

Annual Report – Year 7

Exploration Licence 25676

23rd August 2013 to 22nd August 2014 Northern Territory, Australia

Holder: Merlin Diamonds Limited

Operator: Merlin Diamonds Limited

Reporting Period: 23rd August 2013 to 22nd August 2014

Sheet Reference: Wallhallow 1:250,000 (SE53-07)

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Date:	7 th November 2014
Copies To:	Department of Mines & Energy - NT MDL

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SUMMARY

This annual report outlines exploration activities undertaken by Merlin Diamonds Limited (MDL) on Exploration Licence 25676 between the 23^r August 2013 and 22nd August 2014. This period represents Year Seven of the Licence.

Exploration Licence 25676 is situated on the Walhallow (SE53-07) 1:250,000 geological mapsheet and the Lancewood (6163) 1:100,000 topographic mapsheet in the Northern Territory. It is located around 120 kilometres south of Borroloola and is accessed via existing unsealed tracks leading from Kiana Station.

Previous exploration has included an extensive search by various companies for kimberlites that has recovered significant numbers of chromites and diamonds in loam samples.

No field exploration was completed during the reporting period due to funding constraints.

Expenditure for the reporting period amounted to \$16,384.

1.0 INTRODUCTION

This annual report outlines exploration activities undertaken by Merlin Diamonds Limited (MDL) on Exploration Licence 25676 between the 23rd August 2013 and 22nd August 2014. This period represents Year Seven of the Licence.

2.0 LOCATION AND ACCESS

Exploration Licence 25676 is situated on the Walhallow (SE53-07) 1:250,000 geological mapsheet and the Lancewood (6163) 1:100,000 topographic mapsheet in the Northern Territory. It is located around 120 kilometres south of Borroloola and is accessed via existing unsealed tracks leading from Kiana Station. A Licence location map is provided as Figure 1.

3.0 LICENCE DETAILS

EL 25676 originally comprised 112 blocks and was granted to MDL on 23rd August 2007 for six years. Licence details for EL 25676 are outlined in Table 1 below. A 50% reduction was submitted at the end of Year 2 and the Licence currently comprises 56 blocks. A Waiver of Reduction was approved for Year 3 and Year 4.

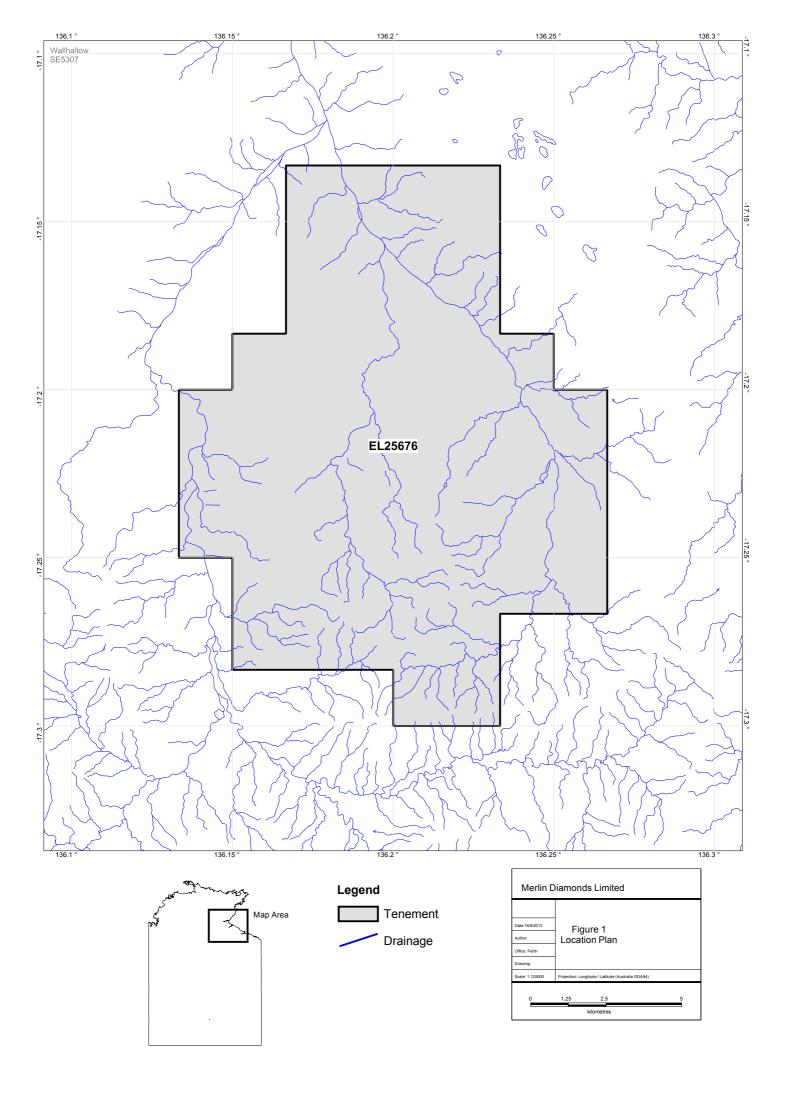
Table 1: Licence Details for EL25676.

