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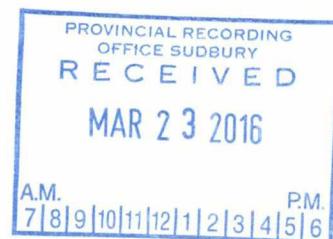
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2.56703



## 2015 SURFACE DRILLING

### WEST LIMB PROJECT



September, 2015

N.A. Guest

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## SUMMARY

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In the summer of 2015, a small diamond drill program was completed to explore the up-plunge extension of known mineralization associated with the West limb of the northern iron formation. Drilling was conducted near the southern shore of Opapimiskan Lake, adjacent to the northern most vent raise on the Musselwhite Mine property, which is owned and operated by Goldcorp Canada Ltd. The work completed is covered by a single mining lease. Drilling revealed similar geology and gold mineralization to what had been previously discovered down plunge of the target area.

## INTRODUCTION

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This report is written on behalf of Goldcorp Canada Ltd. by the staff of Musselwhite Mine. The report discusses work conducted within the boundaries of mining lease PA369772.

The program was designed and implemented by the exploration department at Musselwhite Mine. Drilling was performed by Boart Longyear. The core from this program is stored in the core racks adjacent to the exploration camp on the Musselwhite Mine property.

## LOCATION AND ACCESS

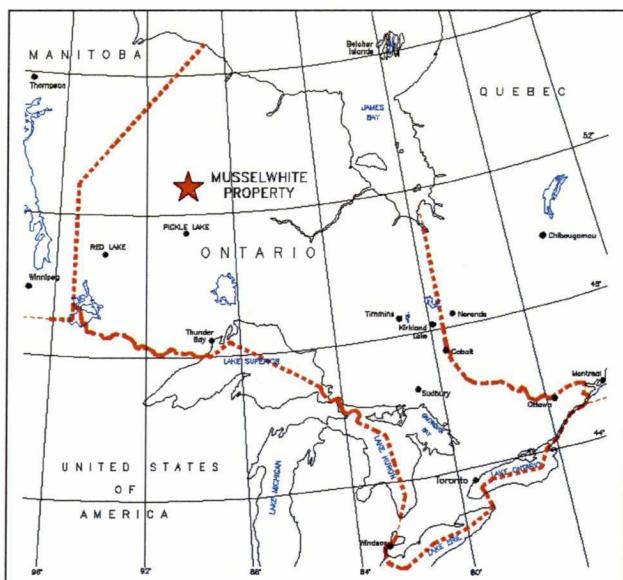
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All work in this report was conducted within the boundaries of the Musselwhite Mine property. Musselwhite Mine is a gold producing mine that is 100% owned and operated by Goldcorp Canada Ltd. The mine is located approximately 480 km north-north-west of Thunder Bay and 103 km north of Pickle Lake with geographic coordinates of 52° 36' 50" N latitude and 90° 21' 43" W longitude (**Figure 1**), on the south of Opapimiskan Lake and the deposit plunges beneath the lake.

Drilling preformed during this program took place within the boundaries of the above stated mining lease, located in the Zeemal Lake Area within the Patricia Mining Division, District of Kenora, Northwestern Ontario. The mining lease is located on NTS map sheet 53 B/9 (Opapimiskan Lake) and is approximately 2.1 km from the mine portal.

The West Limb drill program was land based and mine roads were used for access.

**Figure 1:** General Location Map



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## LAND TENURE & OWNERSHIP

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Mining lease PA369772 is ~16 ha (1 claim unit) in size and is owned by Goldcorp Canada Ltd. The tenure rights for this lease are mining and surface rights.

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## PROPERTY GEOLOGY

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The above mentioned mining lease is located within the south-central portion of the North Caribou Greenstone Belt.

The geology identified by this drill program consisted of a sequence of metasedimentary rocks, basalt and biotite-garnet schist. There were also minor felsic to intermediate volcanic rocks, ultramafic rocks and silicate and oxide facies iron formations. Rocks have been metamorphosed to

amphibolite grade. A cross section of the drilling can be seen in **Appendix 1** and drill logs in **Appendix 4**.

The various lithology codes used during logging are briefly described below:

1	Ultramafic
2	Basalt
2H	Mafic tuff, lapilli tuff
2T	Biotite bearing metavolcanic
2U	Garnet bearing metavolcanic
3C	Intermediate tuff, lapilli tuff
3F	Felsic tuff/lapilli tuff
4E	Garnet-amphibole iron formation
4EA	Garnet-amphibole-grunerite iron formation
4EF	Garnet-amphibole with less than 50% intercalated garnet-biotite schist
4F	Garnet-biotite schist
4FB	Garnet-biotite schist with abundant magnetite +/- chert
4FE	Garnet-biotite schist with less than 50% intercalated Garnet-amphibole
6	Metasediment
6W	Garnet-bearing mustone/siltstone/sandstone
6B	Matrix-supported conglomerate
8A	Diorite

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## PROGRAM DESCRIPTION

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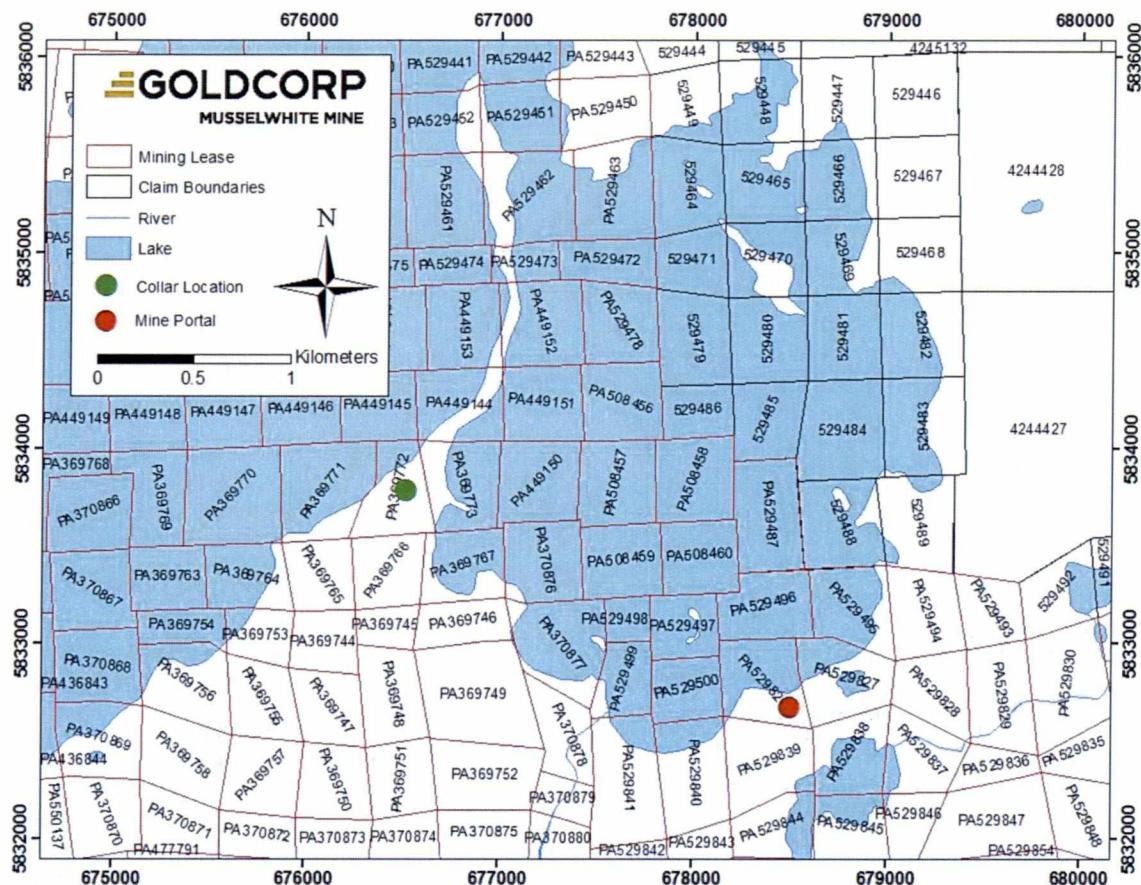
A single drill hole was planned to intercept the west limb of the highly folded “Northern Iron Formation” (NIF) in an attempt to prove the up-plunge extension of known mineralization. The NIF contains the vast majority of ore at Musselwhite Mine.

