fracture in a dark rock is clearly visible in the BIPS-image. But a bright coloured fracture in a light coloured rock might, however, be clearly visible in the drill core but not visible in the BIPS-image, especially if the fracture and wall rock have the same colour. The opposite is true for dark fractures.

In very rare cases when the BIPS-image contrast between a very thin fracture and the wall rock is very strong the fracture might be visible in the BIPS-image even if it is not visible in the drill core.

3.4.3 BIPS-image quality

BIPS-image quality is sometimes limited due to:

1) blackish coatings probably related to the drilling equipment,
2) vertical bleached bands from the clayey mixture of drill cuttings and water,
3) light and dark bands at high angle to the drill hole related to the automatic aperture of the video camera,
4) vertical enlargements of pixels due to stick-slip movement of the camera probe.

Vertical bleached bands and blackish coatings are usually the main disturbances in the BIPS-image quality.

The image quality is classified into four levels; good, acceptable, bad and very bad. Good quality means a more or less clear image which is easy to interpret. If the quality is acceptable it means that the image is not good, but that the mapping can be performed without any problems. An image of bad quality is somewhat difficult to interpret while an image of very bad quality cannot be interpreted except from very obvious and outstanding features. When the BIPS-image quality is so bad that fractures and structures cannot be identified, they can still be oriented using the *guide-line method* (section 4.3.3). The BIPS-image quality for KLX15A is presented in Table 3-1.

Table 3-1. BIPS-image quality in KLX15A.

From (m)	To (m)	Quality
77	91	Acceptable
91	648	Good
648	652	Bad
652	980	Acceptable

4 Execution

4.1 General

Mapping of the drill core of the telescopic drilled borehole was performed and documented according to activity plan AP PS 400-07-046 (SKB, internal document) referring to the Method Description for Boremap mapping (SKB MD 143.006, v. 2.0), Nomenklatur vid Boremapkartering (SKB MD 143.008, v. 1.0), Instruktion: Regler för bergarters benämningar vid platsundersökningen i Oskarshamn (SKB MD 132.004, v. 1.0) and Instruktion för längdkalibrering vid undersökningar i kärnborrhål (SKB MD 620.010, v. 2.0), all of them SKB internal documents.

The drill core was displayed on inclined roller tables and mapped in its entire length with the Boremap software. The core mapping was carried out without any detailed geological knowledge of the area but with access to geophysical logs from the borehole and rock samples.

The term *oxidation* has been used as an alteration type until the mapping of KLX05. However, research has shown that the red colour of the bedrock is actually not only a result of oxidation. Since April 2005 the term *red staining* is used instead of the term *oxidation.*

The mapping was performed by Karl-Johan Mattsson and Peter Dahlin (Geosigma AB)

4.2 Preparations

Any depth registered in the BIPS-image deviates from the true depth in the borehole, a deviation which increases with depth, with approximately 0.4 m/100 m. This problem is eliminated by adjusting the depth of the BIPS-image to reference slots cut into the borehole walls every fiftieth meter (Appendix 7). The level for each slot is measured in the BIPS-images and then adjusted to the correct level using the correct depth value from the SICADA database.

Necessary in data for length adjustment and orientation in space are borehole diameter, reference marks, length and deviation; all data is collected from SICADA database (Appendices 6–8).

4.3 Execution of measurements

Concepts used during the core mapping, are defined in this chapter.

4.3.1 Fracture definitions

Definitions of different fracture types and aperture, crush zones and sealed fracture network are found in Nomenklatur vid Boremapkartering (SKB MD 143.008, v. 1.0), SKB internal document.

Two types of fractures are mapped in Boremap; broken and unbroken. Broken are fractures that split the core while unbroken fractures do not split the core. All fractures are described with their fracture minerals and other characteristics, e.g. width, aperture and roughness. Visible apertures are measured down to 1 mm in the BIPS-image. Smaller apertures, which are impossible to detect in the BIPS-image, are denoted a value of 0.5 mm. If the core pieces don't fit well, the aperture is considered "probable". If the core pieces do fit well, but the fracture surfaces are dull or altered, the aperture is considered "possible".

All fractures with apertures > 0 mm are treated as open in the SICADA database. Only few broken fractures are given the aperture = 0 mm. Unbroken fractures usually have apertures = 0 mm. Unbroken fractures that have apertures > 0 mm are interpreted as partly open and are included in the open-category. Open and sealed fractures are finally frequency calculated and shown in Appendix 1.

4.3.2 Fracture alteration and joint alteration number

Joint alteration number is principally related to the thickness of, and the clay content in a fracture. Thick fractures rich in clay minerals are given joint alteration numbers between 2 and 3. The majority of the broken fractures are very thin to extremely thin and seldom contain clay minerals. These fractures receive joint alteration numbers between 1 and 2.

A subdivision of fractures with joint alteration numbers between 1 and 2 was introduced to facilitate both the evaluation process for fracture alterations and the possibility to compare the alterations between different fractures in the boreholes. The subdivision is based on fracture mineralogy as follows:

a) fracture wall alterations,

b) fracture mineral fillings assumed to have been deposited from circulating water-rich solutions,

c) fracture mineral fillings most likely resulting from altered wall rock material.

Joint alteration number equal to 1: Fractures with or without wall rock alteration, e.g. oxidation or epidotization, and without mineral fillings is considered as fresh. The joint alteration number is thus set to 1.

Minerals such as calcite, quartz, fluorite, zeolites, laumontite and sulphides are regarded as deposited by circulating water-rich solutions and not as true fracture alteration minerals. The joint alteration number is thus set to 1.

Joint alteration number equal to 1.5: epidote, prehnite, hematite, chlorite and/or clay minerals are regarded as fracture minerals most likely resulting from altered wall rock. A weak alteration is thus assumed and the joint alteration number was set to 1.5. Extra considerations have been given to clay minerals since the occurrence of these minerals often resulted in a higher joint alteration number.

Joint alteration numbers higher than 1.5: When the mineral fillings is thick and contain a few mm of clay minerals, often together with epidote and chlorite, the joint alteration number is set to 2. In rare cases, when a fracture contains 5–10 mm thick clay, together with chlorite, the joint alteration number is set to 3 or higher.

When the alteration of a fracture is too thick (and/or intense) to give the fracture the joint alteration number 1.5 and too thin and/or weak to give it a 2, 1.7 and 1.8 is used.

4.3.3 Mapping of fractures not visible in the BIPS-image

Not all fractures are visible in the BIPS-images, and these fractures are orientated by using the *guide-line method*, based on the following data:

- Amplitude (measured along the drill core) which is the interval between fracture extremes along the drill core.
- The relation between the orientations of the fracture trace, measured on the drill core and a well defined structure visible in the BIPS-image.
- Absolute depth.

Orientation of fractures and other structures with the *guide-line method* is done in the following way: The first step is to calculate the amplitude of the fracture trace in the BIPS-image (with 76 mm diameter) from the measured fracture amplitude in the drill core (with 50 mm diameter). The second step is the correction of strike and dip. This is done by rotating the fracture trace in the BIPS-image relative to a feature with known orientation. The fracture trace is then put at the correct depth according to the depth measured on the drill core.

The *guide-line method* can be used to orientate any feature that is not visible in the BIPS-image. It is also a valuable tool to control that the personnel working with the drill core is observing the same feature as the personnel delineating the trace in the BIPS-image, especially in intervals rich in fractures.

The error of orientating fractures using the *guide-line method* is not known but experience and an estimation using stereographic plots indicated that the error is most likely insignificant. Accordingly, the *guide-line method* is so far considered better than mapping lots of non-oriented fractures. The fractures in question are mapped as "non-visible in BIPS" and can therefore be separated from fractures visible in BIPS which probably have a more accurate orientation.

4.3.4 Definition of veins and dikes

Rock occurrence is the way Boremap handles the occurrence of lithology up to 1 meter wide. Chiefly two different rock occurrences are mapped: veins and dikes. These two are separated by their respectively length in the drill core; veins are set to 0–20 cm and dikes are set to 20–100 cm. Rock occurrences that covers more than 100 cm of the drill core are mapped under the feature *rock type.*

4.3.5 Mineral codes

In the case where properties and/or minerals are not represented in the mineral list, following mineral codes have been used:

X2 Barite.
X5 Bleached fracture walls.
X7 Fractures with a fresh appearance and no detectable mineral.
X8 Fractures with epidotized / saussuritized walls.

4.4 Data handling

Mapping of the drill core is performed on-line on the SKB network, in order to obtain the best possible data security. Before every break (> 15 minutes) a back-up is saved on the local disk. Regular quality controls are performed. Every working day a Summary report (from Boremap) and a WellCad plot are printed in order to find possible misprints. The mapping is also quality checked by a routine in Boremap before it is exported to and archived in SICADA database. Personnel from SKB also perform spot test controls and regular quality revisions. All primary data is stored in SKB's database SICADA and only these data are later used for interpretation and modelling.

4.5 Geological Summary table, general description

A Geological Summary table (Appendix 1) is an overview of the features mapped with the Boremap software. It also facilitates comparisons between Boremap information collected from different boreholes and is more objective than a pure descriptive borehole summary.

All information is taken directly from the Boremap database using simple and well defined search paths for each geological parameter (Appendix 2).

The Geological Summary table consists of 23 columns, each one representing a specific geological parameter, presented as either intervals or frequencies (see section 4.5.1 for column description). Intervals are calculated for parameters with a width ≥ 1 m and frequencies for parameters with a width < 1 m. Frequency information is treated as point observations. It should be noted that parameters with a thickness of only 1 mm get the same "value" as a similar parameter with a thickness of 999 mm since both are treated as point observations and used for frequency calculations.

Parameters are sometimes related in such a way that the mapping of one parameter cause a decrease in the frequency of another parameter. This type of intimate relationship between parameters has been noted for the following cases;

- There is a decrease in the frequency of *unbroken fractures* with oxidized walls and without mineral fillings in intervals mapped with *Alteration – red staining.*
- No *unbroken fractures* are mapped in intervals of *sealed fracture network*.
- No *broken fractures* are mapped in intervals with *crush.*
- Hybrid rock and composite dikes generally include a large amount of fine to medium grained granite veins. These veins are not mapped and the frequency presented for veins + dikes in column 6 (Appendix 1) are lower than the true frequency in composite dike intervals.

4.5.1 Columns in the Geological Summary table

The Geological Summary table includes the following 23 columns:

Column 1: *Rock Type / Lithology*, interval column. Only lithologies longer than 1 m are presented here. Shorter lithologies are presented in column 6. This column is identical with the ordinary WellCad presentation.

Column 2: *Rock Type / Grain size*, interval column. Interval limits follows column 1. This column is identical with the ordinary WellCad presentation.

Column 3: *Rock Type / Texture*, interval column. Interval limits follows column 1. This column is identical with the ordinary WellCad presentation.

Column 4: *Alteration / Type*, interval column. No frequency column is presented for alteration/ type. The alteration/ type column are identical with the ordinary WellCad presentation.

Column 5: *Alteration / Intensity*, interval column. This column is identical with the ordinary WellCad presentation.

Column 6: *Rock Occurrence / Veins + Dikes < 1 m wide*, frequency column. This rock type column can be seen as the frequency complement to the rock type/lithology interval column. Only rock type sections that are thinner than 1 m can be described as rock occurrences in Boremap. Thicker rock type sections are mapped as rock type.

Column 7: *Structure / Shear Zone < 1 m wide*, frequency column. This column includes ductile shear structures as well as brittle-ductile shear structures and these are mapped as rock occurrences in Boremap.

Column 8: *Structure / Brecciated < 1 m wide*, frequency column. Breccias < 1 m wide are mapped as rock occurrence in Boremap. Very thin micro breccias along sealed/natural fracture planes are generally not considered.

Column 9: *Structure / Brecciated ≥ 1 m wide*, interval column. Breccias > 1 m wide are mapped as rock type/structure in Boremap.

Column 10: *Structure / Mylonite < 1 m wide*, frequency column. Mylonites < 1 m wide are mapped as rock occurrence/structure in Boremap.

Column 11: *Structure / Mylonite ≥ 1 m wide* is an interval column. Mylonites > 1 m wide are mapped as rock type/structure in Boremap.

Column 12: *Structure / Foliated < 1 m wide* is a frequency column. Sections with foliation < 1 m wide are mapped as rock occurrence/structure in Boremap.

Column 13: *Structure / Foliated ≥ 1 m wide* is an interval column. Sections with foliation ≥ 1 m wide are mapped as rock type/structure in Boremap.

Column 14: *Sealed fractures / All*, frequency column. This column includes all fractures mapped as unbroken in the Boremap system as well as broken fractures interpreted to have broken up artificially during/after drilling.

Column 15: *Sealed fractures / Broken fractures with aperture = 0*, frequency column. This column includes unbroken fractures interpreted to have broken up artificially during/after drilling.

Column 16: *Sealed fractures / Sealed Fracture Network < 1 m wide*, frequency column. The sealed fracture network parameter is the only parameter that is generally evaluated directly from observations of the drill core. These types of sealed fractures can only in rare cases be observed in the BIPS-image.

Column 17: *Sealed fractures / Sealed Fracture Network ≥ 1 m wide*, interval column.

Column 18: *Open fractures / All Apertures > 0*, frequency column. This column includes all broken fractures, both fractures that with certainty were open before drilling and fractures that probably or possibly were open before drilling.

Column 19: *Open fractures / Uncertain, Aperture = 0.5 probable + 0.5 possible*, frequency column. This column includes fractures that probably or possibly open before drilling.

Column 20: *Open fractures / Certain, Aperture = 0.5 and > 0.5*, frequency column. This column includes fractures that certainly were open before drilling.

Column 21: *Open fractures / Joint alteration > 1.5*, frequency column. This column show fractures with stronger joint alteration than normal. This parameter is generally correlated with the location of lithologies with a more weathered appearance.

Column 22: *Open fractures / Crush < 1 m wide*, frequency column. This column includes shorter sections with crush.

Column 23: *Open fractures / Crush ≥ 1 m wide*, interval column. This column includes longer sections with crush.

4.6 Nonconformities

The section at 77.00–980.24 m was mapped with drill core and BIPS and the section at 980.242–1,000.43 m only with core.

Core loss occurs at 216.541–216.591 m and at 996.075–996.545 m.

5 Results

5.1 General

Borehole KLX15A is oriented 199/–54°. The drill core covers the interval 77.00–1,000.43 m and the BIPS-image covers the interval 77.00–980.24 m.

All results from the mapping are principally found in the Appendices. Information from the SICADA database is shown in the Geological Summary table in Appendix 1 and a search path to Geological Summary table is presented in Appendix 2. The BIPS-image is presented in Appendix 3, the WellCad diagram in Appendix 4 and In-data, such as borehole length, reference marks, deviation data and diameter are presented in Appendices 6–8.

Original data from the reported activity are stored in the primary database SICADA. Data are traceable in SICADA by the Activity Plan number (AP PS 400-07-046). Only data in databases are accepted for further interpretation and modelling. The data presented in this report are regarded as copies of the original data. Data in the databases may be revised, if needed. Such revisions will not necessarily result in a revision of the P-report, although the normal procedure is that major revisions entail a revision of the P-report. Minor revisions are normally presented as supplements, available at www.skb.se.

5.2 Lithology and structures

The lithology in KLX15A (Table 5-1) is dominated by quartz monzodiorite (501036). Subordinate rock types comprise Ävrö granite (501044), fine-grained granite (511058), fine-grained diorite-gabbro (505102), pegmatite (501061) and granite (501058).

Table 5-1. Lithology distribution in KLX15A.