Name	Status	Bate Date Expiry		Blocks	Holder	Percentage
EL25676	Grant	23/08/07	22/08/15	56 blocks	Merlin Diamonds Ltd	100

4.0 PHYSIOGRAPHY

Geomorphology

EL25676 lies within and at the southern margins of the *Gulf Fall* physiographic division. The *Gulf Fall* contains north flowing drainages. A marginal scarp forms a drainage divide that separates the *Gulf Fall* from the *Barkly-Birdum Tableland* to the south where drainage flows southward. In this area the *Gulf Fall* division contains two sub-divisions namely the *Top Springs Erosion Surface* and the *Bukalara Plateau*. The *Top Springs Erosion Surface* is generally flat at elevations of approximately 750 feet and contains outcrop of Top Springs Limestone, isolated outcrops of Cretaceous sediments, and Quaternary sediments on flat-lying areas and in drainages. The southern part of the sub-division becomes



undulating and slopes up to the scarp of the *Barkly-Birdum Tableland*. The *Top Springs Erosion Surface* descends gently and merges with the *Bukalara Plateau* to the north. The plateau occurs approximately 30 feet below the *Top Springs Erosion Surface*. It is dissected by the Glyde River, Lancewood Creek and their tributaries, which has exposed the Bukalara Sandstone.

The *Barkly-Birdum Tableland* occurs on the southern side of the drainage divide at an elevation of approximately 1050 feet. It contains flat-lying Cretaceous sediments with an often well-developed laterite profile. Black soil plains occur where the ferruginous zone of the laterite profile has been eroded. The tableland represents the original Tertiary land surface.

Geology

The oldest rock unit that crops out in the Licence is the Paleozoic Top Springs Limestone. Although not mapped on the NTGS 1:250,000 Geological Mapsheet, basalt has been observed in outcrop and intersected in drill holes between overlying Cretaceous (Mesozoic) clays and underlying siltstones of possibly Tawallah Group (Proterozoic age). Mesozoic sediments are exposed in the scarp in the south of the Licence and also as outliers in the north where they unconformably overly the Top Springs Limestone. The limestone is covered by a thin veneer of residual sand probably derived from the eroding Cretaceous sediments to the south. More recent sands and gravels of Cainozoic age have deposited within active drainages and at the base of the scarp.

Airborne Geophysics

NTGS geophysical and remote sensing data is available over the Licence including aeromagnetic, radiometric and landsat data. CRA and BHP acquired wide spaced airborne geophysical data in the 1980's and 1990's that is not discussed here. Ashton Mining Limited conducted a HEM survey in 1999 that covered the majority of the northern half of the Licence and Gravity Diamonds conducted an airborne gravity and magnetic survey in 2003 that covered the majority of the Licence area. Details of these two surveys are;

- Ashton 1999 HEM survey
 - Electromagnetics and Magnetics 100m line spacing N-S

- Gravity Diamonds 2003 Gravity Survey
 - o Gravity and Magnetics 100m line spacing E-W

The magnetic data is relatively quiet over the area interpreted to be Top Springs Limestone. A thin east-west trending highly magnetic unit is interpreted to be a Proterozoic volcanic unit beneath Mesozoic and Cainozoic cover.

5.0 PREVIOUS EXPLORATION

Other Explorers

BHP explored the Licence and surrounding areas in the early 1990's for base metals and in the mid 1990's Ashton Mining joint ventured into the Licence and commenced systematic diamond exploration that involved extensive stream and loam sampling. This identified two areas where abundant chromites were recovered in loam samples. The areas were then followed up with airborne geophysical surveys and subsequent ground electromagnetics, magnetics and gravity, soil geochemical sampling and drilling of selected airborne anomalies. Despite intensive exploration efforts a source for the abundant chromite and diamond distribution has not been identified.