During drilling, the initial drill hole (15-WEL-049) began to deviate and was cancelled at a depth of ~22m. As a result, a second drill hole (15-WEL-050) was planned and drilled to a depth of 600m. Drill hole information is shown below in **Table 1** and drill locations are shown in **Figure 2**.

**Table 1:** West limb drill hole information.

Hole ID	UTM EASTING (NAD 83)	UTM NORTHING (NAD 83)	AZIMUTH	DIP	DEPTH
15-WEL-049	676522.5	5833779.0	226°	-60°	22.2m
15-WEL-050	676522.5	5833779.0	226°	-65°	600m

**Figure 2:** Map showing location of drill holes.



## RESULTS/RECOMMENDATIONS

15-WEL-050 intersected geology similar to what has been seen in previous West Limb exploration. Assays results (**Appendix 2**) from the target area appear to represent the up-plunge extension of known West Limb mineralization. A summary of intervals containing significant gold mineralization is shown in **Table 2**.

**Table 2:** Significant intervals of Au mineralization.

From	To	Drilled Width	Au
387.5m	389.9m	2.4m	6.2g/t
403.9m	407.2m	3.3	4.7g/t
415.2m	421m	5.8	5.0g/t

These results provide adequate information to proceed with a larger scale exploration program to better delineate the southern, up-plunge extension of the West Limb.

### STATEMENT OF EXPENDITURES

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A total of \$117,325.88 was spent during this program. **Table 3** provides basic details on the expenditures of the West Limb program. A complete breakdown of expenditures can be seen in **Appendix 3** and invoices in **Appendix 5**.

**Table 3:** Breakdown of expenditures.

Hole ID	Labour	Drilling	Other	Total
15-WEL-049	\$826	\$5,699.63	\$16,080.50	\$22,606.13
15-WEL-050	\$16,216	\$62,423.25	\$16,080.50	\$94,719.75
			<b>Grand Total</b>	<b>\$117,325.88</b>

## STATEMENT OF QUALIFICATIONS

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I, Nicolas Guest, hereby certify that:

1. I am the author of this report.
2. I have a Bachelor of Science with advanced major in Earth Science and Business Administration from St. Francis Xavier University in Antigonish, Nova Scotia.
3. I have a Master of Science in Mineral Exploration from Laurentian University in Sudbury, Ontario.
4. I am a member-in-training of the Association of Professional Geoscientists of Nova Scotia.
5. I am employed by Goldcorp Canada Ltd at Musselwhite Mine.
6. I agree with all the information contained within this report and believe that it is an accurate description of the work performed.
7. Reside in the town of Antigonish, Nova Scotia, Canada.

Name: Nicolas Guest

Date: September 17<sup>th</sup>, 2015

Goldcorp Canada Ltd.

Musselwhite Mine

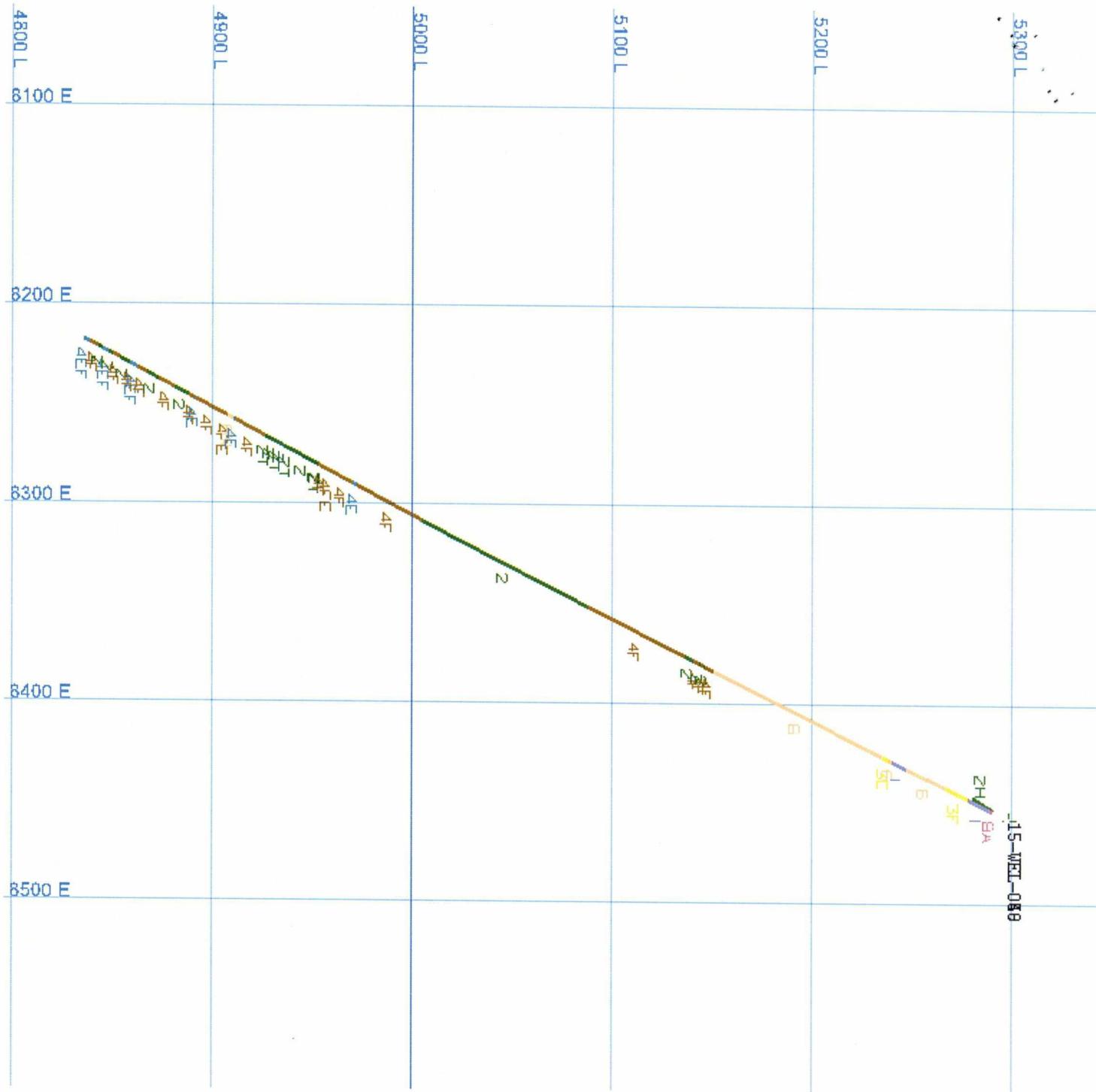
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Thunder Bay, ON