Rock types	%
Quartz monzodiorite (501036)	95.4
Ävrö granite (501044)	2.1
Fine-grained granite (511058)	1.0
Fine-grained diorite-gabbro (505102)	0.9
Pegmatite (501061)	0.5
Granite (501058)	0.1

Twelve sections in KLX15A are recognized by increased fracture frequencies, alterations and structural features;

Section interval characteristics

1. 193.1–197.9 m. Increased frequency of sealed fractures and sealed fracture networks, slight increase of open fractures. The section is related to a deformed fine-grained diorite-gabbro (505102). Two crush zones occur within the section. The section is partly faint saussuritizated.
2. 250.5–254.6 m. Slight increased frequency of open fractures, sealed fractures and sealed fracture networks, ductile shear zones and one cataclasite.
3. 260.5–265.6 m. Increased frequency of open fractures and open fractures with aperture > 0.5 mm, sealed fractures and sealed fracture networks. Two crush zone occur in the section. The section is faint saussuritizated and faint to medium red stained.
4. 379.3–385.5 m. Increased frequency of sealed fractures, sealed fracture networks, brittle-ductile and ductile shear zones and cataclasites. The section is weak to medium red stained.
5. 401.9–409.1 m. Increased frequency of sealed fractures, sealed fracture networks, cataclasites and one brittle-ductile shear zone. The section is weak to medium red stained and partly weak saussuritizated.
6. 502.5–505.6 m. Slight increased frequency of sealed fractures, sealed fracture networks, cataclasites and brittle-ductile shear zones. The section is partly weak to medium red stained.
7. 602.2–608.7 m. Slight increased frequency of sealed fractures and sealed fracture networks. One cataclasite and one brittle-ductile shear zone. The section is partly weak to medium red stained.
8. 629.4–634.9 m. Increased frequency of open fractures and open fractures with aperture > 0.5 mm, sealed fractures and sealed fracture networks. Two crush zones occur in the section. The section is weak to medium red stained and partly weak epidotized and chloritized. The last 3 m of the section has a vuggy appearance.
9. 675.0–682.9 m. Increased frequency of sealed fractures, sealed fracture networks and cataclasites. One brittle-ductile shear zone and one breccia occur within the section. The section is faint to strong red stained and partly faint epidotized.
10. 711.4–744.1 m. Inhomogeneous section. Increased frequency of sealed fractures and sealed fracture networks. A slight increase of open fractures. Scattered cataclasites, brittle-ductile and ductile shear zones and breccias. The section is partly weak to medium red stained and partly medium epidotized.
11. 772.6–774.2 m. Increased frequency of open fractures, sealed fractures and sealed fracture networks. The section is related to a deformed fine-grained diorite-gabbro (505102). The section is partly faint saussuritizated.
12. 978.4–1,000.4 m. Increased frequency of sealed fractures and sealed fracture networks. Moderate increases of open fractures, brittle-ductile and ductile shear zones and cataclasite. One core loss occurs in the section. The section is faint to strong red stained and partly faint to weak saussuritizated.

5.3 Fracture mineralogy

Tables 5-3 and 5-4 show the frequency of minerals and rock wall alteration in sealed fractures and open fractures respectively. Minerals less than 0.1 % are not accounted for. For X-mineral classification, see section 4.3.5.

Calcite and chlorite are the most frequently occurring minerals in open fractures. Subordinate minerals are pyrite, clay minerals, epidote, oxidized walls and hematite. In sealed fractures the dominating minerals and rock wall alterations are calcite and oxidized walls. Subordinate minerals and rock wall alteration are chlorite, epidote, X8 (fractures with epidotized / saussuritized walls), quartz and prehnite.

Table 5-3. Frequency of minerals and rock wall alteration in open fractures.

Mineral	%
Calcite	84.4
Chlorite	83.0
Pyrite	15.2
Clay Minerals	11.2
Epidote	8.3
Oxidized Walls	8.2
Hematite	3.6
X7	1.3
Quartz	1.2
Zeolite	0.8
Adularia	0.5
X5	0.5
X8	0.5
Prehnite	0.4
Unknown mineral	0.4
Laumontite	0.3
Sulphides	0.2
Iron Hydroxide	0.1
X2	0.1

Table 5-4. Frequency of minerals and rock wall alteration in sealed fractures.

Mineral	%
Calcite	47.9
Oxidized Walls	42.3
Chlorite	24.3
Epidote	23.9
X8	10.2
Quartz	9.0
Prehnite	6.9
X5	5.2
White Feldspar	4.8
Hematite	1.3
Adularia	1.2
Pyrite	1.0
Red Feldspar	0.3
X7	0.2
Laumontite	0.1

Geological Summary table for KLX15A

Site	LAXEMAR
Borehole	KLX15A
Coordinate System	RT90-RHB70
Date of mapping	2007-04-04 16:08:00

Signed data

ROCKTYPE SIMPEVARP
- Fine-grained granite
- Pegmatite
- Granite
- Ävrö granite
- Quartz monzodiorite
- Fine-grained diorite-gabbro

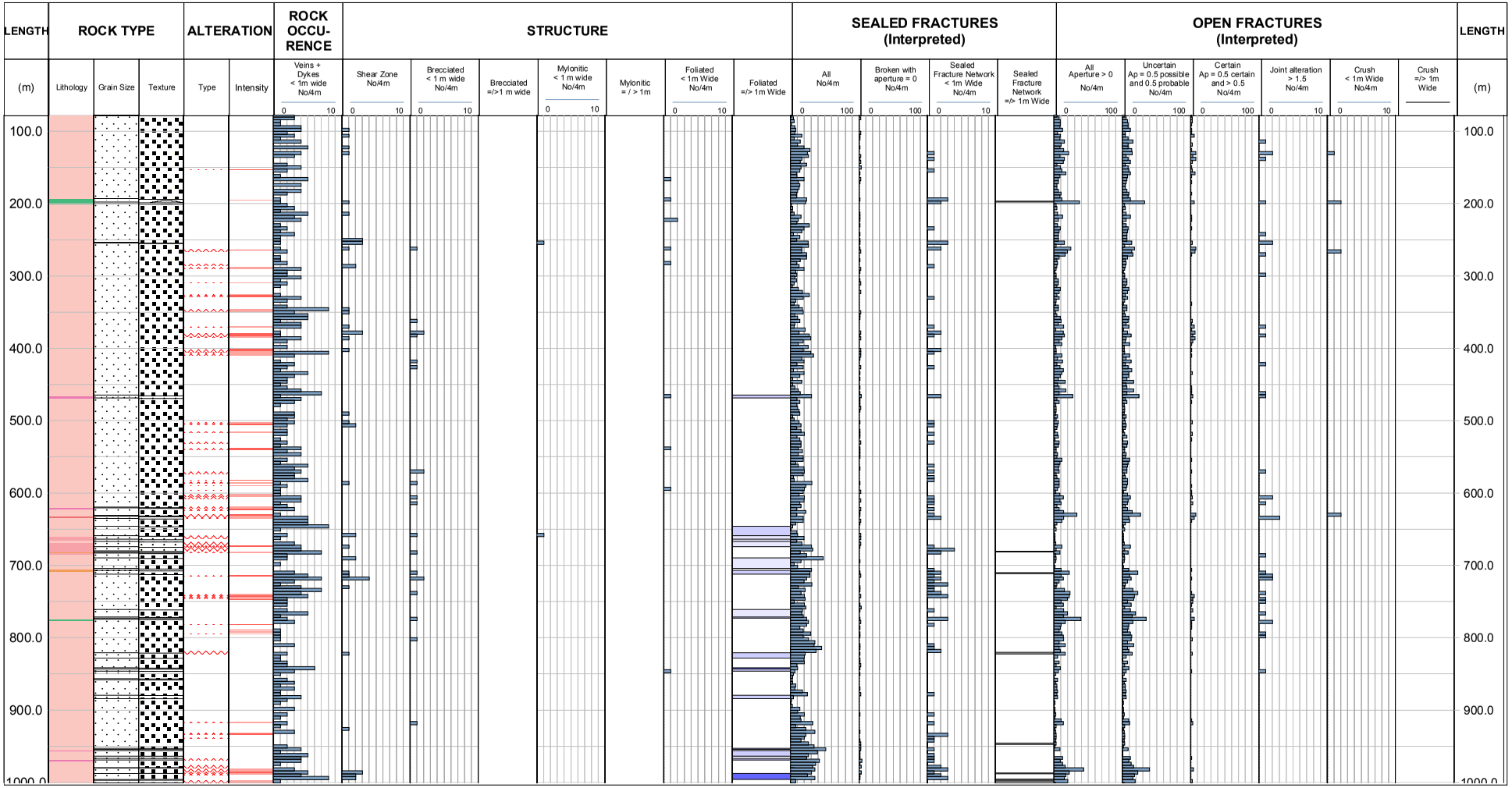
GRAINSIZE
- Fine-grained
- Fine to medium grained
- Medium to coarse grained
- Coarse-grained
- Medium-grained

TEXTURE
- Porphyritic
- Equigranular
- Unequigranular
- Metamorphic

ALTERATION TYPE
- Red Staining

ALTRATION INTENSITY
- Weak
- Medium

STRUCTURE INTENSITY
- Faint
- Weak
- Medium



Appendix 2

Search paths for the Geological Summary table

TABLE HEAD LINES		INFORMATION SOURCE			PRESENTATION
Head lines	**Sub head lines**	**Varcode**	**First suborder**	**Second suborder**	**Interval / frequence**
Rock type	Lithology	5	Sub 1		Interval
	Grain size	5	Sub 5		Interval
	Texture	5	Sub 6		Interval
Alteration	Type	7	Sub 1 = 700		Interval
	Intensity	7	Sub 1 = 700	Sub 2	Interval
Rock occurrence	Vein + dyke	31	Sub 1 = 2 and 18		Frequence
Structure	Shear zone, < 1m wide	31	Sub 4 = 41 and 42		Frequence
	Brecciated, < 1m wide	31	Sub 4 = 7		Frequence
	Brecciated, >/= 1m wide	5	Sub 3 = 7	Sub 4; 101 and 102 = 102	Interval
		5	Sub 3 = 7	Sub 4; 103 and 104 = 104	
	Mylonite, < 1 m wide	31	Sub 4 = 34		Frequence
	Mylonite, >/= 1 m wide	5	Sub 3 = 34	Sub 4; 101 and 102 = 102	Interval
		5	Sub 3 = 34	Sub 4; 103 and 104 = 104	
	Foliated, < 1 m wide	31	Sub 4 = 81		Frequence
	Foliated, >/= 1 m wide	5	Sub 3 = 81	Sub 4; 101 and 102 = 102	Interval
		5	Sub 3 = 81	Sub 4; 103 and 104 = 104	
Sealed fracture	All unbroken fractures	3			Frequence
	and broken fractures	2	SNUM 11= 0		
	Broken fractures, Aperture = 0	2	SNum 11 = 0		Frequence
	Sealed fracture network < 1 m wide	32			Frequence
	Sealed fracture network>/= 1 m wide	32			Interval
Open fractures	All, Aperture > 0	2 and 3	SNum 11>0		Frequence
	Uncertain, Aperture = 0.5 possible	2 and 3	SNum 11>0	Sub 12 = 3	Frequence
	and 0.5 probable	2 and 3	SNum 11>0	Sub 12 = 2	
	Certain, Aperture = 0.5 and >0.5	2 and 3	SNum 11>0	Sub 12 = 1	Frequence
	Joint alteration > 1.5	2	SNum16 > 1.5		Frequence
	Crush < 1 m wide	4			Frequence
	Crush >/= 1 m wide	4			Interval

Appendix 3

BIPS-image for KLX15A

Borehole Name: KLX15A

Mapping Name: KLX15A_Geosigma_1

Mapping Range: 77.000 - 979.597 m

Diameter: 76.0 mm

Printed Range: 77.000 - 979.272

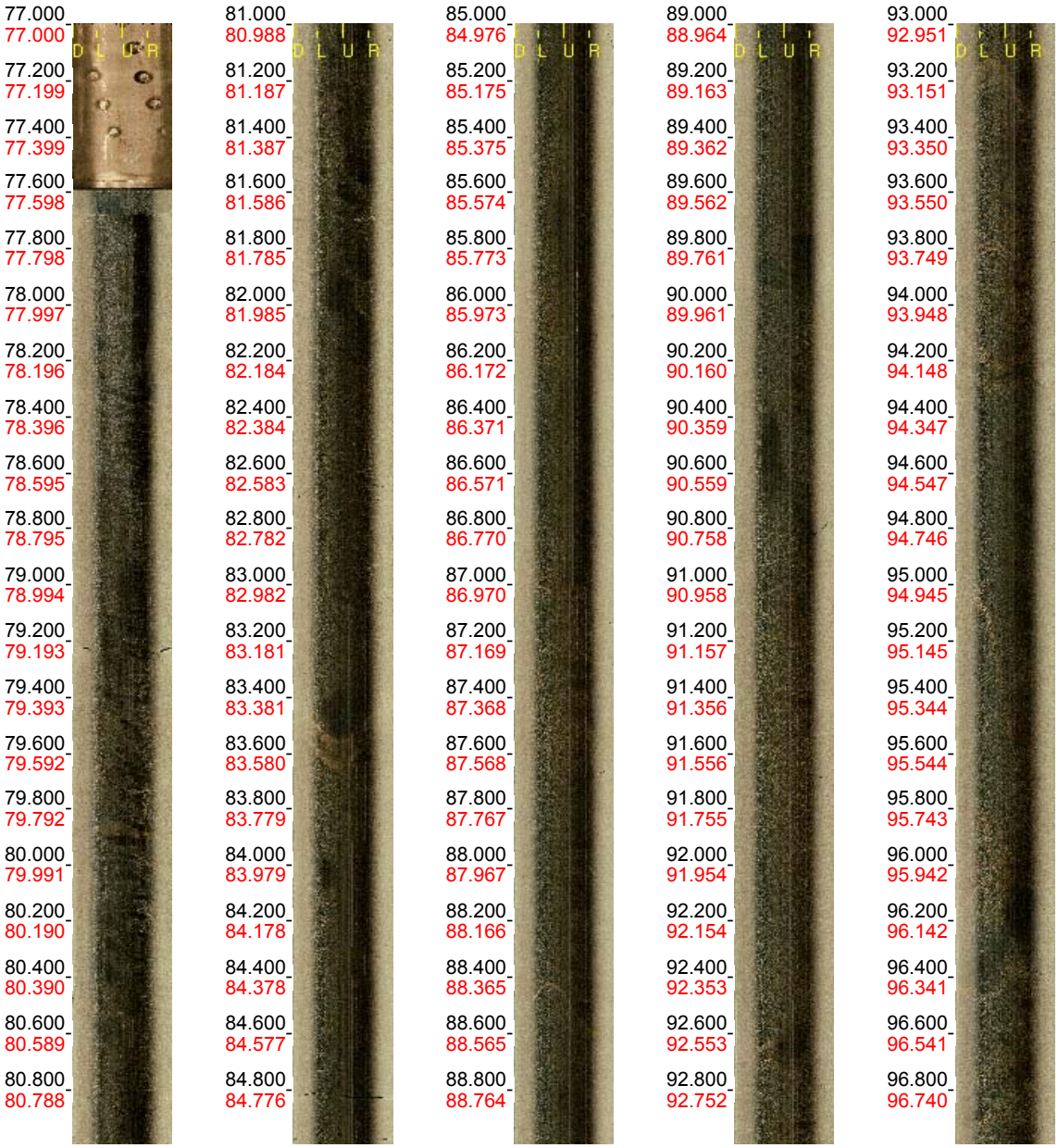
Pages: 47

Image File Information:

File:	G:\skb\bips\oskarshamn\KLX15A\Used\KLX15A_77-979m.BIP
Date/Time:	2007-03-28 12:39:00
Start Depth:	77.000 m
End Depth:	979.272 m
Resolution:	1.00 mm/pixel (depth)
Orientation:	Gravmetric
Image height:	902272 pixels
Image width:	360 pixels
BIP Version:	BIP-III
Locality:	LAXEMAR
Borehole:	KLX15A
Scan Direction:	Down
Color adjust:	0 0 0 (RGB)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