Gravity Diamonds completed a detailed airborne gravity and magnetic survey in 2004 that identified numerous gravity anomalies. Gravity withdrew from the project upon the completion of their drilling of section airborne gravity anomalies.

In 2000 Ashton Mining excavated a trench in an area where abundant chromites were recovered from loam sampling. Sampling at the base of the trench did not recover indicator materials. A bulk loam sample comprising 30 tonnes of surficial sand was processed through a HMS plant and recovered 721 chromites but no diamonds. A ~100kg loam sample collected approximately 500m south-east of the bulk loam sample recovered 5 macrodiamonds and 3 chromites.

2007 - 2009 MDL/TEU

Work completed during the 2007 - 2008 reporting period included a desktop review of available geological and geophysical datasets. The potential of the Licence to host uranium mineralization was assessed as part of the Top End Uranium prospectus and

subsequently by Jigsaw Geoscience Pty Ltd. No uranium or base metal targets were identified within the Licence.

A total of two loam samples and thirty-one soil geochemical samples were collected over a historic loam sample site that recovered five macrodiamonds. Results reported one positive with 66 chromites and 6 diamonds (08-018-001) and one negative (08-018-002). The positive sample was for the -1mm fraction and the negative sample was for the 1-3mm fraction.

2009-2010

Exploration Drilling

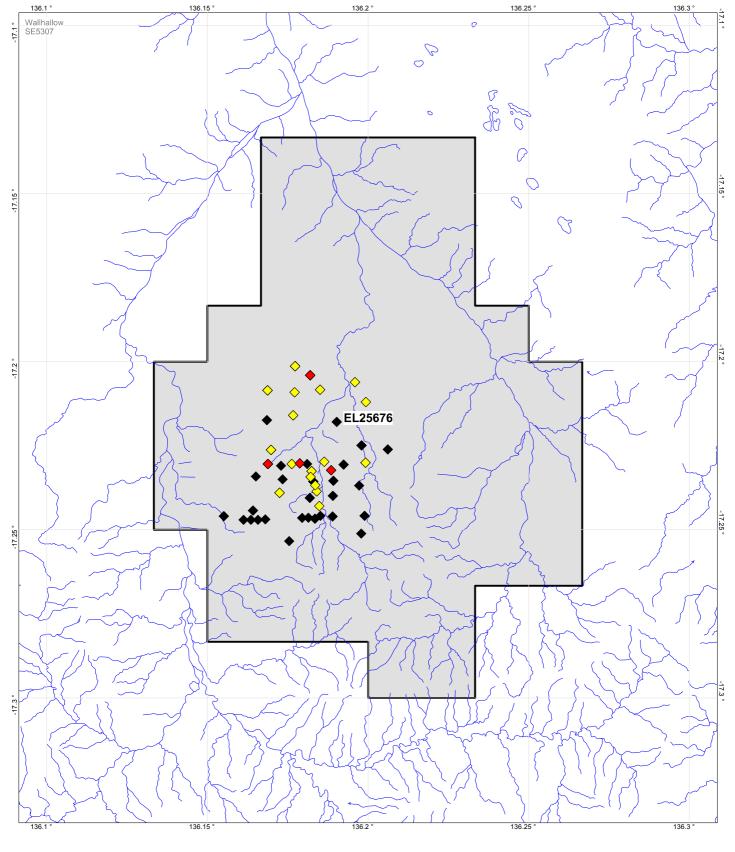
A reverse circulation drilling program was completed during the reporting period to test EM 34-3 targets and soil geochemical targets for kimberlite. The program comprised 66 drill holes for 2,508 metres. No kimberlite was intersected.

The previous Annual Reports refer to three drilling programs. This is incorrect and there was only the one program comprising 66 drill holes. The other two programs referenced in the previous reports actually refer to down-hole sampling of the drill spoil.

Down-hole geochemical samples were taken from selected horizons in 54 drill holes. A total of 279 samples of drill spoil for geochemical analysis were taken as down-hole composites, grouping units of similar lithology (09-026 series). Down-hole indicator mineral samples were taken from selected horizons in 44 drill holes. A total of 116 samples of drill spoil for indicator mineral analysis were taken as down-hole composites, grouping units of similar lithology (09-025 series). Results are discussed in previous reports.