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## **Appendix 1**

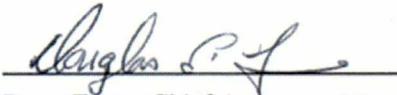
### **Cross Section of Drill Holes**



**Appendix 2**

**Assay Certificate**

**GOLDCORP MUSSELWHITE MINE  
WEST LIMB SURFACE DRILLING 2015  
ASSAY CERTIFICATE**



Doug Town, Chief Assayer – Musselwhite Mine

Sample ID	Hole No.	Project	From (m)	To (m)	Au ppm	Sample Date
E700315	15-WEL-050	WEL	243	244	0.025	29-Jul-15
E700316	15-WEL-050	WEL	244	245	0.047	29-Jul-15
E700317	15-WEL-050	WEL	245	246	0.053	29-Jul-15
E700318	15-WEL-050	WEL	246	247	0.03	29-Jul-15
E700319	15-WEL-050	WEL	247	248	0.044	29-Jul-15
E700321	15-WEL-050	WEL	248	249	0.049	29-Jul-15
E700322	15-WEL-050	WEL	249	250	0.425	29-Jul-15
E700323	15-WEL-050	WEL	250	251	0.233	29-Jul-15
E700324	15-WEL-050	WEL	251	252	0.08	29-Jul-15
E700325	15-WEL-050	WEL	252	253	3.512	29-Jul-15
E700326	15-WEL-050	WEL	253	254	0.057	29-Jul-15
E700327	15-WEL-050	WEL	254	255	0.077	29-Jul-15
E700328	15-WEL-050	WEL	255	256	0.027	29-Jul-15
E700329	15-WEL-050	WEL	256	257	0.028	29-Jul-15
E700331	15-WEL-050	WEL	257	258	0.043	29-Jul-15
E700332	15-WEL-050	WEL	258	259	0.032	29-Jul-15
E700333	15-WEL-050	WEL	259	260	0.066	29-Jul-15
E700334	15-WEL-050	WEL	260	261	0.06	29-Jul-15
E700335	15-WEL-050	WEL	261	262	0.049	29-Jul-15
E700336	15-WEL-050	WEL	262	263	0.068	29-Jul-15
E700337	15-WEL-050	WEL	263	264	0.037	29-Jul-15
E700338	15-WEL-050	WEL	264	265	0.024	29-Jul-15
E700339	15-WEL-050	WEL	265	266	0.058	29-Jul-15
E700341	15-WEL-050	WEL	266	267	0.137	29-Jul-15
E700342	15-WEL-050	WEL	267	268	0.225	29-Jul-15
E700343	15-WEL-050	WEL	268	269	0.128	29-Jul-15
E700344	15-WEL-050	WEL	269	270	0.278	29-Jul-15
E700345	15-WEL-050	WEL	270	271	0.039	29-Jul-15
E700346	15-WEL-050	WEL	271	272	0.043	29-Jul-15
E700347	15-WEL-050	WEL	272	273	0.024	29-Jul-15
E700348	15-WEL-050	WEL	273	274	0.038	29-Jul-15
E700349	15-WEL-050	WEL	274	275	0.104	29-Jul-15
E700351	15-WEL-050	WEL	275	276	0.097	29-Jul-15
E700352	15-WEL-050	WEL	276	277	0.13	29-Jul-15
E700353	15-WEL-050	WEL	277	278	0.197	29-Jul-15
E700354	15-WEL-050	WEL	278	279	0.055	29-Jul-15
E700355	15-WEL-050	WEL	279	280	0.057	29-Jul-15
E700356	15-WEL-050	WEL	280	281	0.03	29-Jul-15
E700357	15-WEL-050	WEL	281	282	0.027	29-Jul-15
E700358	15-WEL-050	WEL	282	283	0.028	29-Jul-15
E700359	15-WEL-050	WEL	283	284	0.048	29-Jul-15
E700361	15-WEL-050	WEL	284	285	0.068	29-Jul-15
E700362	15-WEL-050	WEL	285	286	0.146	29-Jul-15

E700363	15-WEL-050	WEL	286	287	0.066	29-Jul-15
E700364	15-WEL-050	WEL	287	288	0.232	29-Jul-15
E700365	15-WEL-050	WEL	288	289	0.019	29-Jul-15
E700366	15-WEL-050	WEL	289	290	0.068	29-Jul-15
E700367	15-WEL-050	WEL	290	291	0.011	29-Jul-15
E700368	15-WEL-050	WEL	291	292	0.068	29-Jul-15
E700369	15-WEL-050	WEL	292	293	0.059	29-Jul-15
E700371	15-WEL-050	WEL	293	294	0.124	29-Jul-15
E700372	15-WEL-050	WEL	294	295	0.012	29-Jul-15
E700373	15-WEL-050	WEL	295	296	0.038	29-Jul-15
E700374	15-WEL-050	WEL	296	297	<0.001	29-Jul-15
E700375	15-WEL-050	WEL	297	298	0.011	29-Jul-15
E700376	15-WEL-050	WEL	298	299	0.03	29-Jul-15
E700377	15-WEL-050	WEL	299	300	0.014	29-Jul-15
E700378	15-WEL-050	WEL	300	301	0.011	29-Jul-15
E700379	15-WEL-050	WEL	301	302	0.109	29-Jul-15
E700381	15-WEL-050	WEL	302	303	0.032	29-Jul-15
E700382	15-WEL-050	WEL	303	304	0.073	29-Jul-15
E700383	15-WEL-050	WEL	304	305	0.015	29-Jul-15
E700384	15-WEL-050	WEL	305	306	<0.001	29-Jul-15
E700385	15-WEL-050	WEL	306	307	<0.001	29-Jul-15
E700386	15-WEL-050	WEL	307	308	<0.001	29-Jul-15
E700387	15-WEL-050	WEL	308	309	<0.001	29-Jul-15
E700388	15-WEL-050	WEL	309	310	0.016	29-Jul-15
E700389	15-WEL-050	WEL	310	311	<0.001	29-Jul-15
E700391	15-WEL-050	WEL	311	312	0.034	29-Jul-15
E700392	15-WEL-050	WEL	312	313	0.021	29-Jul-15
E700393	15-WEL-050	WEL	313	314	0.045	29-Jul-15
E700394	15-WEL-050	WEL	314	315	0.201	29-Jul-15
E700395	15-WEL-050	WEL	315	316	0.614	29-Jul-15
E700396	15-WEL-050	WEL	316	317	1.64	29-Jul-15
E700397	15-WEL-050	WEL	317	318	0.05	29-Jul-15
E700398	15-WEL-050	WEL	318	319	0.023	29-Jul-15
E700399	15-WEL-050	WEL	319	320	0.012	29-Jul-15
E700401	15-WEL-050	WEL	320	321	0.019	29-Jul-15
E700402	15-WEL-050	WEL	321	322	0.07	29-Jul-15
E700403	15-WEL-050	WEL	322	323	0.063	29-Jul-15
E700404	15-WEL-050	WEL	323	324	0.201	29-Jul-15
E700405	15-WEL-050	WEL	324	325	0.011	29-Jul-15
E700406	15-WEL-050	WEL	325	326	0.158	29-Jul-15
E700407	15-WEL-050	WEL	326	327	0.09	29-Jul-15
E700408	15-WEL-050	WEL	327	328	0.043	29-Jul-15
E700409	15-WEL-050	WEL	328	329	<0.001	29-Jul-15
E700411	15-WEL-050	WEL	329	329.5	<0.001	29-Jul-15
E700412	15-WEL-050	WEL	329.5	330	<0.001	29-Jul-15
E700413	15-WEL-050	WEL	330	331	0.012	29-Jul-15
E700414	15-WEL-050	WEL	331	332	0.02	29-Jul-15
E700415	15-WEL-050	WEL	332	333	<0.001	29-Jul-15
E700416	15-WEL-050	WEL	333	334	0.019	29-Jul-15
E700417	15-WEL-050	WEL	334	335	0.019	29-Jul-15
E700418	15-WEL-050	WEL	335	336	0.02	29-Jul-15
E700419	15-WEL-050	WEL	336	337	0.022	29-Jul-15