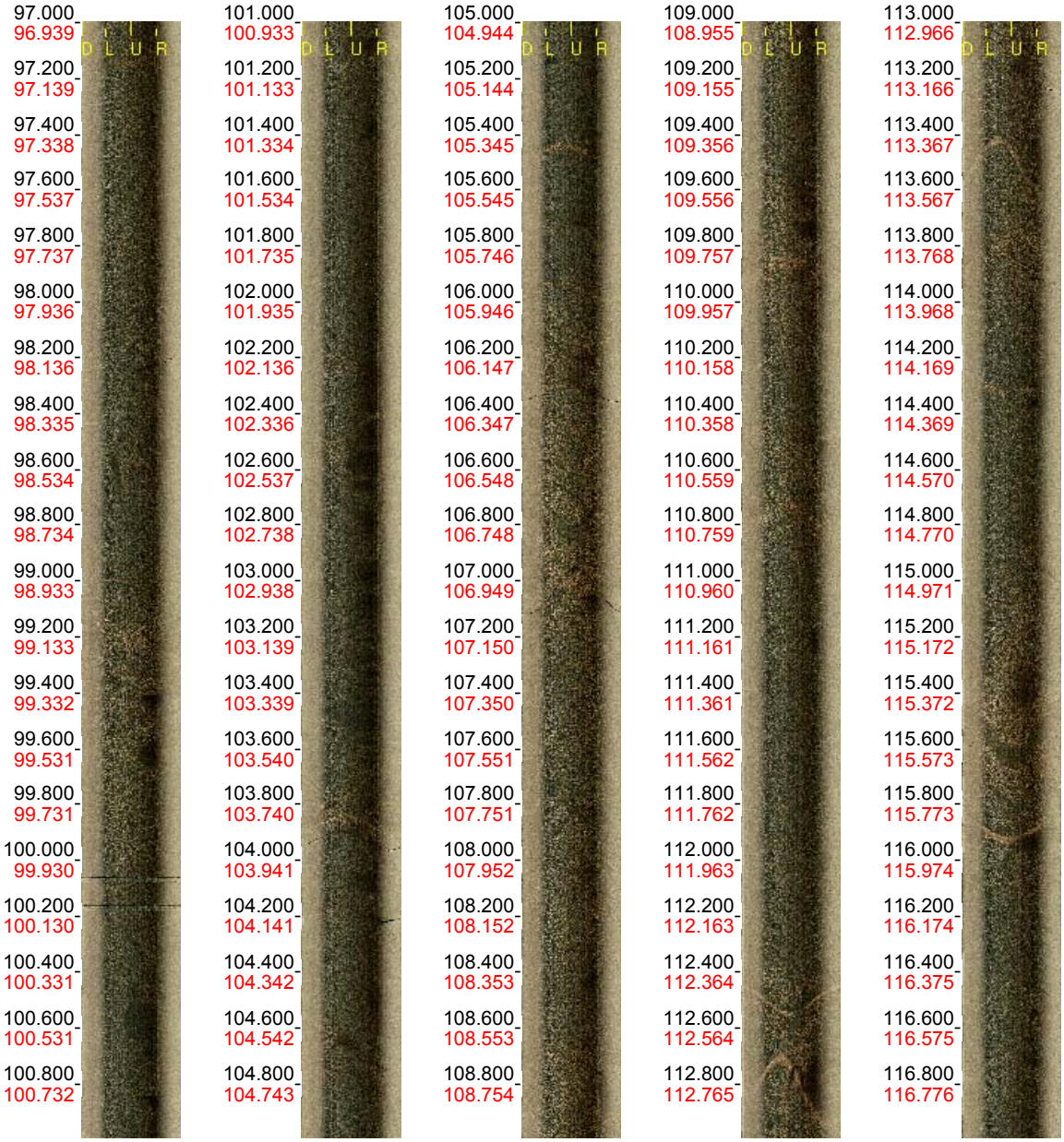
Depth range: 77.000 - 97.000 m
Azimuth: 196.9
Inclination: -50.8



Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 2 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 97.000 - 117.000 m
Azimuth: 196.9
Inclination: -50.9



Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 3 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 117.000 - 137.000 m
Azimuth: 197.0
Inclination: -50.8

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 4 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 137.000 - 157.000 m
Azimuth: 196.8
Inclination: -50.7

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 157.000 - 177.000 m
Azimuth: 196.5
Inclination: -50.5

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 6 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 177.000 - 197.000 m
Azimuth: 196.3
Inclination: -50.5

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 197.000 - 217.000 m
Azimuth: 196.6
Inclination: -50.5

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 8 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 217.000 - 237.000 m
Azimuth: 196.0
Inclination: -50.3

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 9 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 237.000 - 257.000 m
Azimuth: 195.6
Inclination: -50.2

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 10 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 257.000 - 277.000 m
Azimuth: 195.5
Inclination: -50.0

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 277.000 - 297.000 m
Azimuth: 195.3
Inclination: -49.9

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 297.000 - 317.000 m
Azimuth: 195.4
Inclination: -49.8

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 13 (47)

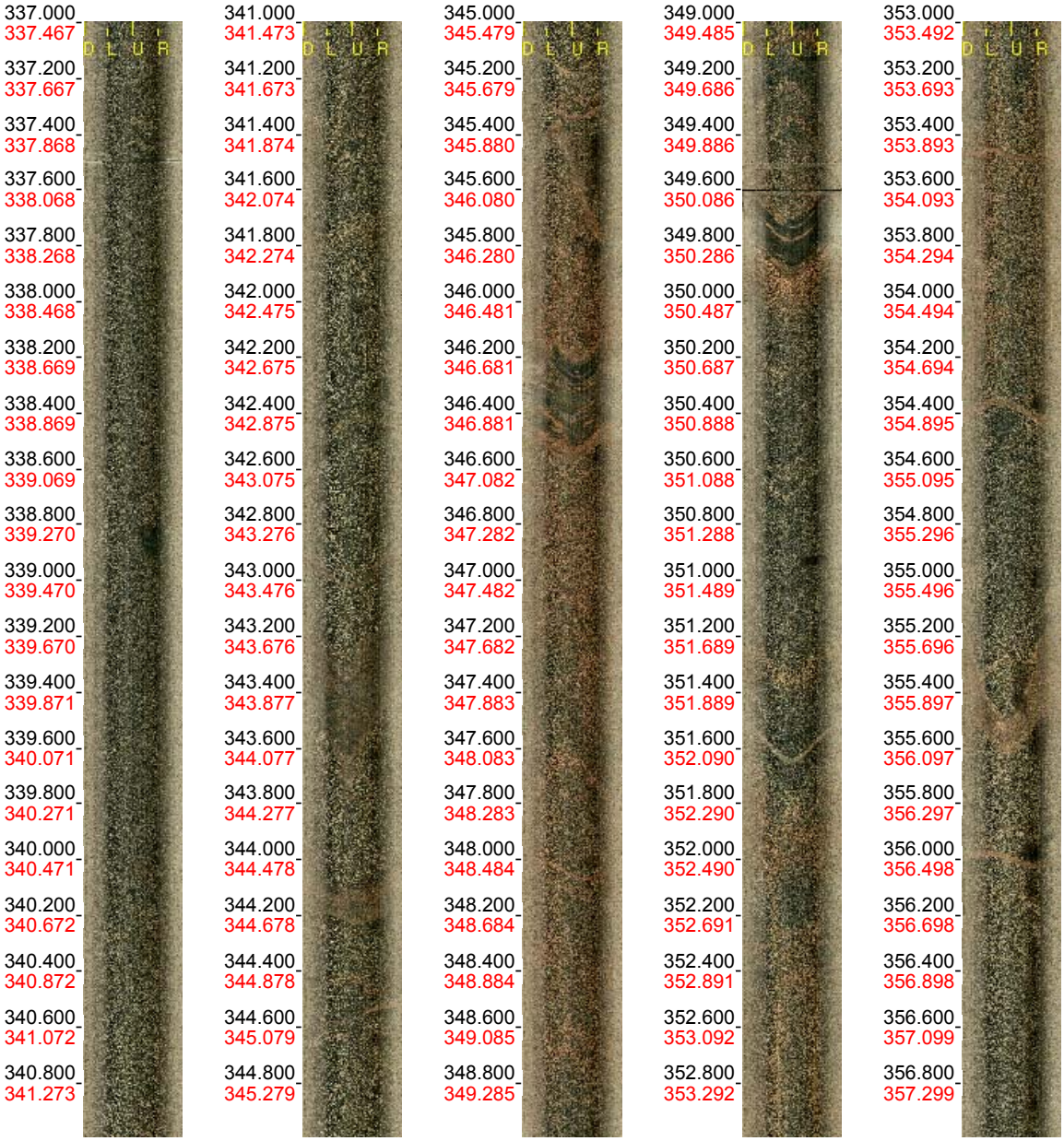
Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 317.000 - 337.000 m
Azimuth: 195.3
Inclination: -49.8

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 14 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 337.000 - 357.000 m
Azimuth: 195.1
Inclination: -49.8



Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 15 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 357.000 - 377.000 m
Azimuth: 195.1
Inclination: -49.7

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 16 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 377.000 - 397.000 m
Azimuth: 195.0
Inclination: -49.6

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 17 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 397.000 - 417.000 m
Azimuth: 194.6
Inclination: -49.5

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 417.000 - 437.000 m
Azimuth: 194.4
Inclination: -49.4

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 19 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 437.000 - 457.000 m
Azimuth: 194.5
Inclination: -49.3

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 20 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 457.000 - 477.000 m
Azimuth: 194.0
Inclination: -49.2

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 21 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 477.000 - 497.000 m
Azimuth: 194.0
Inclination: -49.0

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 22 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 497.000 - 517.000 m
Azimuth: 194.0
Inclination: -48.9

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 23 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 517.000 - 537.000 m
Azimuth: 193.8
Inclination: -48.8

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 24 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 537.000 - 557.000 m
Azimuth: 193.4
Inclination: -48.7

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 25 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 557.000 - 577.000 m
Azimuth: 193.0
Inclination: -48.6

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 26 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 577.000 - 597.000 m
Azimuth: 193.2
Inclination: -48.5

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 27 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 597.000 - 617.000 m
Azimuth: 193.0
Inclination: -48.3

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 28 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 617.000 - 637.000 m
Azimuth: 193.1
Inclination: -48.3

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 29 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 637.000 - 657.000 m
Azimuth: 193.3
Inclination: -48.2

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 30 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 657.000 - 677.000 m
Azimuth: 192.9
Inclination: -48.1

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 677.000 - 697.000 m
Azimuth: 193.2
Inclination: -48.1

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 32 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 697.000 - 717.000 m
Azimuth: 193.2
Inclination: -47.9

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 33 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 717.000 - 737.000 m
Azimuth: 193.4
Inclination: -47.7

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 34 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 737.000 - 757.000 m
Azimuth: 193.1
Inclination: -47.6

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 35 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 757.000 - 777.000 m
Azimuth: 192.7
Inclination: -47.4

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 36 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 777.000 - 797.000 m
Azimuth: 192.9
Inclination: -47.3

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 37 (47)

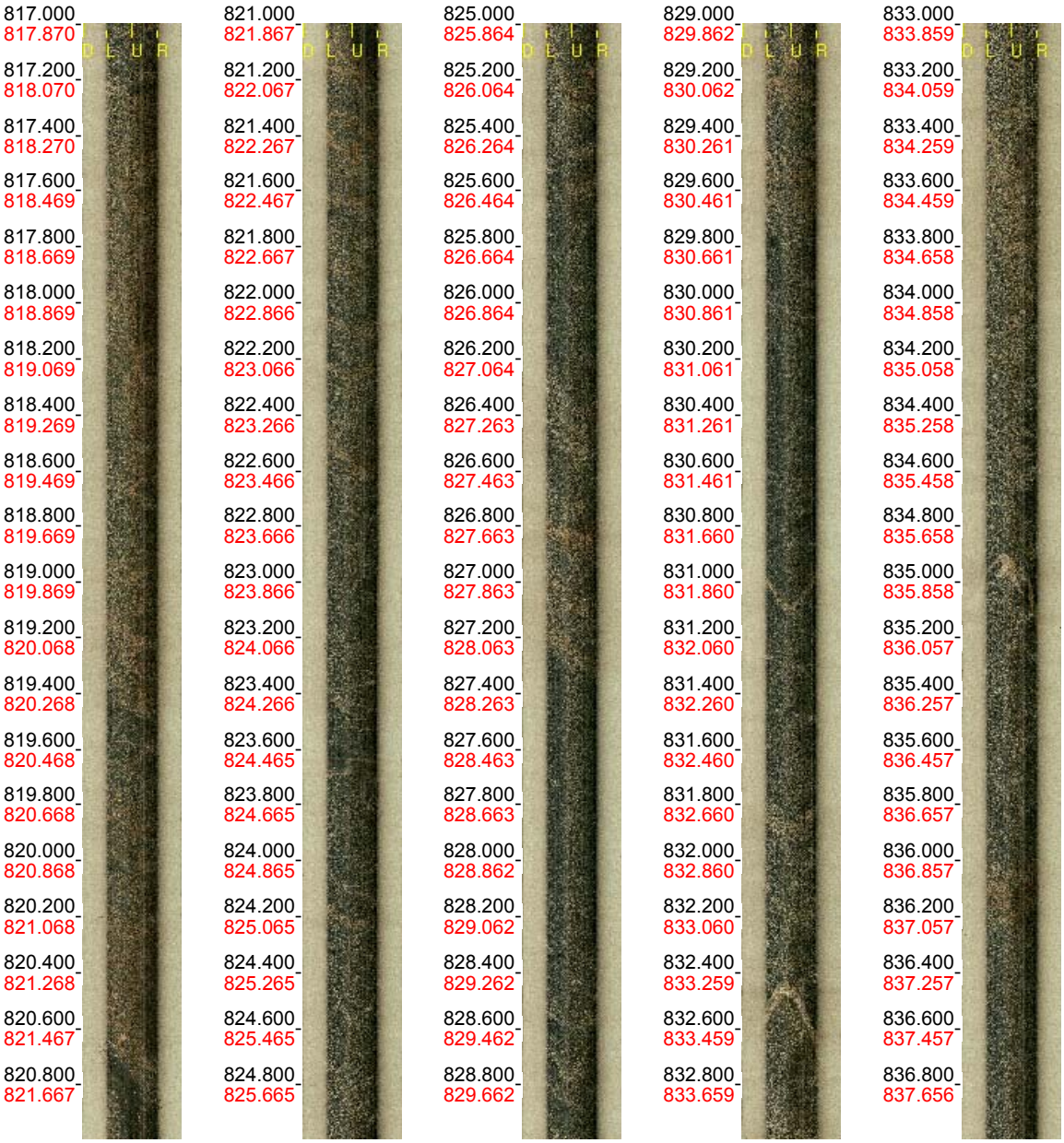
Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 797.000 - 817.000 m
Azimuth: 192.7
Inclination: -47.2

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 38 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

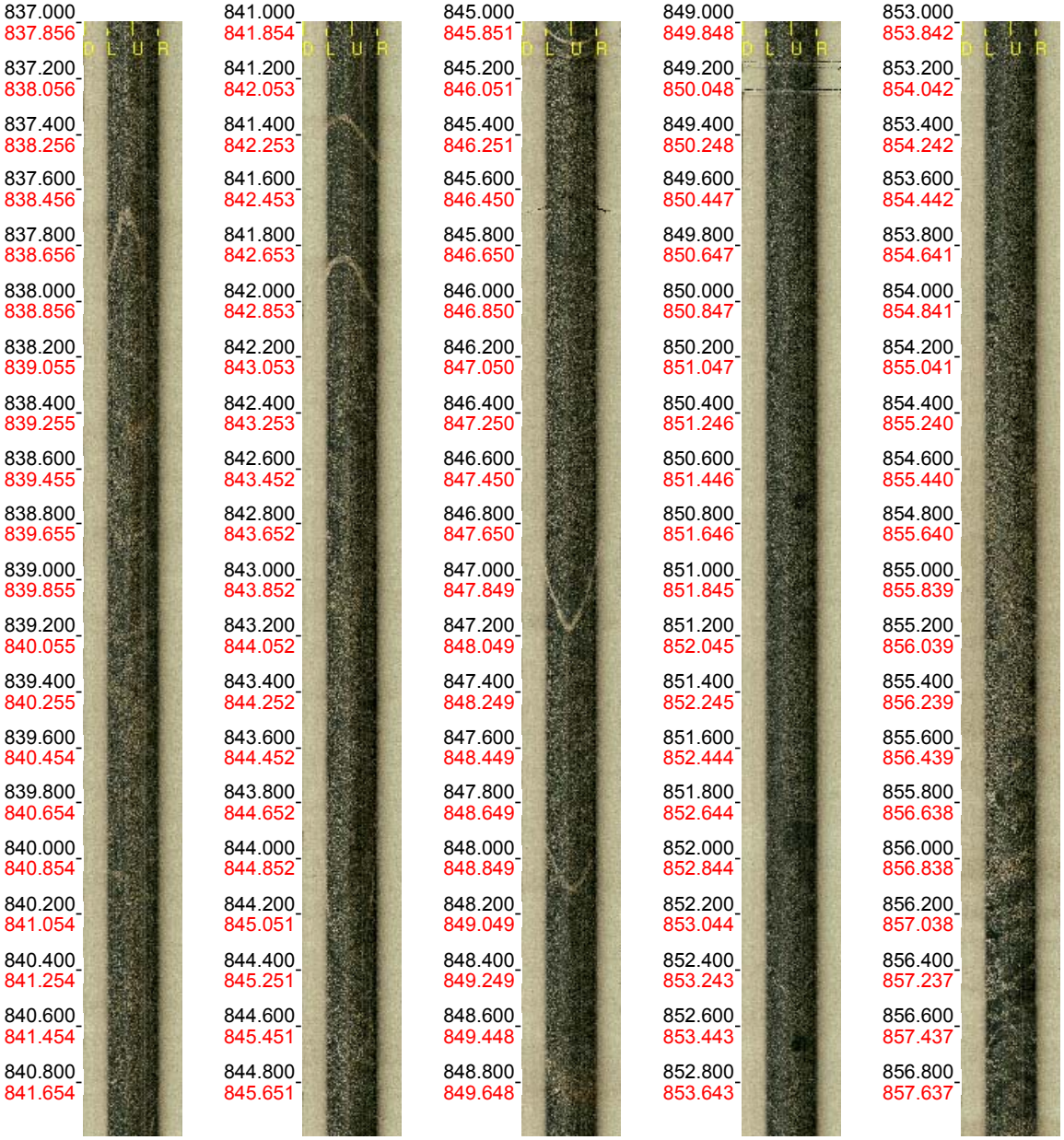
Depth range: 817.000 - 837.000 m
Azimuth: 192.5
Inclination: -47.0



Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 39 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 837.000 - 857.000 m
Azimuth: 192.4
Inclination: -46.8



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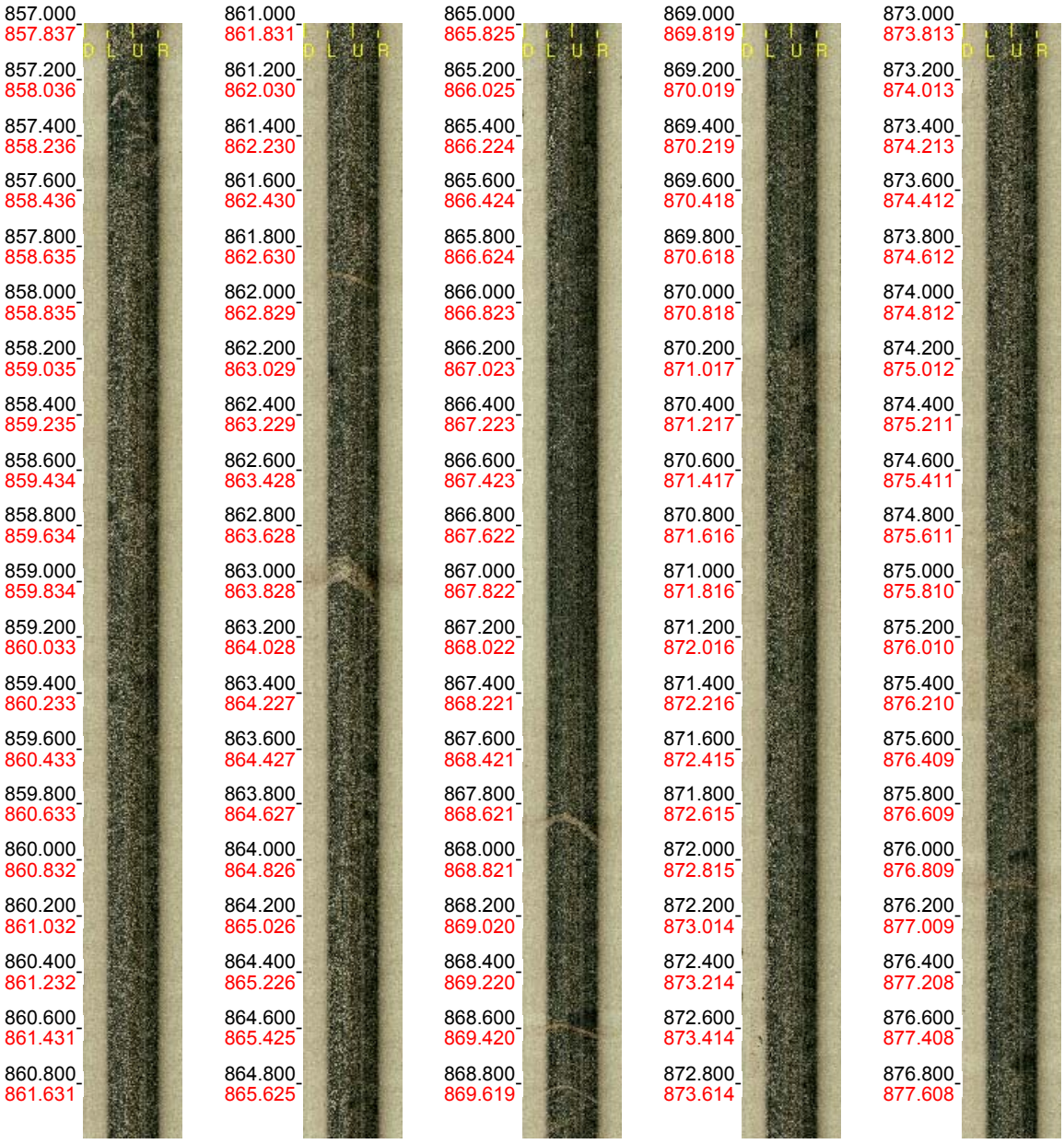
Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

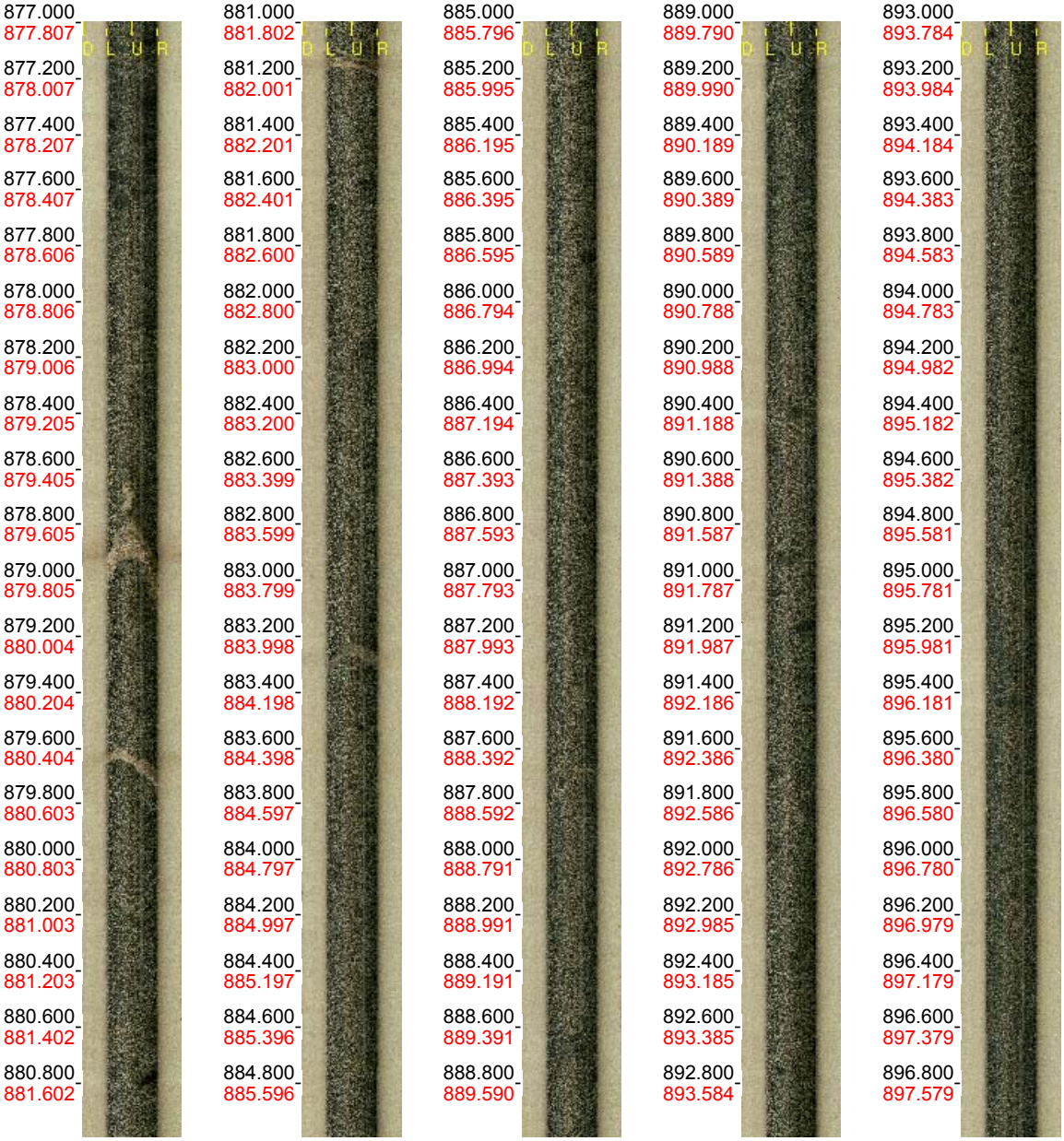
Depth range: 857.000 - 877.000 m
Azimuth: 192.0
Inclination: -46.8



Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 41 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 877.000 - 897.000 m
Azimuth: 191.7
Inclination: -46.7



Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 42 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 897.000 - 917.000 m
Azimuth: 191.4
Inclination: -46.7

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 43 (47)

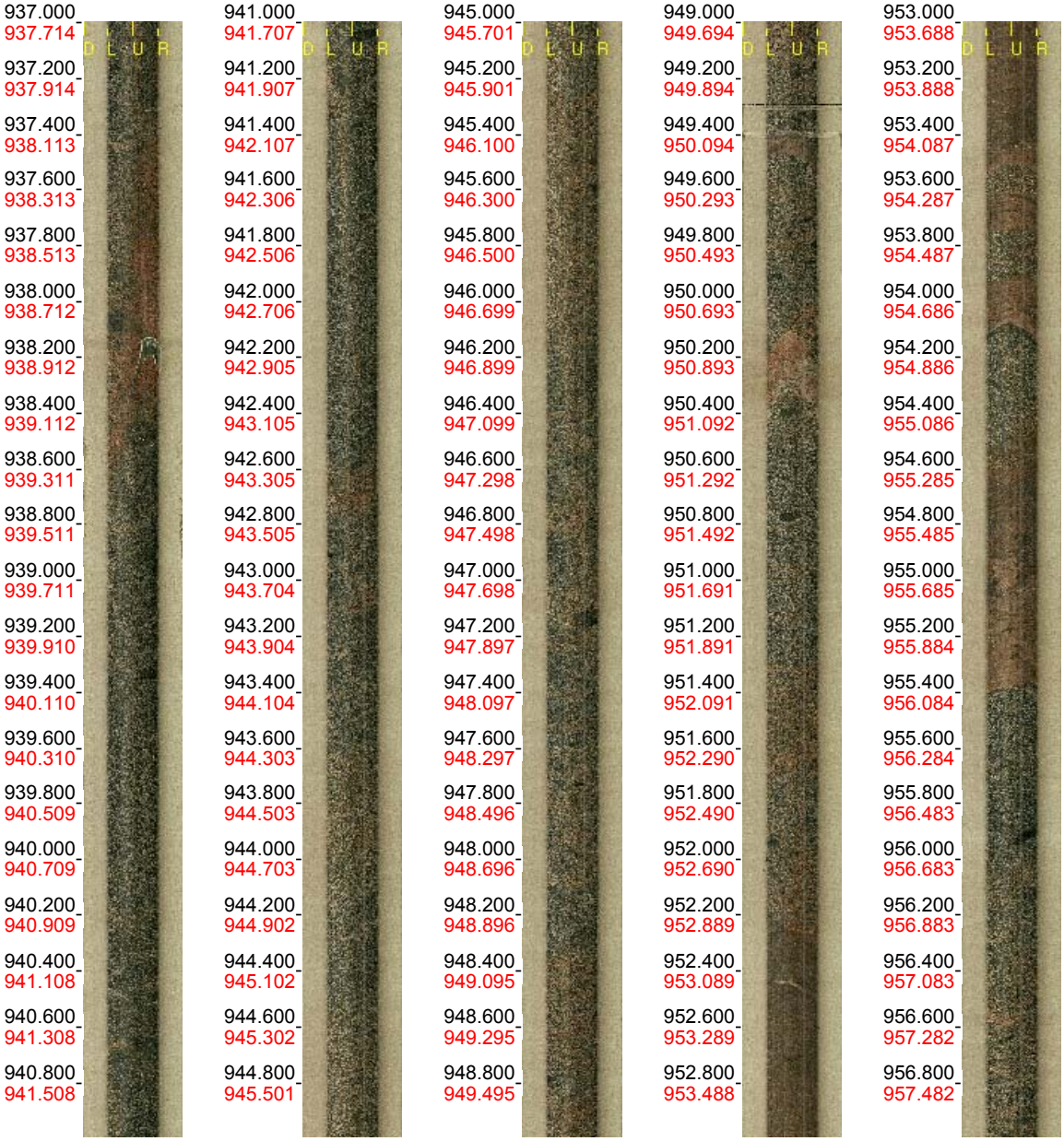
Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 917.000 - 937.000 m
Azimuth: 191.4
Inclination: -46.8

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 44 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 937.000 - 957.000 m
Azimuth: 190.8
Inclination: -46.7



Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 45 (47)

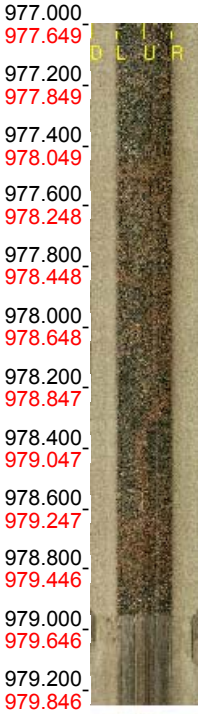
Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 957.000 - 977.000 m
Azimuth: 191.0
Inclination: -46.6

Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 46 (47)