No drill lines or drill pads were cleared prior to the drill program commencing. Drill spoil was layed out on the ground and no sample bags were used. All holes were plugged with concrete plugs and smoothed over. Sumps were not required due to the shallow hole depths and the potential for groundwater to be fresh. The sandy surface also allowed any groundwater brought to the surface to rapidly soak back into the ground.

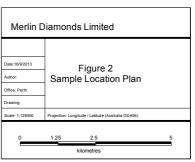
Ground Gravity Survey



Legend

Tenement

- Diamond Positive Samples
- Chromite Positive Samples
- Negative Samples
- Drainage



A ground gravity survey was undertaken in June 2010 over the tenement. The survey was conducted over four areas measuring 5.32 line kilometers in Area A; 9.8 km in Area B; 2.2 line km in Area C and 3.38 line km in Area D. Results are discussed in previous reports.

2010-2011

Detrital Stream Zircon Samples

A total of 12 stream gravel samples were collected and the detrital zircons picked out and submitted to CSIRO in Perth for helium age dating. Results are discussed in previous reports but it was concluded that 'hot' zircons were potentially derived from a local igneous intrusive source of Tertiary age. When considered together with the indicator mineral distribution it is possible that a Tertiary age kimberlite could be present and thus the source of the young zircons, diamonds and kimberlitic chromites.

Stream Gravel and Loam Samples

A total of 24 loam samples and 15 stream gravel samples were collected and transported to Perth for processing and recovery of kimberlite indicator minerals. Results included a number of positive samples reporting diamonds and kimberlitic chromites.

2011-2012

Stream Gravel and Loam Samples

A total of 16 loam samples and 2 stream gravel samples were collected and transported for processing at the Company's Perth Laboratory. Sample details are included in Table 2.

Field Geological Mapping

A detailed mapping exercise was undertaken for two weeks to gain a better understanding of the local geology and in particular the distribution of the indicator minerals and diamonds, alluvial material in which they may be travelling and the potential source areas of the alluvial material near the eroding Cretaceous scarp in the southern parts of the tenement. The study is not yet complete but the main conclusion drawn is that the indicator minerals are likely to be derived from a local source and have not travelled great distances such as from Merlin approximately 40km downstream to the north.

Desktop Review of Geomorphic Evolution of McArthur River Area

A detailed study into the geomorphic evolution of the project and wider McArthur River

area was commenced by in-house research staff. This was undertaken to gain a better understanding of the distribution of kimberlitic indicator minerals and alluvial material within which they are potentially travelling. The study is not yet complete but the main conclusion drawn is in agreement with the field mapping in that the indicator minerals are likely to be derived from a local source and have not travelled great distances such as from Merlin approximately 40km downstream to the north.

MMP

A Mining Management Plan was compiled and submitted to the Department of Mine and Energy for a proposed costeaning program to investigate the indicator distribution within the alluvial material, identify the source of the alluvial material and to also investigate a number of geophysical targets derived from the Falcon Airborne Survey data.

2012-2013

Costeaning Program

During the current reporting period a costeaning program was undertaken to investigate the distribution of the indicator minerals within the alluvial material, to investigate the source of the alluvial material and to investigate a number of geophysical targets. A total of 91 costeaning samples were collected and sent for HMA processing at the company laboratory in Perth. The results returned 30 positive samples with a total of 4 diamonds and 111 chromite grains. The results are shown in Table 3 and on Figure 2. These results continue to be interpreted however early indications suggest a potential source area has been constrained. The results are considered to be highly encouraging that a local source for the diamonds and indicator minerals is present within the Licence area.

6.0 EXPLORATION COMPLETED DURING CURRENT REPORTING PERIOD

No field exploration was completed during the reporting period due to funding constraints.

7.0 EXPENDITURE STATEMENT

Expenditure for the reporting period amounted to \$16,384. Details are included in attached Expenditure Report.

8.0 PROPOSED EXPENDITURE AND WORK PROGRAM

The proposed expenditure for the next twelve months is \$100,000 and is to include follow up costeaning to validate some of the significant results from Year 6 work. Ground geophysical surveys including electromagnetic and magnetic will be conducted to produce drilling targets.

- Costeaning with an excavator (\$10,000)
- Collection and heavy mineral processing of approximately 20 costean samples (\$20,000)
- Ground geophysical surveys (\$10,000)
- Drilling program (\$50,000)
- Administration and Reporting (\$10,000)

9.0 REFERENCES

Merlin Diamonds Ltd. Kammermann, M. (2011) Annual Report EL 25676 23rd August 2010-22nd August 2011 11-049.