E700421	15-WEL-050	WEL	337	338	0.037	29-Jul-15
E700422	15-WEL-050	WEL	338	339	0.023	29-Jul-15
E700423	15-WEL-050	WEL	339	340	1.589	29-Jul-15
E700424	15-WEL-050	WEL	340	341	1.172	29-Jul-15
E700425	15-WEL-050	WEL	341	341.5	0.377	29-Jul-15
E700426	15-WEL-050	WEL	341.5	342	2.158	29-Jul-15
E700427	15-WEL-050	WEL	342	342.4	2.667	29-Jul-15
E700428	15-WEL-050	WEL	342.4	343	0.348	29-Jul-15
E700429	15-WEL-050	WEL	343	344	0.081	29-Jul-15
E700431	15-WEL-050	WEL	344	345	0.042	29-Jul-15
E700432	15-WEL-050	WEL	345	346	0.048	29-Jul-15
E700433	15-WEL-050	WEL	346	347	0.029	29-Jul-15
E700434	15-WEL-050	WEL	347	348	0.036	29-Jul-15
E700435	15-WEL-050	WEL	348	349	0.043	29-Jul-15
E700436	15-WEL-050	WEL	349	350	0.168	29-Jul-15
E700437	15-WEL-050	WEL	350	351	0.242	29-Jul-15
E700438	15-WEL-050	WEL	351	352	0.189	29-Jul-15
E700439	15-WEL-050	WEL	352	353	0.062	30-Jul-15
E700441	15-WEL-050	WEL	353	354	0.062	30-Jul-15
E700442	15-WEL-050	WEL	354	355	0.024	30-Jul-15
E700443	15-WEL-050	WEL	355	356	0.051	30-Jul-15
E700444	15-WEL-050	WEL	356	357	0.035	30-Jul-15
E700445	15-WEL-050	WEL	357	358	0.022	30-Jul-15
E700446	15-WEL-050	WEL	358	359	0.021	30-Jul-15
E700447	15-WEL-050	WEL	359	360	0.028	30-Jul-15
E700448	15-WEL-050	WEL	360	361	0.021	30-Jul-15
E700449	15-WEL-050	WEL	361	362	0.025	30-Jul-15
E700451	15-WEL-050	WEL	362	363	0.027	30-Jul-15
E700452	15-WEL-050	WEL	363	364	0.019	30-Jul-15
E700453	15-WEL-050	WEL	364	365	0.022	30-Jul-15
E700454	15-WEL-050	WEL	365	366	0.021	30-Jul-15
E700455	15-WEL-050	WEL	366	366.6	0.387	30-Jul-15
E700456	15-WEL-050	WEL	366.6	367	0.138	30-Jul-15
E700457	15-WEL-050	WEL	367	368	0.079	30-Jul-15
E700458	15-WEL-050	WEL	368	369	0.046	30-Jul-15
E700459	15-WEL-050	WEL	369	370	0.078	30-Jul-15
E700461	15-WEL-050	WEL	370	371	0.025	30-Jul-15
E700462	15-WEL-050	WEL	371	372	0.027	30-Jul-15
E700463	15-WEL-050	WEL	372	373	0.044	30-Jul-15
E700464	15-WEL-050	WEL	373	374	0.045	30-Jul-15
E700465	15-WEL-050	WEL	374	375	0.058	30-Jul-15
E700466	15-WEL-050	WEL	375	376	0.024	30-Jul-15
E700467	15-WEL-050	WEL	376	377	2.134	30-Jul-15
E700468	15-WEL-050	WEL	377	378	0.125	30-Jul-15
E700469	15-WEL-050	WEL	378	379	0.118	30-Jul-15
E700471	15-WEL-050	WEL	379	380	0.096	30-Jul-15
E700472	15-WEL-050	WEL	380	380.3	0.052	30-Jul-15
E700473	15-WEL-050	WEL	380.3	381	0.05	30-Jul-15
E700474	15-WEL-050	WEL	381	382	0.05	31-Jul-15
E700475	15-WEL-050	WEL	382	383	0.261	31-Jul-15
E700476	15-WEL-050	WEL	383	384	0.582	31-Jul-15
E700477	15-WEL-050	WEL	384	385	0.036	31-Jul-15