Borehole: KLX15A
Mapping: KLX15A_Geosigma_1

Depth range: 977.000 - 979.272 m
Azimuth: 190.6
Inclination: -46.7

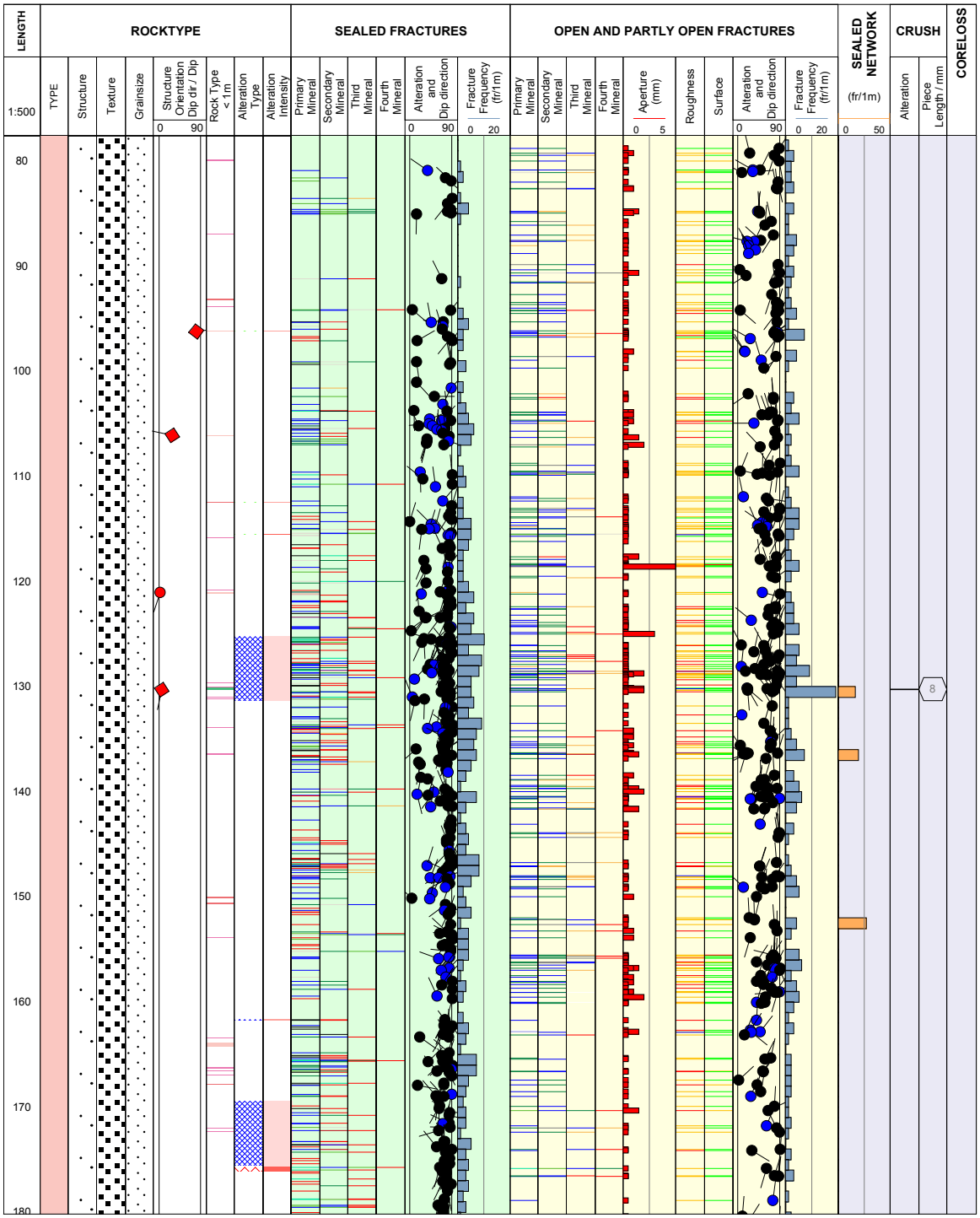


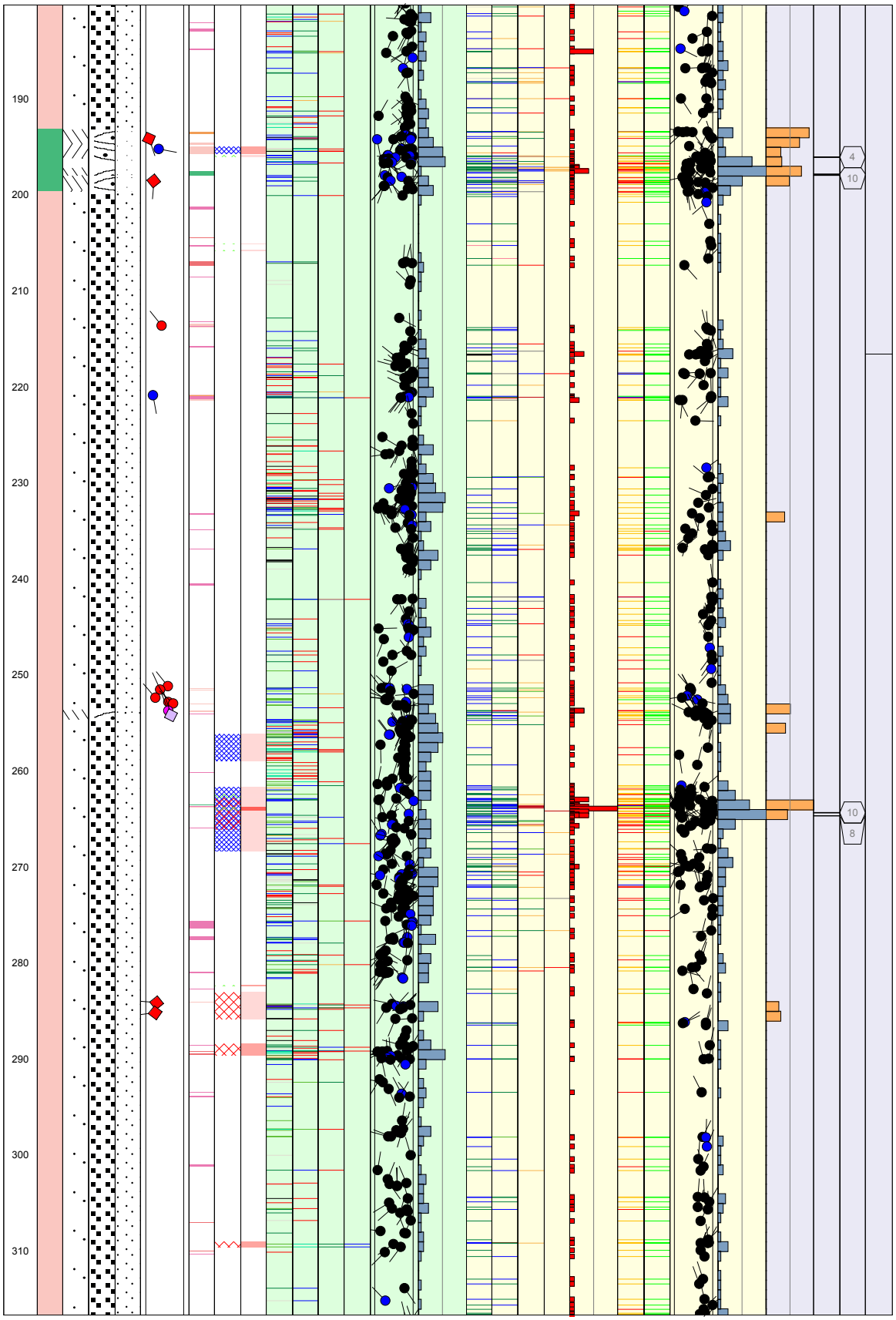
Printed: 2007-05-10 16:03:58 Scale: 1 : 20 Aspect: 150 % 47 (47)

WellCad diagram for KLX15A

Title GEOLOGY IN KLX15A **Appendix:**

Site	LAXEMAR	**Coordinate System**	RT90-RHB70
Borehole	KLX15A	**Northing [m]**	6365614.17
Diameter [mm]	76	**Easting [m]**	1547987.47
Length [m]	1000.430	**Elevation [m.a.s.l.]**	14.59
Bearing [°]	198.83	**Drilling Start Date**	2007-01-17 10:30:00
Inclination [°]	-54.41	**Drilling Stop Date**	2007-02-25 20:00:00
Date of coremapping	2007-04-04 16:08:00	**Plot Date**	2007-10-25 22:03:45
Rocktype data from	p_rock	**Signed data**	

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270
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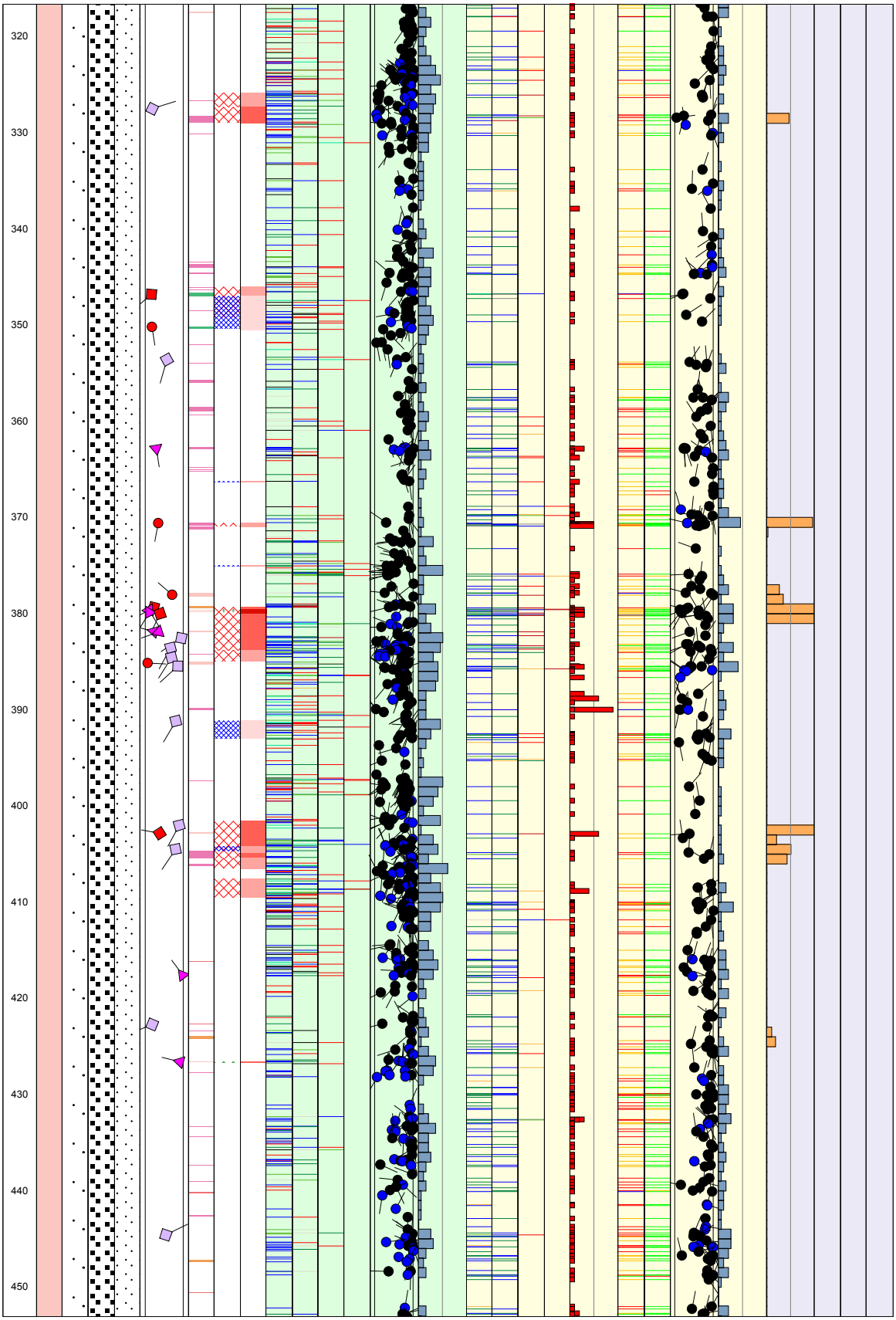
290
300
310
4
10
10
8