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Jigsaw Geoscience Pty Ltd, 2008. Confidential Report to Top End Uranium Limited. Targeting Review, McArthur South Project, Northern Territory.

DPIFM NTGS Strike Website (2008).

Top End Uranium Limited (2007). Top End Uranium Limited Prospectus. September 2007

Table 2. 2011-2012 Sample Data

SAMPLE	TYPE	DATUM	LONGITUDE	LATITUDE	RESULT	CHROMITES	DIAMONDS
12-001-001	LOAM	GDA94	136.177551	-17.2356	NEGATIVE	0	0
12-001-002	LOAM	GDA94	136.177768	-17.2372	NEGATIVE	0	0
12-005-001	STREAM GRAVEL	GDA94	136.187141	-17.241	NEGATIVE	0	0
12-005-002	LOAM	GDA94	136.187302	-17.2427	NEGATIVE	0	0
12-005-003	LOAM	GDA94	136.186845	-17.2447	NEGATIVE	0	0
12-005-004	LOAM	GDA94	136.188987	-17.2443	NEGATIVE	0	0
12-005-005	LOAM	GDA94	136.188959	-17.2429	NEGATIVE	0	0
12-005-006	LOAM	GDA94	136.189003	-17.2409	NEGATIVE	1	0
12-005-007	LOAM	GDA94	136.191012	-17.2447	NEGATIVE	0	0
12-005-008	LOAM	GDA94	136.190838	-17.2426	NEGATIVE	0	0
12-005-009	LOAM	GDA94	136.190874	-17.2409	NEGATIVE	0	0
12-005-010	LOAM	GDA94	136.190798	-17.2392	NEGATIVE	0	0
12-005-011	LOAM	GDA94	136.178138	-17.2391	NEGATIVE	0	0
12-005-012	LOAM	GDA94	136.172989	-17.2474	NEGATIVE	0	0
12-005-013	LOAM	GDA94	136.16594	-17.2527	NEGATIVE	0	0
12-005-014	LOAM	GDA94	136.163718	-17.2493	NEGATIVE	0	0
12-005-015	LOAM	GDA94	136.164166	-17.2443	POSITIVE	4	0
12-005-016	STREAM GRAVEL	GDA94	136.137593	-17.2254	NEGATIVE	0	0

Table 3. 2012-2013 Sample Data

SAMPLE	TYPE	EASTING	NORTHING	DATUM	ZONE	RESULT	DIAMONDS	CHROMITES
12-017-001	COSTEAN	625191	8097793	GDA94	53	POSITIVE	0	6
12-017-002	COSTEAN	625191	8097793	GDA94	53	POSITIVE	0	2
12-017-003	COSTEAN	625191	8097793	GDA94	53	POSITIVE	0	1
12-017-004	COSTEAN	625686	8097488	GDA94	53	POSITIVE	0	1
12-017-005	COSTEAN	625686	8097488	GDA94	53	POSITIVE	0	1
12-017-006	COSTEAN	625686	8097488	GDA94	53	POSITIVE	0	3
12-017-007	COSTEAN	625686	8097488	GDA94	53	POSITIVE	1	0
12-017-008	COSTEAN	625165	8096931	GDA94	53	POSITIVE	0	1
12-017-009	COSTEAN	626008	8097012	GDA94	53	NEGATIVE	0	0
12-017-010	COSTEAN	626008	8097012	GDA94	53	POSITIVE	0	1
12-017-011	COSTEAN	625117	8096175	GDA94	53	POSITIVE	0	1
12-017-012	COSTEAN	625117	8096175	GDA94	53	NEGATIVE	0	0
12-017-013	COSTEAN	624272	8097004	GDA94	53	POSITIVE	0	2
12-017-014	COSTEAN	624272	8097004	GDA94	53	NEGATIVE	0	0
12-017-015	COSTEAN	624272	8097004	GDA94	53	NEGATIVE	0	0
12-017-016	COSTEAN	624272	8097004	GDA94	53	NEGATIVE	0	0
12-017-017	COSTEAN	624244	8096022	GDA94	53	NEGATIVE	0	0
12-017-018	COSTEAN	624244	8096022	GDA94	53	NEGATIVE	0	0
12-017-019	COSTEAN	624378	8095042	GDA94	53	NEGATIVE	0	0
12-017-020	COSTEAN	624378	8095042	GDA94	53	NEGATIVE	0	0
12-017-021	COSTEAN	624378	8095042	GDA94	53	NEGATIVE	0	0
12-017-022	COSTEAN	624378	8095042	GDA94	53	POSITIVE	0	15
12-017-023	COSTEAN	624266	8094577	GDA94	53	NEGATIVE	0	0
12-017-024	COSTEAN	624266	8094577	GDA94	53	POSITIVE	0	1