E700478	15-WEL-050	WEL	385	386	0.029	31-Jul-15
E700479	15-WEL-050	WEL	386	387	0.072	31-Jul-15
E700481	15-WEL-050	WEL	387	387.5	0.019	31-Jul-15
E700482	15-WEL-050	WEL	387.5	388.2	5.583	31-Jul-15
E700483	15-WEL-050	WEL	388.2	389	1.13	31-Jul-15
E700484	15-WEL-050	WEL	389	389.9	11.07	31-Jul-15
E700485	15-WEL-050	WEL	389.9	390.9	0.552	31-Jul-15
E700486	15-WEL-050	WEL	390.9	391.9	0.103	31-Jul-15
E700487	15-WEL-050	WEL	391.9	392.5	2.876	31-Jul-15
E700488	15-WEL-050	WEL	392.5	393.5	0.219	31-Jul-15
E700489	15-WEL-050	WEL	393.5	394.5	0.027	31-Jul-15
E700491	15-WEL-050	WEL	394.5	395.5	0.613	31-Jul-15
E700492	15-WEL-050	WEL	395.5	396.5	0.247	31-Jul-15
E700493	15-WEL-050	WEL	396.5	397.2	0.802	31-Jul-15
E700494	15-WEL-050	WEL	397.2	398.2	1.236	31-Jul-15
E700495	15-WEL-050	WEL	398.2	399	0.109	31-Jul-15
E700496	15-WEL-050	WEL	399	400	0.115	31-Jul-15
E700497	15-WEL-050	WEL	400	401	0.145	31-Jul-15
E700498	15-WEL-050	WEL	401	402	0.086	31-Jul-15
E700499	15-WEL-050	WEL	402	403	0.047	31-Jul-15
E700501	15-WEL-050	WEL	403	403.9	0.321	31-Jul-15
E700502	15-WEL-050	WEL	403.9	404.4	3.843	31-Jul-15
E700503	15-WEL-050	WEL	404.4	405	9.55	31-Jul-15
E700504	15-WEL-050	WEL	405	405.5	1.607	31-Jul-15
E700505	15-WEL-050	WEL	405.5	406	0.665	31-Jul-15
E700506	15-WEL-050	WEL	406	406.5	2.165	31-Jul-15
E700507	15-WEL-050	WEL	406.5	407.2	7.859	31-Jul-15
E700508	15-WEL-050	WEL	407.2	407.9	1.627	31-Jul-15
E700509	15-WEL-050	WEL	407.9	408.7	0.183	31-Jul-15
E700511	15-WEL-050	WEL	408.7	409.7	0.29	31-Jul-15
E700512	15-WEL-050	WEL	409.7	410.7	0.034	31-Jul-15
E700513	15-WEL-050	WEL	410.7	411.3	0.041	31-Jul-15
E700514	15-WEL-050	WEL	411.3	412.2	0.881	31-Jul-15
E700515	15-WEL-050	WEL	412.2	413.2	0.124	31-Jul-15
E700516	15-WEL-050	WEL	413.2	414.2	0.269	31-Jul-15
E700517	15-WEL-050	WEL	414.2	415.2	1.911	31-Jul-15
E700518	15-WEL-050	WEL	415.2	416.2	2.247	31-Jul-15
E700519	15-WEL-050	WEL	416.2	417.2	0.32	31-Jul-15
E700521	15-WEL-050	WEL	417.2	417.7	8.731	31-Jul-15
E700522	15-WEL-050	WEL	417.7	418.5	7.397	31-Jul-15
E700523	15-WEL-050	WEL	418.5	419.1	13.63	31-Jul-15
E700524	15-WEL-050	WEL	419.1	420	7.26	31-Jul-15
E700525	15-WEL-050	WEL	420	421	1.558	31-Jul-15
E700526	15-WEL-050	WEL	421	422	0.072	31-Jul-15
E700527	15-WEL-050	WEL	422	423	0.062	31-Jul-15
E700528	15-WEL-050	WEL	423	424	0.036	31-Jul-15
E700529	15-WEL-050	WEL	424	425	0.043	31-Jul-15
E700531	15-WEL-050	WEL	425	425.6	0.029	31-Jul-15
E700532	15-WEL-050	WEL	425.6	426.1	0.174	31-Jul-15
E700533	15-WEL-050	WEL	426.1	427	0.068	31-Jul-15
E700534	15-WEL-050	WEL	427	428	0.04	31-Jul-15
E700535	15-WEL-050	WEL	428	429	0.058	31-Jul-15

E700536	15-WEL-050	WEL	429	430	0.04	31-Jul-15
E700537	15-WEL-050	WEL	430	431	0.754	31-Jul-15
E700538	15-WEL-050	WEL	431	432	0.056	1-Aug-15
E700539	15-WEL-050	WEL	432	433	0.022	1-Aug-15
E700541	15-WEL-050	WEL	433	434	0.03	1-Aug-15
E700542	15-WEL-050	WEL	434	435	0.033	1-Aug-15
E700543	15-WEL-050	WEL	435	435.9	0.04	1-Aug-15
E700544	15-WEL-050	WEL	435.9	436.8	0.089	1-Aug-15
E700545	15-WEL-050	WEL	436.8	437.6	0.027	1-Aug-15
E700546	15-WEL-050	WEL	437.6	438.6	0.01	1-Aug-15
E700547	15-WEL-050	WEL	438.6	439.4	0.013	1-Aug-15
E700548	15-WEL-050	WEL	439.4	440.3	0.014	1-Aug-15
E700549	15-WEL-050	WEL	440.3	441	<0.001	1-Aug-15
E700551	15-WEL-050	WEL	441	441.8	0.028	1-Aug-15
E700552	15-WEL-050	WEL	441.8	442.6	0.022	1-Aug-15
E700553	15-WEL-050	WEL	442.6	443	0.021	1-Aug-15
E700554	15-WEL-050	WEL	443	444	0.019	1-Aug-15
E700555	15-WEL-050	WEL	444	445	0.077	1-Aug-15
E700556	15-WEL-050	WEL	445	446	0.028	1-Aug-15
E700557	15-WEL-050	WEL	446	447	0.019	1-Aug-15
E700558	15-WEL-050	WEL	447	447.7	0.263	1-Aug-15
E700559	15-WEL-050	WEL	447.7	448.1	0.04	1-Aug-15
E700561	15-WEL-050	WEL	448.1	449	0.037	1-Aug-15
E700562	15-WEL-050	WEL	449	450	0.04	1-Aug-15
E700563	15-WEL-050	WEL	450	451	0.039	1-Aug-15
E700564	15-WEL-050	WEL	451	451.5	0.024	1-Aug-15
E700565	15-WEL-050	WEL	451.5	452.2	0.027	1-Aug-15
E700566	15-WEL-050	WEL	452.2	452.5	1.002	1-Aug-15
E700567	15-WEL-050	WEL	452.5	453	0.109	1-Aug-15
E700568	15-WEL-050	WEL	453	453.7	0.021	1-Aug-15
E700569	15-WEL-050	WEL	453.7	454.1	0.084	1-Aug-15
E700571	15-WEL-050	WEL	454.1	455	0.04	1-Aug-15
E700572	15-WEL-050	WEL	455	455.7	0.029	1-Aug-15
E700573	15-WEL-050	WEL	455.7	456.2	0.485	1-Aug-15
E700574	15-WEL-050	WEL	456.2	457	0.298	1-Aug-15
E700575	15-WEL-050	WEL	457	458	0.039	1-Aug-15
E700576	15-WEL-050	WEL	458	458.4	0.027	1-Aug-15
E700577	15-WEL-050	WEL	458.4	459	0.05	1-Aug-15
E700578	15-WEL-050	WEL	459	460	0.024	1-Aug-15
E700579	15-WEL-050	WEL	460	461	0.044	1-Aug-15
E700581	15-WEL-050	WEL	461	462	0.03	1-Aug-15
E700582	15-WEL-050	WEL	462	463	0.036	1-Aug-15
E700583	15-WEL-050	WEL	463	464	0.063	1-Aug-15
E700584	15-WEL-050	WEL	464	465	0.023	1-Aug-15
E700585	15-WEL-050	WEL	465	466	0.014	1-Aug-15
E700586	15-WEL-050	WEL	466	467	0.027	1-Aug-15
E700587	15-WEL-050	WEL	467	468	0.016	1-Aug-15
E700588	15-WEL-050	WEL	468	469	0.011	1-Aug-15
E700589	15-WEL-050	WEL	469	470	0.028	1-Aug-15
E700591	15-WEL-050	WEL	470	470.4	0.037	1-Aug-15
E700592	15-WEL-050	WEL	470.4	471.4	0.022	1-Aug-15
E700593	15-WEL-050	WEL	471.4	472.4	0.66	1-Aug-15