320
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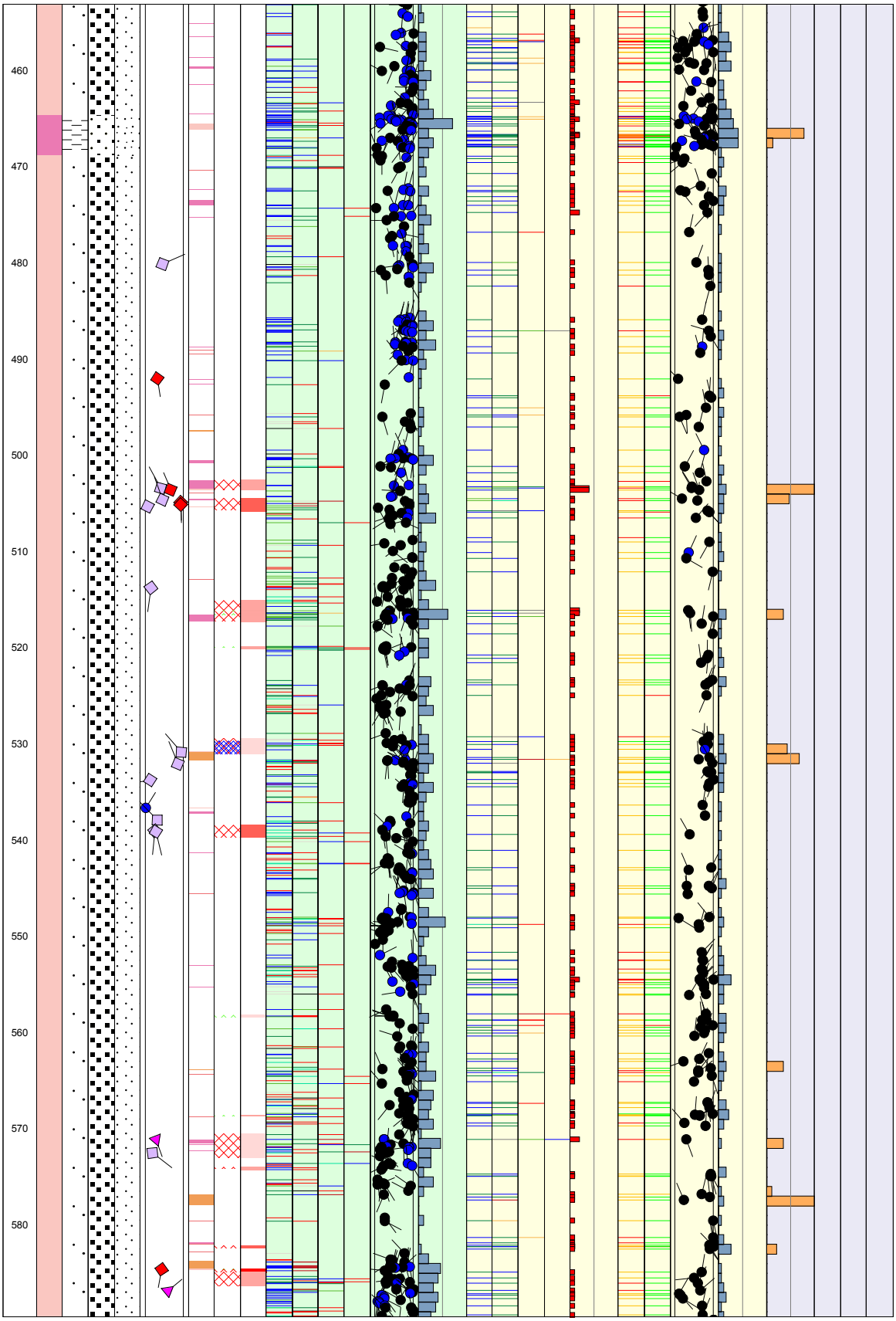
370
380
390
400
410
420
430
440
450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520
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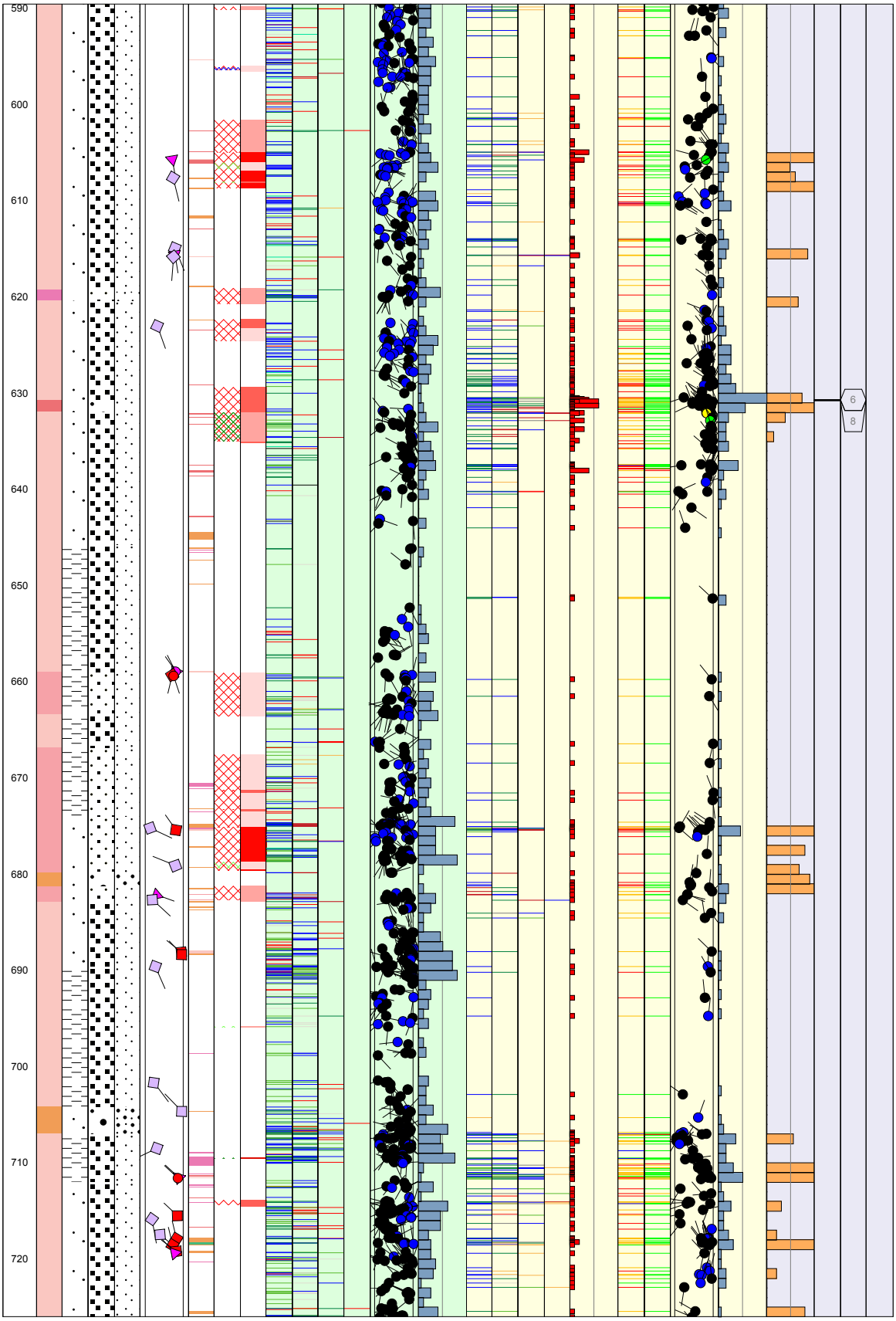
540
550
560
570
580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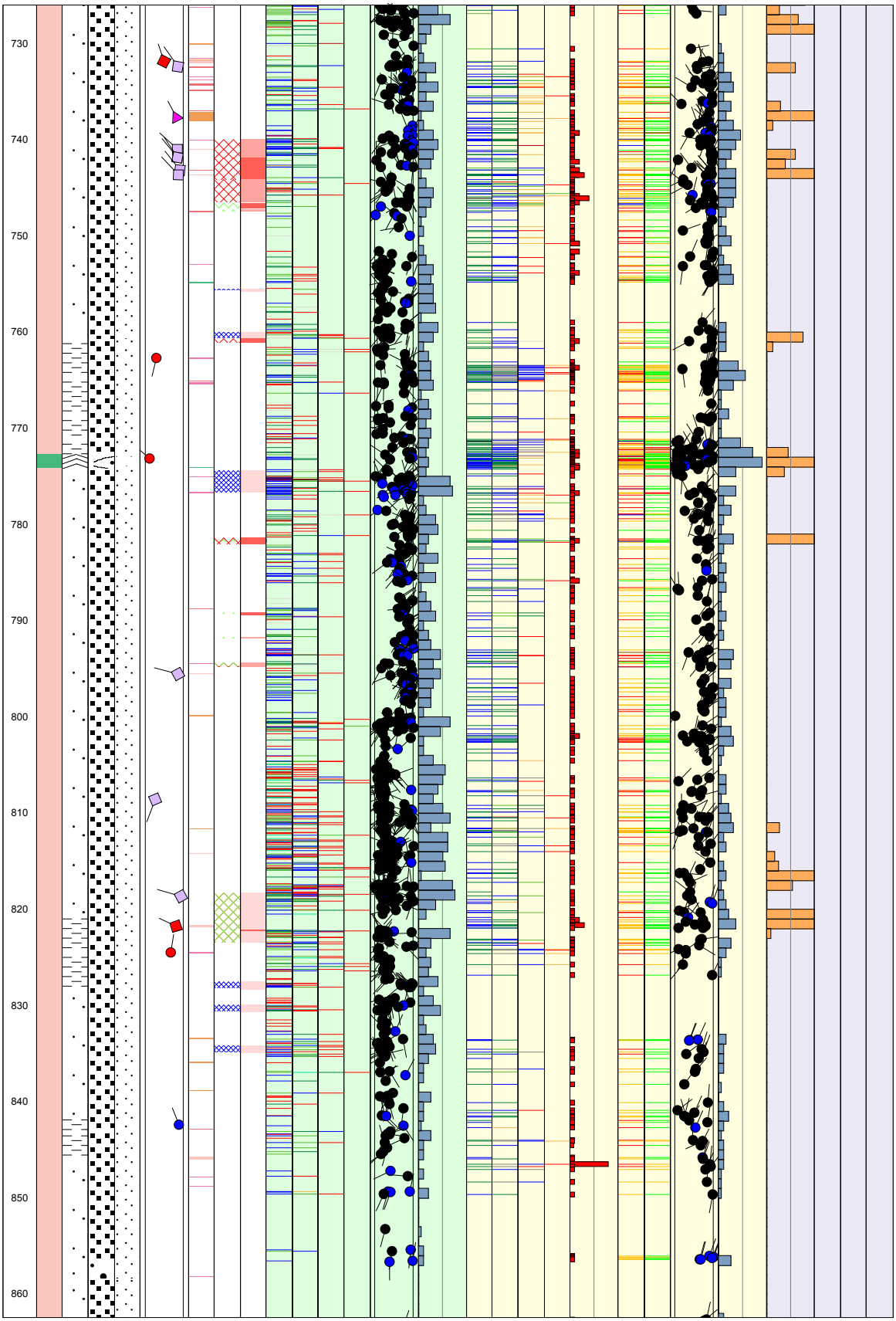
620
630
640
650
660
670
680
690
700
710
720
6
8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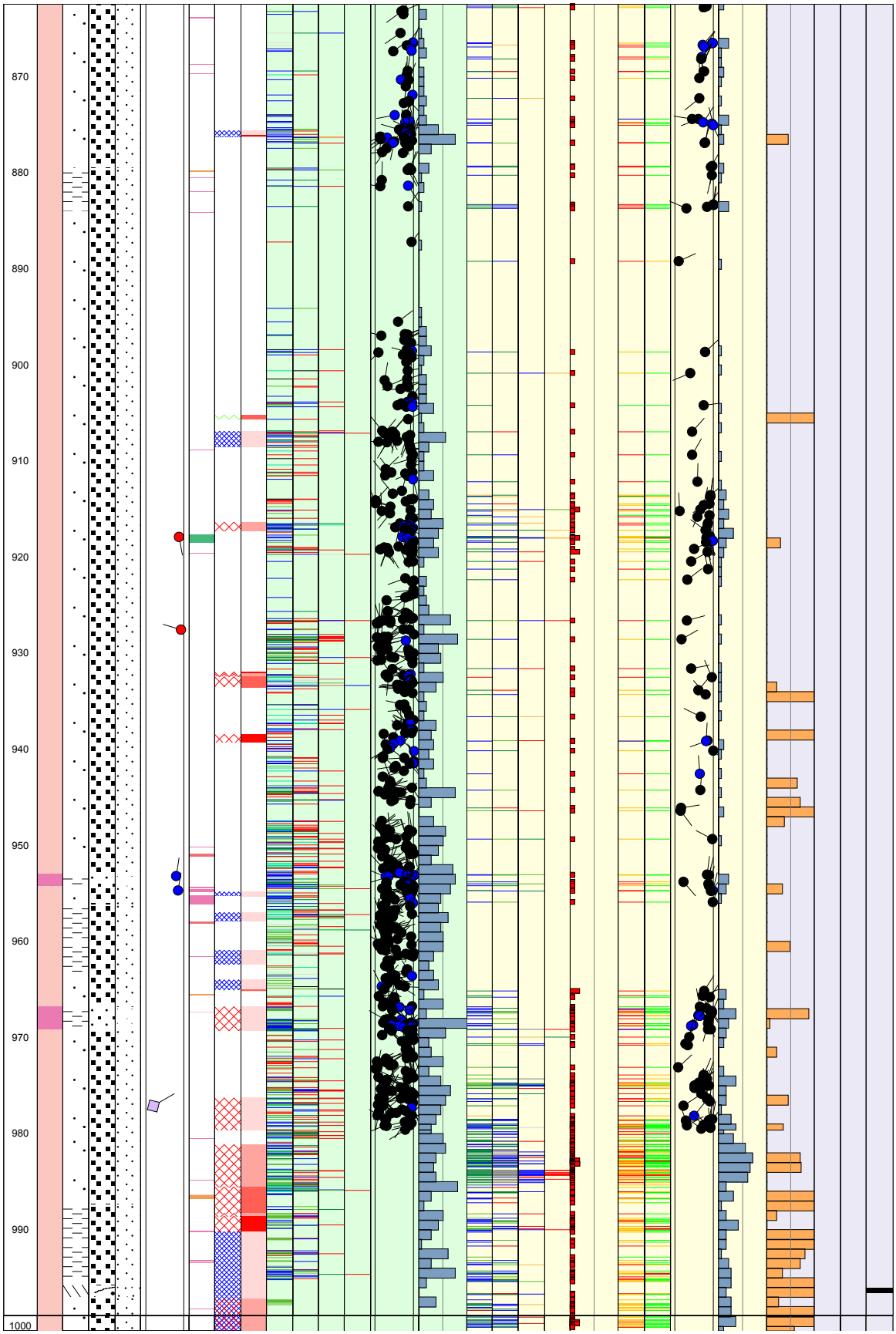
760
770
780
790
800
810
820
830
840
850
860


870
880
890
900
910
920
930
940
950
960
970
980
990
1000

Legend to WellCad diagram for KLX15A

Appendix 6

In-data: Borehole length and diameter for KLX15A

Hole Diam T - Drilling: Borehole diameter

KLX15A, 2007-01-17 10:30:00 - 2007-02-25 20:00:00 (76.130 - 1000.430 m)

Sub Secup (m)	Sub Seclow (m)	Hole Diam (m)	Comment
76.130	76.710	0.0862	T-86
76.710	77.580	0.0862	T-86 (Rymning)
77.580	1000.430	0.0758	Corac N/3

Printout from SICADA 2007-05-10 16:20:05.

In-data: Reference marks for length adjustments for KLX15A

Reference Mark T - Reference mark in drillhole

KLX15A, 2007-03-01 08:00:00 - 2007-03-02 09:30:00 (100.000 - 980.000 m)

Bhlen (m)	Rotation Speed (rpm)	Start Flow (l/h)	Stop Flow (l/h)	Stop Pressure (bar)	Cutter Time (s)	Trace Detectable	Cutter Diameter (mm)	Comment
100.00	400.00	350	1000	30.0	58	JA		
150.00	400.00	250	1000	30.0	60	JA		
200.00	400.00	300	1000	30.0	59	JA		
250.00	400.00	300	1000	32.0	67	JA		
300.00	400.00	300	1000	32.0	58	JA		
350.00	400.00	300	1000	32.0	54	JA		
400.00	400.00	300	1000	32.0	55	JA		
450.00	400.00	300	1000	32.0	63	JA		
500.00	400.00	300	1000	32.0	60	JA		
550.00	400.00	300	1000	34.0	66	JA		
600.00	400.00	350	1000	34.0	57	JA		
650.00	400.00	350	1000	34.0	59	JA		
700.00	400.00	350	1000	34.0	62	JA		
750.00	400.00	350	1000	35.0	66	JA		
800.00	400.00	350	1000	35.0	70	JA		
850.00	400.00	350	1000	35.0	63	JA		
900.00	400.00	400	1000	35.0	61	JA		
950.00	400.00	400	1000	35.0	64	JA		
980.00	400.00	400	1000	35.0	65	JA		

Appendix 8

In-data: Borehole deviation data for KLX15A

SICADA - object_location

Idcode	Coord System	Northing (m)	Easting (m)	Elevation (m.a.s.l.)	Length (m)	Vertical Depth (m)	Inclination (degrees)	Bearing (degrees)	Inclination Uncert (degrees)	Bearing Uncert (degrees)	Radius Uncert (m)	Origin	Indat
KLX15A	RT90-RHB70	6365614.17	1547987.47	14.59	0.00	0.00	-54.42	198.83	0.160	0.591	0.00	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365612.51	1547986.90	12.15	3.00	2.44	-54.35	198.83	0.160	0.591	0.02	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365610.86	1547986.34	9.71	6.00	4.88	-54.26	198.79	0.160	0.591	0.04	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365609.20	1547985.77	7.28	9.00	7.31	-54.23	198.76	0.160	0.591	0.05	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365607.54	1547985.21	4.85	12.00	9.74	-54.22	198.72	0.160	0.591	0.07	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365605.87	1547984.65	2.41	15.00	12.18	-54.16	198.69	0.160	0.591	0.09	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365604.21	1547984.08	-0.02	18.00	14.61	-54.03	198.65	0.160	0.591	0.11	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365602.54	1547983.52	-2.44	21.00	17.03	-53.97	198.62	0.160	0.591	0.13	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365600.86	1547982.96	-4.87	24.00	19.46	-53.88	198.57	0.160	0.591	0.15	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365599.18	1547982.39	-7.29	27.00	21.88	-53.73	198.57	0.160	0.591	0.16	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365597.50	1547981.83	-9.71	30.00	24.30	-53.59	198.43	0.160	0.591	0.18	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365595.80	1547981.27	-12.12	33.00	26.71	-53.43	198.30	0.160	0.591	0.20	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365594.10	1547980.71	-14.52	36.00	29.11	-53.28	198.07	0.160	0.591	0.22	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365592.39	1547980.15	-16.93	39.00	31.52	-53.16	197.96	0.160	0.591	0.24	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365590.68	1547979.60	-19.33	42.00	33.92	-53.00	197.83	0.160	0.591	0.26	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365588.96	1547979.05	-21.72	45.00	36.31	-52.77	197.79	0.160	0.591	0.27	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365587.22	1547978.49	-24.10	48.00	38.69	-52.64	197.75	0.160	0.591	0.29	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365585.49	1547977.94	-26.49	51.00	41.08	-52.54	197.68	0.160	0.591	0.31	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365583.75	1547977.38	-28.87	54.00	43.46	-52.38	197.56	0.160	0.591	0.33	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365582.00	1547976.83	-31.24	57.00	45.83	-52.20	197.39	0.160	0.591	0.35	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365580.24	1547976.29	-33.61	60.00	48.20	-52.08	197.03	0.160	0.591	0.37	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365578.47	1547975.75	-35.97	63.00	50.56	-51.96	196.94	0.160	0.591	0.39	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365576.70	1547975.21	-38.33	66.00	52.92	-51.79	196.87	0.160	0.591	0.41	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365574.92	1547974.67	-40.69	69.00	55.28	-51.56	196.85	0.160	0.591	0.43	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365573.13	1547974.13	-43.03	72.00	57.62	-51.11	196.86	0.160	0.591	0.45	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365571.32	1547973.58	-45.36	75.00	59.95	-50.83	196.86	0.160	0.591	0.47	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365569.50	1547973.03	-47.69	78.00	62.28	-50.83	196.89	0.160	0.591	0.48	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365567.69	1547972.48	-50.01	81.00	64.60	-50.84	196.82	0.160	0.591	0.50	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365565.88	1547971.93	-52.34	84.00	66.93	-50.87	196.81	0.160	0.591	0.52	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365564.07	1547971.38	-54.67	87.00	69.26	-50.91	196.80	0.160	0.591	0.54	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365562.26	1547970.84	-56.99	90.00	71.58	-50.93	196.83	0.160	0.591	0.56	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365560.45	1547970.29	-59.32	93.00	73.91	-50.93	196.89	0.160	0.591	0.58	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365558.64	1547969.74	-61.65	96.00	76.24	-50.93	196.92	0.160	0.591	0.60	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365556.83	1547969.19	-63.98	99.00	78.57	-50.92	196.94	0.160	0.591	0.62	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365555.02	1547968.64	-66.31	102.00	80.90	-50.91	196.91	0.160	0.591	0.64	Measured	2007-04-18 09:18