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12-017-025	COSTEAN	624266	8094577	GDA94	53	POSITIVE	0	1
12-017-026	COSTEAN	624266	8094577	GDA94	53	POSITIVE	1	4
12-017-027	COSTEAN	624701	8094520	GDA94	53	NEGATIVE	0	0
12-017-028	COSTEAN	625056	8094572	GDA94	53	NEGATIVE	0	0
12-017-029	COSTEAN	625056	8094572	GDA94	53	POSITIVE	0	1
12-017-030	COSTEAN	624754	8094068	GDA94	53	NEGATIVE	0	0
12-017-031	COSTEAN	625567	8094571	GDA94	53	NEGATIVE	0	0
12-017-032	COSTEAN	625770	8093990	GDA94	53	NEGATIVE	0	0
12-017-033	COSTEAN	625770	8093990	GDA94	53	NEGATIVE	0	0
12-017-034	COSTEAN	625881	8093668	GDA94	53	POSITIVE	0	2
12-017-035	COSTEAN	625652	8093453	GDA94	53	NEGATIVE	0	0
12-017-036	COSTEAN	625652	8093453	GDA94	53	NEGATIVE	0	0
12-017-037	COSTEAN	626362	8094358	GDA94	53	POSITIVE	1	0
12-017-038	COSTEAN	626362	8094358	GDA94	53	NEGATIVE	0	0
12-017-039	COSTEAN	626362	8094358	GDA94	53	NEGATIVE	0	0
12-017-040	COSTEAN	626434	8094012	GDA94	53	NEGATIVE	0	0
12-017-041	COSTEAN	626434	8094012	GDA94	53	NEGATIVE	0	0
12-017-042	COSTEAN	626773	8094543	GDA94	53	NEGATIVE	0	0
12-017-043	COSTEAN	626773	8094543	GDA94	53	NEGATIVE	0	0
12-017-044	COSTEAN	626133	8094642	GDA94	53	POSITIVE	0	6
12-017-045	COSTEAN	627372	8095169	GDA94	53	NEGATIVE	0	0
12-017-046	COSTEAN	627372	8095169	GDA94	53	NEGATIVE	0	0
12-017-047	COSTEAN	627372	8095169	GDA94	53	NEGATIVE	0	0
12-017-048	COSTEAN	626554	8095952	GDA94	53	NEGATIVE	0	0
12-017-049	COSTEAN	626554	8095952	GDA94	53	NEGATIVE	0	0
12-017-050	COSTEAN	627502	8094602	GDA94	53	POSITIVE	0	1
12-017-051	COSTEAN	627502	8094602	GDA94	53	NEGATIVE	0	0

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12-017-079	COSTEAN	625324	8094592	GDA94	53	POSITIVE	1	30
12-017-080	COSTEAN	625961	8093184	GDA94	53	POSITIVE	0	8
12-017-081	COSTEAN	625997	8092863	GDA94	53	NEGATIVE	0	0
12-017-082	COSTEAN	625816	8092768	GDA94	53	NEGATIVE	0	0
12-017-083	COSTEAN	625816	8092768	GDA94	53	NEGATIVE	0	0
12-017-084	COSTEAN	625599	8092801	GDA94	53	NEGATIVE	0	0
12-017-085	COSTEAN	625391	8092799	GDA94	53	NEGATIVE	0	0
12-017-086	COSTEAN	624172	8092758	GDA94	53	NEGATIVE	0	0
12-017-087	COSTEAN	623693	8092744	GDA94	53	NEGATIVE	0	0
12-017-088	COSTEAN	623931	8092741	GDA94	53	NEGATIVE	0	0
12-017-089	COSTEAN	623449	8092745	GDA94	53	NEGATIVE	0	0
12-017-090	COSTEAN	626411	8093516	GDA94	53	NEGATIVE	0	0
12-017-091	COSTEAN	626411	8093516	GDA94	53	NEGATIVE	0	0