E700594	15-WEL-050	WEL	472.4	473.4	2.598	1-Aug-15
E700595	15-WEL-050	WEL	473.4	474.4	0.048	1-Aug-15
E700596	15-WEL-050	WEL	474.4	475.4	0.045	1-Aug-15
E700597	15-WEL-050	WEL	475.4	476.4	0.033	1-Aug-15
E700598	15-WEL-050	WEL	476.4	477.4	0.036	1-Aug-15
E700599	15-WEL-050	WEL	477.4	478.4	0.033	1-Aug-15
E700601	15-WEL-050	WEL	478.4	479.3	0.059	1-Aug-15
E700602	15-WEL-050	WEL	479.3	480	0.035	4-Aug-15
E700603	15-WEL-050	WEL	480	481	0.033	4-Aug-15
E700604	15-WEL-050	WEL	481	482	0.049	4-Aug-15
E700605	15-WEL-050	WEL	482	483	0.049	4-Aug-15
E700606	15-WEL-050	WEL	483	484	0.047	4-Aug-15
E700607	15-WEL-050	WEL	484	485	0.039	4-Aug-15
E700608	15-WEL-050	WEL	485	486	0.059	4-Aug-15
E700609	15-WEL-050	WEL	486	487	0.075	4-Aug-15
E700611	15-WEL-050	WEL	487	488	0.047	4-Aug-15
E700612	15-WEL-050	WEL	488	489	0.046	4-Aug-15
E700613	15-WEL-050	WEL	489	490	0.064	4-Aug-15
E700614	15-WEL-050	WEL	490	491	0.042	4-Aug-15
E700615	15-WEL-050	WEL	491	492	0.27	4-Aug-15
E700616	15-WEL-050	WEL	492	493	0.048	4-Aug-15
E700617	15-WEL-050	WEL	493	494	0.025	4-Aug-15
E700618	15-WEL-050	WEL	494	494.5	<0.001	4-Aug-15
E700619	15-WEL-050	WEL	494.5	495.4	0.034	4-Aug-15
E700621	15-WEL-050	WEL	495.4	496.1	0.035	4-Aug-15
E700622	15-WEL-050	WEL	496.1	497	0.032	4-Aug-15
E700623	15-WEL-050	WEL	497	498	0.025	6-Aug-15
E700624	15-WEL-050	WEL	498	499	0.021	6-Aug-15
E700625	15-WEL-050	WEL	499	500	0.022	6-Aug-15
E700626	15-WEL-050	WEL	500	500.8	0.026	6-Aug-15
E700627	15-WEL-050	WEL	500.8	501.4	0.025	6-Aug-15
E700628	15-WEL-050	WEL	501.4	502	0.012	6-Aug-15
E700629	15-WEL-050	WEL	502	503	0.032	6-Aug-15
E700631	15-WEL-050	WEL	503	504	0.043	6-Aug-15
E700632	15-WEL-050	WEL	504	505	0.017	6-Aug-15
E700633	15-WEL-050	WEL	505	505.5	0.551	6-Aug-15
E700634	15-WEL-050	WEL	505.5	506	0.027	6-Aug-15
E700635	15-WEL-050	WEL	506	507	0.019	6-Aug-15
E700636	15-WEL-050	WEL	507	508	0.033	6-Aug-15
E700637	15-WEL-050	WEL	508	508.3	0.02	6-Aug-15
E700638	15-WEL-050	WEL	508.3	509	0.669	6-Aug-15
E700639	15-WEL-050	WEL	509	510	1.487	6-Aug-15
E700641	15-WEL-050	WEL	510	510.8	0.123	6-Aug-15
E700642	15-WEL-050	WEL	510.8	511.4	0.283	6-Aug-15
E700643	15-WEL-050	WEL	511.4	512.4	0.074	6-Aug-15
E700644	15-WEL-050	WEL	512.4	513.4	0.065	6-Aug-15
E700645	15-WEL-050	WEL	513.4	514	0.028	6-Aug-15
E700646	15-WEL-050	WEL	514	515	0.042	6-Aug-15
E700647	15-WEL-050	WEL	515	516	0.104	6-Aug-15
E700648	15-WEL-050	WEL	516	517	0.064	6-Aug-15
E700649	15-WEL-050	WEL	517	517.7	0.048	6-Aug-15
E701676	15-WEL-050	WEL	517.7	518.3	0.046	6-Aug-15

E701677	15-WEL-050	WEL	518.3	519.3	0.134	6-Aug-15
E701678	15-WEL-050	WEL	519.3	520.3	0.083	6-Aug-15
E701679	15-WEL-050	WEL	520.3	521.3	0.05	6-Aug-15
E701681	15-WEL-050	WEL	521.3	522.3	0.163	6-Aug-15
E701682	15-WEL-050	WEL	522.3	523.3	0.047	6-Aug-15
E701683	15-WEL-050	WEL	523.3	524.3	0.035	6-Aug-15
E701684	15-WEL-050	WEL	524.3	525	0.039	6-Aug-15
E701685	15-WEL-050	WEL	525	526	0.047	6-Aug-15
E701686	15-WEL-050	WEL	526	526.4	0.088	6-Aug-15
E701687	15-WEL-050	WEL	526.4	527.4	0.042	6-Aug-15
E701688	15-WEL-050	WEL	527.4	528.4	0.024	6-Aug-15
E701689	15-WEL-050	WEL	528.4	529.4	0.054	6-Aug-15
E701691	15-WEL-050	WEL	529.4	530.3	0.016	6-Aug-15
E701692	15-WEL-050	WEL	530.3	531	0.041	6-Aug-15
E701693	15-WEL-050	WEL	531	532	0.03	6-Aug-15
E701694	15-WEL-050	WEL	532	533	0.04	6-Aug-15
E701695	15-WEL-050	WEL	533	533.4	0.023	6-Aug-15
E701696	15-WEL-050	WEL	533.4	534	0.035	6-Aug-15
E701697	15-WEL-050	WEL	534	535	0.039	6-Aug-15
E701698	15-WEL-050	WEL	535	536	1.005	6-Aug-15
E701699	15-WEL-050	WEL	536	537	0.08	6-Aug-15
E701701	15-WEL-050	WEL	537	538	0.201	6-Aug-15
E701702	15-WEL-050	WEL	538	539	0.033	6-Aug-15
E701703	15-WEL-050	WEL	539	540	2.279	6-Aug-15
E701704	15-WEL-050	WEL	540	541	0.869	6-Aug-15
E701705	15-WEL-050	WEL	541	542	0.654	6-Aug-15
E701706	15-WEL-050	WEL	542	543	0.067	6-Aug-15
E701707	15-WEL-050	WEL	543	544	0.072	6-Aug-15
E701708	15-WEL-050	WEL	544	545	0.036	6-Aug-15
E701709	15-WEL-050	WEL	545	545.8	0.031	6-Aug-15
E701711	15-WEL-050	WEL	545.8	546.3	0.019	6-Aug-15
E701712	15-WEL-050	WEL	546.3	547	0.022	6-Aug-15
E701713	15-WEL-050	WEL	547	548	0.027	6-Aug-15
E701714	15-WEL-050	WEL	548	549	0.032	6-Aug-15
E701715	15-WEL-050	WEL	549	550	12.87	6-Aug-15
E701716	15-WEL-050	WEL	550	551	0.153	6-Aug-15
E701717	15-WEL-050	WEL	551	552	0.055	6-Aug-15
E701718	15-WEL-050	WEL	552	553	0.025	6-Aug-15
E701719	15-WEL-050	WEL	553	554	0.051	6-Aug-15
E701721	15-WEL-050	WEL	554	555	0.016	6-Aug-15
E701722	15-WEL-050	WEL	555	556	0.027	6-Aug-15
E701723	15-WEL-050	WEL	556	557	0.027	6-Aug-15
E701724	15-WEL-050	WEL	557	558	0.022	6-Aug-15
E701725	15-WEL-050	WEL	558	559	0.019	6-Aug-15
E701726	15-WEL-050	WEL	559	560	0.015	6-Aug-15
E701727	15-WEL-050	WEL	560	561	0.013	6-Aug-15
E701728	15-WEL-050	WEL	561	562	0.031	6-Aug-15
E701729	15-WEL-050	WEL	562	563	0.018	6-Aug-15
E701731	15-WEL-050	WEL	563	564	0.039	6-Aug-15
E701732	15-WEL-050	WEL	564	565	0.023	6-Aug-15
E701733	15-WEL-050	WEL	565	566	0.046	6-Aug-15
E701734	15-WEL-050	WEL	566	566.7	0.031	6-Aug-15