KLX15A	RT90-RHB70	6365553.21	1547968.09	-68.64	105.00	83.23	-50.91	196.91	0.160	0.591	0.66	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365551.40	1547967.54	-70.97	108.00	85.56	-50.89	196.98	0.160	0.591	0.68	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365549.59	1547966.98	-73.29	111.00	87.88	-50.88	197.01	0.160	0.591	0.70	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365547.78	1547966.43	-75.62	114.00	90.21	-50.86	197.01	0.160	0.591	0.72	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365545.97	1547965.87	-77.95	117.00	92.54	-50.83	197.02	0.160	0.591	0.74	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365544.15	1547965.32	-80.27	120.00	94.86	-50.81	197.01	0.160	0.591	0.76	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365542.34	1547964.77	-82.60	123.00	97.19	-50.78	197.01	0.160	0.591	0.78	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365540.53	1547964.21	-84.92	126.00	99.51	-50.75	197.01	0.160	0.591	0.80	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365538.71	1547963.66	-87.24	129.00	101.83	-50.71	196.97	0.160	0.591	0.82	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365536.89	1547963.10	-89.57	132.00	104.16	-50.70	196.87	0.160	0.591	0.84	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365535.07	1547962.55	-91.89	135.00	106.48	-50.66	196.80	0.160	0.591	0.86	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365533.25	1547962.01	-94.21	138.00	108.80	-50.65	196.56	0.160	0.591	0.88	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365531.43	1547961.46	-96.53	141.00	111.12	-50.63	196.76	0.160	0.591	0.90	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365529.61	1547960.91	-98.84	144.00	113.43	-50.59	196.76	0.160	0.591	0.92	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365527.78	1547960.36	-101.16	147.00	115.75	-50.58	196.79	0.160	0.591	0.93	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365525.96	1547959.81	-103.48	150.00	118.07	-50.54	196.77	0.160	0.591	0.95	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365524.13	1547959.26	-105.79	153.00	120.38	-50.52	196.69	0.160	0.591	0.97	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365522.30	1547958.72	-108.11	156.00	122.70	-50.50	196.49	0.160	0.591	0.99	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365520.47	1547958.18	-110.42	159.00	125.01	-50.49	196.57	0.160	0.591	1.01	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365518.64	1547957.63	-112.74	162.00	127.33	-50.47	196.53	0.160	0.591	1.03	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365516.81	1547957.09	-115.05	165.00	129.64	-50.45	196.53	0.160	0.591	1.05	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365514.98	1547956.54	-117.37	168.00	131.96	-50.45	196.52	0.160	0.591	1.07	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365513.15	1547956.00	-119.68	171.00	134.27	-50.46	196.47	0.160	0.591	1.09	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365511.32	1547955.46	-121.99	174.00	136.58	-50.46	196.41	0.160	0.591	1.11	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365509.48	1547954.92	-124.31	177.00	138.90	-50.47	196.33	0.160	0.591	1.13	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365507.65	1547954.39	-126.62	180.00	141.21	-50.47	196.33	0.160	0.591	1.15	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365505.82	1547953.85	-128.93	183.00	143.52	-50.47	196.33	0.160	0.591	1.17	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365503.99	1547953.31	-131.25	186.00	145.84	-50.46	196.26	0.160	0.591	1.19	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365502.15	1547952.78	-133.56	189.00	148.15	-50.47	196.22	0.160	0.591	1.21	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365500.32	1547952.25	-135.87	192.00	150.46	-50.48	196.31	0.160	0.591	1.23	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365498.49	1547951.70	-138.19	195.00	152.78	-50.49	196.64	0.160	0.591	1.25	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365496.66	1547951.16	-140.50	198.00	155.09	-50.48	196.26	0.160	0.591	1.27	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365494.83	1547950.63	-142.82	201.00	157.41	-50.47	196.25	0.160	0.591	1.29	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365492.99	1547950.10	-145.13	204.00	159.72	-50.42	196.19	0.160	0.591	1.31	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365491.15	1547949.56	-147.44	207.00	162.03	-50.39	196.10	0.160	0.591	1.33	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365489.32	1547949.04	-149.75	210.00	164.34	-50.38	196.00	0.160	0.591	1.35	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365487.48	1547948.51	-152.06	213.00	166.65	-50.34	196.00	0.160	0.591	1.37	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365485.64	1547947.98	-154.37	216.00	168.96	-50.33	196.01	0.160	0.591	1.39	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365483.79	1547947.45	-156.68	219.00	171.27	-50.30	195.95	0.160	0.591	1.41	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365481.95	1547946.93	-158.99	222.00	173.58	-50.26	195.82	0.160	0.591	1.43	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365480.10	1547946.41	-161.30	225.00	175.89	-50.23	195.69	0.160	0.591	1.45	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365478.26	1547945.89	-163.60	228.00	178.19	-50.20	195.70	0.160	0.591	1.47	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365476.41	1547945.37	-165.91	231.00	180.50	-50.17	195.66	0.160	0.591	1.49	Measured	2007-04-18 09:18

KLX15A	RT90-RHB70	6365474.56	1547944.85	-168.21	234.00	182.80	-50.17	195.67	0.160	0.591	1.51	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365472.71	1547944.33	-170.51	237.00	185.10	-50.15	195.63	0.160	0.591	1.53	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365470.85	1547943.81	-172.82	240.00	187.41	-50.11	195.59	0.160	0.591	1.55	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365469.00	1547943.30	-175.12	243.00	189.71	-50.09	195.53	0.160	0.591	1.57	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365467.14	1547942.78	-177.42	246.00	192.01	-50.07	195.41	0.160	0.591	1.59	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365465.29	1547942.27	-179.72	249.00	194.31	-50.05	195.40	0.160	0.591	1.61	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365463.43	1547941.76	-182.02	252.00	196.61	-50.03	195.49	0.160	0.591	1.63	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365461.57	1547941.24	-184.32	255.00	198.91	-50.02	195.51	0.160	0.591	1.65	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365459.72	1547940.73	-186.61	258.00	201.20	-50.00	195.56	0.160	0.591	1.67	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365457.86	1547940.21	-188.91	261.00	203.50	-49.98	195.56	0.160	0.591	1.69	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365456.00	1547939.70	-191.21	264.00	205.80	-49.96	195.42	0.160	0.591	1.71	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365454.14	1547939.18	-193.51	267.00	208.10	-49.94	195.33	0.160	0.591	1.73	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365452.27	1547938.67	-195.80	270.00	210.39	-49.92	195.29	0.160	0.591	1.75	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365450.41	1547938.16	-198.10	273.00	212.69	-49.92	195.32	0.160	0.591	1.77	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365448.55	1547937.65	-200.39	276.00	214.98	-49.92	195.33	0.160	0.591	1.79	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365446.69	1547937.14	-202.69	279.00	217.28	-49.90	195.34	0.160	0.591	1.81	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365444.82	1547936.63	-204.98	282.00	219.57	-49.89	195.21	0.160	0.591	1.82	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365442.96	1547936.13	-207.28	285.00	221.87	-49.89	195.16	0.160	0.591	1.84	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365441.09	1547935.62	-209.57	288.00	224.16	-49.86	195.16	0.160	0.591	1.86	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365439.22	1547935.11	-211.86	291.00	226.45	-49.85	195.18	0.160	0.591	1.88	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365437.36	1547934.61	-214.16	294.00	228.75	-49.84	195.35	0.160	0.591	1.90	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365435.49	1547934.09	-216.45	297.00	231.04	-49.82	195.37	0.160	0.591	1.92	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365433.62	1547933.58	-218.74	300.00	233.33	-49.81	195.38	0.160	0.591	1.94	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365431.76	1547933.07	-221.03	303.00	235.62	-49.81	195.35	0.160	0.591	1.96	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365429.89	1547932.55	-223.32	306.00	237.91	-49.81	195.34	0.160	0.591	1.98	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365428.02	1547932.04	-225.62	309.00	240.21	-49.81	195.32	0.160	0.591	2.00	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365426.16	1547931.53	-227.91	312.00	242.50	-49.83	195.28	0.160	0.591	2.02	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365424.29	1547931.02	-230.20	315.00	244.79	-49.83	195.29	0.160	0.591	2.04	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365422.42	1547930.51	-232.49	318.00	247.08	-49.83	195.27	0.160	0.591	2.06	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365420.56	1547930.00	-234.79	321.00	249.38	-49.81	195.28	0.160	0.591	2.08	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365418.69	1547929.49	-237.08	324.00	251.67	-49.80	195.26	0.160	0.591	2.10	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365416.82	1547928.98	-239.37	327.00	253.96	-49.80	195.26	0.160	0.591	2.12	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365414.95	1547928.47	-241.66	330.00	256.25	-49.80	195.18	0.160	0.591	2.14	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365413.08	1547927.97	-243.95	333.00	258.54	-49.80	195.10	0.160	0.591	2.16	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365411.21	1547927.46	-246.24	336.00	260.83	-49.77	195.10	0.160	0.591	2.18	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365409.34	1547926.96	-248.53	339.00	263.12	-49.77	195.15	0.160	0.591	2.20	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365407.47	1547926.45	-250.82	342.00	265.41	-49.75	195.20	0.160	0.591	2.22	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365405.60	1547925.94	-253.11	345.00	267.70	-49.75	195.37	0.160	0.591	2.24	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365403.73	1547925.43	-255.40	348.00	269.99	-49.74	195.16	0.160	0.591	2.26	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365401.86	1547924.92	-257.69	351.00	272.28	-49.74	195.13	0.160	0.591	2.28	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365399.99	1547924.42	-259.98	354.00	274.57	-49.73	195.13	0.160	0.591	2.30	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365398.12	1547923.91	-262.27	357.00	276.86	-49.72	195.13	0.160	0.591	2.32	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365396.24	1547923.41	-264.56	360.00	279.15	-49.69	195.12	0.160	0.591	2.34	Measured	2007-04-18 09:18

KLX15A	RT90-RHB70	6365394.37	1547922.90	-266.84	363.00	281.43	-49.67	195.22	0.160	0.591	2.36	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365392.49	1547922.39	-269.13	366.00	283.72	-49.66	195.07	0.160	0.591	2.38	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365390.62	1547921.89	-271.42	369.00	286.01	-49.65	195.02	0.160	0.591	2.40	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365388.74	1547921.38	-273.70	372.00	288.29	-49.64	195.01	0.160	0.591	2.42	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365386.87	1547920.88	-275.99	375.00	290.58	-49.63	194.98	0.160	0.591	2.44	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365384.99	1547920.38	-278.27	378.00	292.86	-49.61	194.82	0.160	0.591	2.46	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365383.11	1547919.88	-280.56	381.00	295.15	-49.59	194.82	0.160	0.591	2.48	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365381.23	1547919.38	-282.84	384.00	297.43	-49.58	194.86	0.160	0.591	2.50	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365379.35	1547918.88	-285.13	387.00	299.72	-49.55	194.91	0.160	0.591	2.52	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365377.47	1547918.38	-287.41	390.00	302.00	-49.53	194.85	0.160	0.591	2.54	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365375.58	1547917.89	-289.69	393.00	304.28	-49.51	194.78	0.160	0.591	2.56	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365373.70	1547917.39	-291.97	396.00	306.56	-49.48	194.65	0.160	0.591	2.59	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365371.81	1547916.90	-294.25	399.00	308.84	-49.48	194.51	0.160	0.591	2.61	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365369.92	1547916.41	-296.53	402.00	311.12	-49.48	194.48	0.160	0.591	2.63	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365368.04	1547915.92	-298.81	405.00	313.40	-49.48	194.54	0.160	0.591	2.65	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365366.15	1547915.44	-301.09	408.00	315.68	-49.47	194.54	0.160	0.591	2.67	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365364.26	1547914.95	-303.37	411.00	317.96	-49.46	194.48	0.160	0.591	2.69	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365362.37	1547914.46	-305.65	414.00	320.24	-49.45	194.43	0.160	0.591	2.71	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365360.49	1547913.97	-307.93	417.00	322.52	-49.44	194.43	0.160	0.591	2.73	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365358.60	1547913.49	-310.21	420.00	324.80	-49.44	194.34	0.160	0.591	2.75	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365356.71	1547913.01	-312.49	423.00	327.08	-49.43	194.31	0.160	0.591	2.77	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365354.81	1547912.53	-314.77	426.00	329.36	-49.42	194.24	0.160	0.591	2.79	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365352.92	1547912.04	-317.05	429.00	331.64	-49.39	194.31	0.160	0.591	2.81	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365351.03	1547911.56	-319.33	432.00	333.92	-49.37	194.42	0.160	0.591	2.83	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365349.14	1547911.07	-321.60	435.00	336.19	-49.34	194.46	0.160	0.591	2.85	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365347.24	1547910.58	-323.88	438.00	338.47	-49.32	194.44	0.160	0.591	2.87	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365345.35	1547910.10	-326.15	441.00	340.74	-49.30	194.36	0.160	0.591	2.89	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365343.45	1547909.61	-328.43	444.00	343.02	-49.27	194.29	0.160	0.591	2.91	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365341.56	1547909.13	-330.70	447.00	345.29	-49.25	194.13	0.160	0.591	2.93	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365339.66	1547908.65	-332.97	450.00	347.56	-49.22	194.12	0.160	0.591	2.95	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365337.76	1547908.18	-335.24	453.00	349.83	-49.18	194.06	0.160	0.591	2.97	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365335.85	1547907.70	-337.51	456.00	352.10	-49.17	194.04	0.160	0.591	2.99	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365333.95	1547907.23	-339.78	459.00	354.37	-49.16	194.02	0.160	0.591	3.01	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365332.05	1547906.75	-342.05	462.00	356.64	-49.13	194.13	0.160	0.591	3.03	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365330.14	1547906.27	-344.32	465.00	358.91	-49.11	194.22	0.160	0.591	3.05	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365328.24	1547905.79	-346.59	468.00	361.18	-49.10	194.22	0.160	0.591	3.07	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365326.33	1547905.30	-348.85	471.00	363.44	-49.09	194.14	0.160	0.591	3.09	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365324.43	1547904.83	-351.12	474.00	365.71	-49.06	193.99	0.160	0.591	3.11	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365322.52	1547904.35	-353.39	477.00	367.98	-49.04	193.99	0.160	0.591	3.13	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365320.61	1547903.88	-355.65	480.00	370.24	-49.02	193.95	0.160	0.591	3.15	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365318.70	1547903.40	-357.92	483.00	372.51	-49.00	193.95	0.160	0.591	3.17	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365316.79	1547902.93	-360.18	486.00	374.77	-48.99	193.85	0.160	0.591	3.19	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365314.88	1547902.46	-362.44	489.00	377.03	-48.95	193.89	0.160	0.591	3.21	Measured	2007-04-18 09:18

KLX15A	RT90-RHB70	6365312.97	1547901.98	-364.71	492.00	379.30	-48.93	193.98	0.160	0.591	3.23	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365311.05	1547901.51	-366.97	495.00	381.56	-48.90	193.97	0.160	0.591	3.25	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365309.14	1547901.03	-369.23	498.00	383.82	-48.89	193.76	0.160	0.591	3.27	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365307.22	1547900.56	-371.49	501.00	386.08	-48.87	193.72	0.160	0.591	3.29	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365305.30	1547900.10	-373.75	504.00	388.34	-48.85	193.70	0.160	0.591	3.31	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365303.39	1547899.63	-376.00	507.00	390.59	-48.82	193.78	0.160	0.591	3.33	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365301.47	1547899.16	-378.26	510.00	392.85	-48.81	193.84	0.160	0.591	3.35	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365299.55	1547898.68	-380.52	513.00	395.11	-48.80	193.81	0.160	0.591	3.37	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365297.63	1547898.21	-382.78	516.00	397.37	-48.78	193.80	0.160	0.591	3.39	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365295.71	1547897.74	-385.03	519.00	399.62	-48.77	193.69	0.160	0.591	3.41	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365293.79	1547897.28	-387.29	522.00	401.88	-48.74	193.50	0.160	0.591	3.44	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365291.86	1547896.82	-389.54	525.00	404.13	-48.72	193.38	0.160	0.591	3.46	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365289.94	1547896.36	-391.80	528.00	406.39	-48.72	193.42	0.160	0.591	3.48	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365288.01	1547895.90	-394.05	531.00	408.64	-48.72	193.47	0.160	0.591	3.50	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365286.09	1547895.44	-396.31	534.00	410.90	-48.73	193.47	0.160	0.591	3.52	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365284.16	1547894.98	-398.56	537.00	413.15	-48.73	193.41	0.160	0.591	3.54	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365282.24	1547894.52	-400.82	540.00	415.41	-48.73	193.40	0.160	0.591	3.56	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365280.31	1547894.06	-403.07	543.00	417.66	-48.70	193.37	0.160	0.591	3.58	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365278.38	1547893.61	-405.32	546.00	419.91	-48.67	193.23	0.160	0.591	3.60	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365276.45	1547893.16	-407.58	549.00	422.17	-48.66	193.05	0.160	0.591	3.62	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365274.52	1547892.71	-409.83	552.00	424.42	-48.64	193.04	0.160	0.591	3.64	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365272.59	1547892.26	-412.08	555.00	426.67	-48.61	193.02	0.160	0.591	3.66	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365270.66	1547891.81	-414.33	558.00	428.92	-48.59	192.97	0.160	0.591	3.68	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365268.72	1547891.37	-416.58	561.00	431.17	-48.57	192.95	0.160	0.591	3.70	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365266.79	1547890.93	-418.83	564.00	433.42	-48.56	192.89	0.160	0.591	3.72	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365264.85	1547890.48	-421.08	567.00	435.67	-48.54	192.94	0.160	0.591	3.74	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365262.92	1547890.03	-423.33	570.00	437.92	-48.53	193.11	0.160	0.591	3.76	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365260.98	1547889.58	-425.57	573.00	440.16	-48.52	193.25	0.160	0.591	3.78	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365259.05	1547889.13	-427.82	576.00	442.41	-48.49	193.23	0.160	0.591	3.80	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365257.11	1547888.67	-430.07	579.00	444.66	-48.47	193.23	0.160	0.591	3.82	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365255.18	1547888.22	-432.31	582.00	446.90	-48.43	193.10	0.160	0.591	3.84	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365253.24	1547887.77	-434.56	585.00	449.15	-48.41	192.99	0.160	0.591	3.86	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365251.29	1547887.32	-436.80	588.00	451.39	-48.37	193.00	0.160	0.591	3.89	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365249.35	1547886.87	-439.04	591.00	453.63	-48.35	193.01	0.160	0.591	3.91	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365247.41	1547886.42	-441.28	594.00	455.87	-48.34	193.01	0.160	0.591	3.93	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365245.47	1547885.97	-443.52	597.00	458.11	-48.31	193.02	0.160	0.591	3.95	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365243.52	1547885.52	-445.76	600.00	460.35	-48.31	193.10	0.160	0.591	3.97	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365241.58	1547885.07	-448.00	603.00	462.59	-48.30	193.32	0.160	0.591	3.99	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365239.64	1547884.61	-450.24	606.00	464.83	-48.29	193.32	0.160	0.591	4.01	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365237.69	1547884.15	-452.48	609.00	467.07	-48.28	193.26	0.160	0.591	4.03	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365235.75	1547883.69	-454.72	612.00	469.31	-48.28	193.07	0.160	0.591	4.05	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365233.81	1547883.24	-456.96	615.00	471.55	-48.27	193.05	0.160	0.591	4.07	Measured 2007-04-18 09:18
KLX15A	RT90-RHB70	6365231.86	1547882.79	-459.20	618.00	473.79	-48.27	193.20	0.160	0.591	4.09	Measured 2007-04-18 09:18