E701735	15-WEL-050	WEL	566.7	567.3	0.034	6-Aug-15
E701736	15-WEL-050	WEL	567.3	568	0.053	6-Aug-15
E701737	15-WEL-050	WEL	568	569	0.022	6-Aug-15
E701738	15-WEL-050	WEL	569	569.7	0.038	6-Aug-15
E701739	15-WEL-050	WEL	569.7	570.7	0.071	6-Aug-15
E701741	15-WEL-050	WEL	570.7	571.7	0.038	6-Aug-15
E701742	15-WEL-050	WEL	571.7	572.7	0.029	6-Aug-15
E701743	15-WEL-050	WEL	572.7	573.7	0.028	6-Aug-15
E701744	15-WEL-050	WEL	573.7	574.7	0.096	6-Aug-15
E701745	15-WEL-050	WEL	574.7	575.7	0.124	6-Aug-15
E701746	15-WEL-050	WEL	575.7	576.7	3.263	6-Aug-15
E701747	15-WEL-050	WEL	576.7	577.7	1.161	6-Aug-15
E701748	15-WEL-050	WEL	577.7	578.7	0.08	6-Aug-15
E701749	15-WEL-050	WEL	578.7	579.6	0.044	6-Aug-15
E701751	15-WEL-050	WEL	579.6	580.2	0.045	6-Aug-15
E701752	15-WEL-050	WEL	580.2	581	0.075	6-Aug-15
E701753	15-WEL-050	WEL	581	582	0.025	6-Aug-15
E701754	15-WEL-050	WEL	582	583	0.016	6-Aug-15
E701755	15-WEL-050	WEL	583	584	0.032	6-Aug-15
E701756	15-WEL-050	WEL	584	585	0.016	6-Aug-15
E701757	15-WEL-050	WEL	585	586	0.025	6-Aug-15
E701758	15-WEL-050	WEL	586	587	0.014	6-Aug-15
E701759	15-WEL-050	WEL	587	588	0.026	6-Aug-15
E701761	15-WEL-050	WEL	588	589	0.056	6-Aug-15
E701762	15-WEL-050	WEL	589	590	0.037	6-Aug-15
E701763	15-WEL-050	WEL	590	591	0.044	6-Aug-15
E701764	15-WEL-050	WEL	591	591.4	0.035	6-Aug-15
E701765	15-WEL-050	WEL	591.4	592.3	0.049	6-Aug-15
E701766	15-WEL-050	WEL	592.3	592.7	0.042	6-Aug-15
E701767	15-WEL-050	WEL	592.7	593	0.3	6-Aug-15
E701768	15-WEL-050	WEL	593	593.7	0.054	6-Aug-15
E701769	15-WEL-050	WEL	593.7	594.1	0.149	6-Aug-15
E701771	15-WEL-050	WEL	594.1	594.7	0.047	6-Aug-15
E701772	15-WEL-050	WEL	594.7	595.6	0.063	6-Aug-15
E701773	15-WEL-050	WEL	595.6	596	0.016	6-Aug-15
E701774	15-WEL-050	WEL	596	596.7	0.039	6-Aug-15
E701775	15-WEL-050	WEL	596.7	597	0.023	6-Aug-15
E701776	15-WEL-050	WEL	597	598	0.014	6-Aug-15
E701777	15-WEL-050	WEL	598	599	0.029	6-Aug-15
E701778	15-WEL-050	WEL	599	600	0.013	6-Aug-15

## **Appendix 3**

### **Detailed Breakdown of Expenditures**

**LABOUR**

Drill Hole ID	Item	Unit	Cost/Unit	Total
15-WEL-049	Field Technician	6 hours	\$36	\$216.00
15-WEL-049	Logging Geologist	8 hours	\$50	\$400.00
15-WEL-049	Core Cutter	0	\$26	\$0.00
15-WEL-049	Assay (Internal)	0	\$26	\$0.00
15-WEL-049	Sr. Geologist	3 hour	\$70	\$210.00
<b>SUB TOTAL</b>				<b>\$826.00</b>
15-WEL-050	Field Technician	44 hours	\$36	\$1,584.00
15-WEL-050	Logging Geologist	66 hours	\$47	\$3,102.00
15-WEL-050	Core Cutter	35 hours	\$26	\$910.00
15-WEL-050	Assay (Internal)	395 samples	\$26	\$10,270.00
15-WEL-050	Sr. Geologist	5 hours	\$70	\$350.00
<b>SUB TOTAL</b>				<b>\$16,216.00</b>
<b>TOTAL LABOUR</b>				<b>\$17,042.00</b>

**DRILLING**

Drill Hole ID	Item	Cost
15-WEL-049	Move	\$2,460.00
15-WEL-049	Casing	\$615.00
15-WEL-049	Drilling	\$1,078.38
15-WEL-049	Standby	\$0.00
15-WEL-049	Grout/Survey	\$0.00
15-WEL-049	Supervision	\$650.00
15-WEL-049	Rentals	\$896.25
<b>SUB TOTAL</b>		<b>\$5,699.63</b>
15-WEL-050	Move	\$1,025.00
15-WEL-050	Casing	\$1,742.00
15-WEL-050	Drilling	\$46,655.00
15-WEL-050	Standby	\$820.00
15-WEL-050	Grout/Survey	\$7,060.00
15-WEL-050	Supervision	\$4,225.00
15-WEL-050	Rentals	\$896.25
<b>SUB TOTAL</b>		<b>\$62,423.25</b>
<b>TOTAL DRILLING</b>		<b>\$68,122.88</b>

**OTHER**

Item	Unit	Cost/Unit	Total
Core Shack Rental	1 month	\$4,700	\$4,700.00
Cut Shack Rental	1 month	\$2,600	\$2,600.00
Drill Mobilization	flat rate	\$5,000	\$5,000.00
Drill Demobilization	flat rate	\$5,000	\$5,000.00
Camp costs for Drillers (5)	22 days (5 people)	\$80/day	\$8,800.00
Drill Unload and Staging - Equipment	6 hours	\$102	\$612.00
Pad/Sump building - Equipment	4 hours	\$102	\$408.00
Crush for pad - Material/Equipment	4 hours	\$102	\$408.00
Move onto pad - Equipment	3 hours	\$102	\$306.00
Drill Loading - Equipment	6 hours	\$102	\$612.00
Report Writing - Logging Geo	12 hours	\$50/hr	\$600.00
Report Verification - Sr. Geo	10 hours	\$70/hr	\$700.00
Core Boxes - NQ two row	\$5.75/tray	420	\$2,415.00
<b>TOTAL OTHER</b>			<b>\$32,161.00</b>