KLX15A	RT90-RHB70	6365229.92	1547882.33	-461.44	621.00	476.03	-48.27	193.26	0.160	0.591	4.11	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365227.97	1547881.87	-463.68	624.00	478.27	-48.26	193.26	0.160	0.591	4.13	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365226.03	1547881.42	-465.91	627.00	480.50	-48.25	193.25	0.160	0.591	4.15	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365224.08	1547880.96	-468.15	630.00	482.74	-48.23	193.26	0.160	0.591	4.17	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365222.14	1547880.50	-470.39	633.00	484.98	-48.22	193.36	0.160	0.591	4.19	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365220.19	1547880.04	-472.63	636.00	487.22	-48.18	193.32	0.160	0.591	4.21	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365218.25	1547879.58	-474.86	639.00	489.45	-48.17	193.28	0.160	0.591	4.24	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365216.30	1547879.12	-477.10	642.00	491.69	-48.17	193.17	0.160	0.591	4.26	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365214.35	1547878.66	-479.33	645.00	493.92	-48.18	193.05	0.160	0.591	4.28	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365212.40	1547878.22	-481.57	648.00	496.16	-48.18	192.88	0.160	0.591	4.30	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365210.45	1547877.77	-483.80	651.00	498.39	-48.17	192.88	0.160	0.591	4.32	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365208.50	1547877.32	-486.04	654.00	500.63	-48.16	192.92	0.160	0.591	4.34	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365206.55	1547876.88	-488.27	657.00	502.86	-48.14	192.94	0.160	0.591	4.36	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365204.60	1547876.43	-490.51	660.00	505.10	-48.14	192.94	0.160	0.591	4.38	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365202.65	1547875.98	-492.74	663.00	507.33	-48.14	192.97	0.160	0.591	4.40	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365200.70	1547875.53	-494.98	666.00	509.57	-48.13	192.97	0.160	0.591	4.42	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365198.74	1547875.08	-497.21	669.00	511.80	-48.12	193.01	0.160	0.591	4.44	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365196.79	1547874.63	-499.44	672.00	514.03	-48.10	193.14	0.160	0.591	4.46	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365194.84	1547874.17	-501.68	675.00	516.27	-48.09	193.24	0.160	0.591	4.48	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365192.89	1547873.70	-503.91	678.00	518.50	-48.06	193.69	0.160	0.591	4.50	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365190.94	1547873.24	-506.14	681.00	520.73	-48.03	193.22	0.160	0.591	4.52	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365188.99	1547872.78	-508.37	684.00	522.96	-48.01	193.21	0.160	0.591	4.55	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365187.03	1547872.32	-510.60	687.00	525.19	-47.99	193.20	0.160	0.591	4.57	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365185.08	1547871.86	-512.83	690.00	527.42	-47.98	193.34	0.160	0.591	4.59	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365183.13	1547871.40	-515.06	693.00	529.65	-47.96	193.23	0.160	0.591	4.61	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365181.17	1547870.94	-517.28	696.00	531.87	-47.92	193.22	0.160	0.591	4.63	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365179.21	1547870.48	-519.51	699.00	534.10	-47.90	193.20	0.160	0.591	4.65	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365177.25	1547870.02	-521.74	702.00	536.33	-47.88	193.27	0.160	0.591	4.67	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365175.29	1547869.55	-523.96	705.00	538.55	-47.87	193.27	0.160	0.591	4.69	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365173.34	1547869.09	-526.18	708.00	540.77	-47.84	193.33	0.160	0.591	4.71	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365171.38	1547868.63	-528.41	711.00	543.00	-47.81	193.32	0.160	0.591	4.73	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365169.41	1547868.16	-530.63	714.00	545.22	-47.76	193.34	0.160	0.591	4.75	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365167.45	1547867.69	-532.85	717.00	547.44	-47.72	193.38	0.160	0.591	4.77	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365165.49	1547867.23	-535.07	720.00	549.66	-47.68	193.41	0.160	0.591	4.79	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365163.52	1547866.76	-537.29	723.00	551.88	-47.64	193.38	0.160	0.591	4.82	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365161.55	1547866.29	-539.50	726.00	554.09	-47.63	193.35	0.160	0.591	4.84	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365159.59	1547865.83	-541.72	729.00	556.31	-47.60	193.30	0.160	0.591	4.86	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365157.62	1547865.36	-543.93	732.00	558.52	-47.58	193.14	0.160	0.591	4.88	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365155.65	1547864.90	-546.15	735.00	560.74	-47.56	193.12	0.160	0.591	4.90	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365153.67	1547864.45	-548.36	738.00	562.95	-47.53	192.99	0.160	0.591	4.92	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365151.70	1547863.99	-550.57	741.00	565.16	-47.50	192.97	0.160	0.591	4.94	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365149.72	1547863.54	-552.79	744.00	567.38	-47.48	192.94	0.160	0.591	4.96	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365147.75	1547863.08	-555.00	747.00	569.59	-47.45	192.93	0.160	0.591	4.98	Measured	2007-04-18 09:18

KLX15A	RT90-RHB70	6365145.77	1547862.63	-557.21	750.00	571.80	-47.41	192.93	0.160	0.591	5.00	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365143.79	1547862.18	-559.41	753.00	574.00	-47.39	192.80	0.160	0.591	5.02	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365141.81	1547861.73	-561.62	756.00	576.21	-47.37	192.74	0.160	0.591	5.05	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365139.83	1547861.28	-563.83	759.00	578.42	-47.36	192.79	0.160	0.591	5.07	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365137.84	1547860.83	-566.04	762.00	580.63	-47.34	192.79	0.160	0.591	5.09	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365135.86	1547860.38	-568.24	765.00	582.83	-47.32	192.81	0.160	0.591	5.11	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365133.88	1547859.93	-570.45	768.00	585.04	-47.30	192.85	0.160	0.591	5.13	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365131.90	1547859.47	-572.65	771.00	587.24	-47.29	193.06	0.160	0.591	5.15	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365129.91	1547859.01	-574.86	774.00	589.45	-47.28	193.06	0.160	0.591	5.17	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365127.93	1547858.55	-577.06	777.00	591.65	-47.27	192.86	0.160	0.591	5.19	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365125.94	1547858.10	-579.26	780.00	593.85	-47.27	192.84	0.160	0.591	5.21	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365123.96	1547857.65	-581.47	783.00	596.06	-47.27	192.84	0.160	0.591	5.23	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365121.97	1547857.20	-583.67	786.00	598.26	-47.25	192.80	0.160	0.591	5.26	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365119.99	1547856.75	-585.87	789.00	600.46	-47.23	192.80	0.160	0.591	5.28	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365118.00	1547856.30	-588.07	792.00	602.66	-47.20	192.76	0.160	0.591	5.30	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365116.01	1547855.85	-590.28	795.00	604.87	-47.19	192.69	0.160	0.591	5.32	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365114.02	1547855.40	-592.48	798.00	607.07	-47.16	192.65	0.160	0.591	5.34	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365112.03	1547854.95	-594.67	801.00	609.26	-47.14	192.51	0.160	0.591	5.36	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365110.04	1547854.51	-596.87	804.00	611.46	-47.12	192.41	0.160	0.591	5.38	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365108.04	1547854.07	-599.07	807.00	613.66	-47.08	192.53	0.160	0.591	5.40	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365106.05	1547853.63	-601.27	810.00	615.86	-47.06	192.52	0.160	0.591	5.42	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365104.05	1547853.19	-603.46	813.00	618.05	-47.03	192.51	0.160	0.591	5.44	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365102.06	1547852.74	-605.66	816.00	620.25	-47.01	192.52	0.160	0.591	5.47	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365100.06	1547852.30	-607.85	819.00	622.44	-46.98	192.52	0.160	0.591	5.49	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365098.06	1547851.86	-610.04	822.00	624.63	-46.94	192.52	0.160	0.591	5.51	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365096.06	1547851.41	-612.24	825.00	626.83	-46.92	192.47	0.160	0.591	5.53	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365094.06	1547850.97	-614.43	828.00	629.02	-46.91	192.38	0.160	0.591	5.55	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365092.06	1547850.53	-616.62	831.00	631.21	-46.89	192.38	0.160	0.591	5.57	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365090.05	1547850.09	-618.81	834.00	633.40	-46.87	192.48	0.160	0.591	5.59	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365088.05	1547849.65	-621.00	837.00	635.59	-46.84	192.44	0.160	0.591	5.61	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365086.05	1547849.21	-623.18	840.00	637.77	-46.81	192.32	0.160	0.591	5.63	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365084.04	1547848.77	-625.37	843.00	639.96	-46.81	192.27	0.160	0.591	5.66	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365082.03	1547848.34	-627.56	846.00	642.15	-46.80	192.18	0.160	0.591	5.68	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365080.03	1547847.91	-629.74	849.00	644.33	-46.77	192.06	0.160	0.591	5.70	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365078.02	1547847.48	-631.93	852.00	646.52	-46.76	192.00	0.160	0.591	5.72	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365076.00	1547847.05	-634.12	855.00	648.71	-46.76	191.96	0.160	0.591	5.74	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365073.99	1547846.63	-636.30	858.00	650.89	-46.76	191.92	0.160	0.591	5.76	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365071.98	1547846.20	-638.49	861.00	653.08	-46.77	191.71	0.160	0.591	5.78	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365069.97	1547845.79	-640.67	864.00	655.26	-46.75	191.59	0.160	0.591	5.80	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365067.96	1547845.38	-642.86	867.00	657.45	-46.74	191.57	0.160	0.591	5.83	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365065.94	1547844.96	-645.04	870.00	659.63	-46.72	191.56	0.160	0.591	5.85	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365063.93	1547844.55	-647.23	873.00	661.82	-46.72	191.69	0.160	0.591	5.87	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365061.91	1547844.13	-649.41	876.00	664.00	-46.70	191.74	0.160	0.591	5.89	Measured	2007-04-18 09:18

KLX15A	RT90-RHB70	6365059.90	1547843.71	-651.59	879.00	666.18	-46.69	191.69	0.160	0.591	5.91	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365057.88	1547843.30	-653.78	882.00	668.37	-46.70	191.66	0.160	0.591	5.93	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365055.87	1547842.88	-655.96	885.00	670.55	-46.70	191.59	0.160	0.591	5.95	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365053.85	1547842.47	-658.14	888.00	672.73	-46.70	191.57	0.160	0.591	5.97	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365051.84	1547842.06	-660.32	891.00	674.91	-46.71	191.53	0.160	0.591	6.00	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365049.82	1547841.65	-662.51	894.00	677.10	-46.72	191.37	0.160	0.591	6.02	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365047.80	1547841.25	-664.69	897.00	679.28	-46.73	191.35	0.160	0.591	6.04	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365045.79	1547840.84	-666.88	900.00	681.47	-46.73	191.44	0.160	0.591	6.06	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365043.77	1547840.43	-669.06	903.00	683.65	-46.75	191.47	0.160	0.591	6.08	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365041.76	1547840.02	-671.25	906.00	685.84	-46.77	191.43	0.160	0.591	6.10	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365039.74	1547839.62	-673.43	909.00	688.02	-46.78	191.29	0.160	0.591	6.12	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365037.73	1547839.22	-675.62	912.00	690.21	-46.80	191.33	0.160	0.591	6.14	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365035.72	1547838.81	-677.81	915.00	692.40	-46.78	191.38	0.160	0.591	6.17	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365033.70	1547838.41	-679.99	918.00	694.58	-46.78	191.26	0.160	0.591	6.19	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365031.69	1547838.01	-682.18	921.00	696.77	-46.74	191.10	0.160	0.591	6.21	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365029.67	1547837.62	-684.36	924.00	698.95	-46.72	190.76	0.160	0.591	6.23	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365027.64	1547837.24	-686.55	927.00	701.14	-46.70	190.63	0.160	0.591	6.25	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365025.62	1547836.86	-688.73	930.00	703.32	-46.69	190.79	0.160	0.591	6.27	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365023.60	1547836.47	-690.91	933.00	705.50	-46.68	190.78	0.160	0.591	6.29	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365021.58	1547836.09	-693.09	936.00	707.68	-46.67	190.77	0.160	0.591	6.31	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365019.56	1547835.70	-695.28	939.00	709.87	-46.66	190.76	0.160	0.591	6.33	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365017.53	1547835.32	-697.46	942.00	712.05	-46.66	190.68	0.160	0.591	6.36	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365015.51	1547834.93	-699.64	945.00	714.23	-46.64	190.94	0.160	0.591	6.38	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365013.49	1547834.54	-701.82	948.00	716.41	-46.64	190.90	0.160	0.591	6.40	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365011.47	1547834.15	-704.00	951.00	718.59	-46.61	190.97	0.160	0.591	6.42	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365009.44	1547833.76	-706.18	954.00	720.77	-46.61	190.86	0.160	0.591	6.44	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365007.42	1547833.37	-708.36	957.00	722.95	-46.61	191.01	0.160	0.591	6.46	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365005.39	1547832.98	-710.54	960.00	725.13	-46.62	190.80	0.160	0.591	6.48	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365003.37	1547832.59	-712.72	963.00	727.31	-46.64	190.83	0.160	0.591	6.50	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6365001.35	1547832.21	-714.90	966.00	729.49	-46.66	190.66	0.160	0.591	6.53	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364999.32	1547831.83	-717.09	969.00	731.68	-46.66	190.61	0.160	0.591	6.55	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364997.30	1547831.46	-719.27	972.00	733.86	-46.66	190.22	0.160	0.591	6.57	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364995.27	1547831.09	-721.45	975.00	736.04	-46.67	190.57	0.160	0.591	6.59	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364993.25	1547830.71	-723.63	978.00	738.22	-46.75	190.63	0.160	0.591	6.61	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364991.23	1547830.33	-725.82	981.00	740.41	-46.75	190.68	0.160	0.591	6.63	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364989.21	1547829.95	-728.01	984.00	742.60	-46.83	190.54	0.160	0.591	6.65	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364987.20	1547829.57	-730.19	987.00	744.78	-46.82	190.49	0.160	0.591	6.67	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364985.18	1547829.20	-732.38	990.00	746.97	-46.81	190.46	0.160	0.591	6.70	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364983.16	1547828.83	-734.57	993.00	749.16	-46.81	190.41	0.160	0.591	6.72	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364981.14	1547828.46	-736.76	996.00	751.35	-46.81	190.38	0.160	0.591	6.74	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364979.12	1547828.09	-738.94	999.00	753.53	-46.81	190.38	0.160	0.591	6.76	Measured	2007-04-18 09:18
KLX15A	RT90-RHB70	6364978.16	1547827.91	-739.99	1000.43	754.58	-46.81	190.38	0.160	0.591	6.77	Measured	2007-04-18 09:18

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