**GRAND TOTAL      \$117,325.88**

## **Appendix 4**

### **Drill Logs**

15-WEL-049

## MUSSELWHITE MINE - GEOLOGY

Hole: **15-WEL-050**

Project: **WEL**

Mine Grid Easting: 8457.798

Planned Depth(m): 600

Drill Start Date: 7/20/2015

Mine Grid Northing: 11944.49

Actual Depth (m): 600

Drill End Date: 7/29/2015

Elevation: 5298.32

Core Diameter: NQ2

UTM East: 676522.5

Plugged: YES

**Target 1:** WEL-A

UTM North: 5833779

Grout Test: YES

**Target 2:**

Result: GOOD

**Target 3:**

Drill Instructions:

Collar Comments:

Survey			
Depth	Azimuth	Dip	SurveyType
0	269.9	-64.2	MAXI
3	270	-64.1	MAXI
6	270	-64	MAXI
9	270.1	-63.9	MAXI
12	270.1	-63.8	MAXI
15	270.1	-63.7	MAXI
18	270.1	-63.7	MAXI
21	270.1	-63.7	MAXI
24	270.1	-63.7	MAXI
27	270	-63.8	MAXI
30	270.1	-63.7	MAXI
33	270.1	-63.8	MAXI
36	270.2	-63.7	MAXI
39	270.2	-63.7	MAXI
42	270.2	-63.7	MAXI
45	270.3	-63.7	MAXI
48	270.3	-63.6	MAXI
51	270.3	-63.6	MAXI
54	270.3	-63.6	MAXI
57	270.3	-63.5	MAXI
60	270.4	-63.5	MAXI
63	270.4	-63.5	MAXI
66	270.4	-63.5	MAXI
69	270.5	-63.4	MAXI
72	270.6	-63.4	MAXI
75	270.6	-63.4	MAXI
78	270.6	-63.4	MAXI
81	270.7	-63.3	MAXI
84	270.7	-63.3	MAXI
87	270.8	-63.3	MAXI
90	270.8	-63.3	MAXI
93	270.9	-63.3	MAXI
96	270.9	-63.3	MAXI
99	271	-63.3	MAXI
102	271	-63.3	MAXI
105	271.1	-63.3	MAXI
108	271.2	-63.3	MAXI
111	271.3	-63.3	MAXI
114	271.3	-63.2	MAXI
117	271.4	-63.3	MAXI
120	271.5	-63.2	MAXI
123	271.6	-63.2	MAXI
126	271.7	-63.2	MAXI
129	271.7	-63.2	MAXI
132	271.8	-63.2	MAXI
135	271.8	-63.1	MAXI
138	271.9	-63.2	MAXI
141	271.9	-63.2	MAXI
144	272	-63.2	MAXI
147	272.1	-63.2	MAXI
150	272.1	-63.2	MAXI
153	272.2	-63.1	MAXI
156	272.3	-63.1	MAXI
159	272.3	-63.1	MAXI

## MUSSELWHITE MINE - GEOLOGY

Hole: **15-WEL-049**

Project: **WEL**

Mine Grid Easting: 8457.877

Planned Depth(m): 600

Drill Start Date: 7/19/2015

Mine Grid Northing: 11944.5

Actual Depth (m): 22.2

Drill End Date: 7/19/2015

Elevation: 5298.729

Core Diameter: NQ2

UTM East: 676522.5

Plugged: NO

**Target 1: WEL-A**

UTM North: 5833779

Grout Test:

**Target 2:**

Result: NO RESULTS

**Target 3:**

Drill Instructions:

Collar Comments: Hole cancelled due to lift and binding of rods. Collared at -61.5 and was at -57 by 16m. Recollared steeper as 15-WEL-050

### Survey

Depth	Azimuth	Dip	Survey Type
0	270.168	-61.554	SURV
16	270	-57.4	EZS



## MUSSELWHITE MINE - GEOLOGY

Hole: **15-WEL-050**

Project: **WEL**

Mine Grid Easting: 8457.798

Planned Depth(m): 600

Drill Start Date: 7/20/2015

Mine Grid Northing: 11944.49

Actual Depth (m): 600

Drill End Date: 7/29/2015

Elevation: 5298.32

Core Diameter: NQ2

UTM East: 676522.5

Plugged: YES

**Target 1:** WEL-A

UTM North: 5833779

Grout Test: YES

**Target 2:**

Result: GOOD

**Target 3:**

Drill Instructions:

Collar Comments:

### **Survey**

Depth	Azimuth	Dip	SurveyType
162	272.4	-62.9	MAXI
165	272.4	-62.9	MAXI
168	272.5	-62.9	MAXI
171	272.5	-62.9	MAXI
174	272.5	-62.9	MAXI
177	272.6	-62.9	MAXI
180	272.7	-62.9	MAXI
183	272.7	-62.9	MAXI
186	272.9	-62.9	MAXI
189	273	-62.9	MAXI
192	273	-62.9	MAXI
195	273.1	-62.9	MAXI
198	273.2	-62.9	MAXI
201	273.3	-62.9	MAXI
204	273.3	-63	MAXI
207	273.4	-62.9	MAXI
210	273.5	-62.9	MAXI
213	273.5	-62.8	MAXI
216	273.6	-62.9	MAXI
219	273.7	-62.8	MAXI
222	273.7	-62.9	MAXI
225	273.8	-62.9	MAXI
228	273.8	-62.8	MAXI
231	273.8	-62.9	MAXI
234	273.9	-62.8	MAXI
237	273.9	-62.8	MAXI
240	273.9	-62.9	MAXI
243	274	-62.9	MAXI
246	274	-62.8	MAXI
249	274.1	-62.8	MAXI
252	274.2	-62.8	MAXI
255	274.2	-62.8	MAXI
258	274.3	-62.8	MAXI
261	274.2	-62.8	MAXI
264	274.2	-62.8	MAXI
267	274.3	-62.8	MAXI
270	274.4	-62.7	MAXI
273	274.5	-62.7	MAXI
276	274.5	-62.6	MAXI
279	274.6	-62.6	MAXI
282	274.7	-62.6	MAXI
285	274.7	-62.6	MAXI
288	274.8	-62.5	MAXI
291	274.9	-62.5	MAXI
294	275	-62.4	MAXI
297	275.1	-62.4	MAXI
300	275.2	-62.3	MAXI
303	275.3	-62.4	MAXI
306	275.5	-62.3	MAXI
309	275.6	-62.3	MAXI
312	275.6	-62.3	MAXI
315	275.7	-62.2	MAXI
318	275.7	-62.2	MAXI
321	275.7	-62.2	MAXI

## MUSSELWHITE MINE - GEOLOGY

Hole: **15-WEL-050**

Project: **WEL**

Mine Grid Easting: 8457.798

Planned Depth(m): 600

Drill Start Date: 7/20/2015

Mine Grid Northing: 11944.49

Actual Depth (m): 600

Drill End Date: 7/29/2015

Elevation: 5298.32

Core Diameter: NQ2

UTM East: 676522.5

Plugged: YES

**Target 1:** WEL-A

UTM North: 5833779

Grout Test: YES

**Target 2:**

Result:GOOD

**Target 3:**

Drill Instructions:

Collar Comments:

### **Survey**

Depth	Azimuth	Dip	SurveyType
324	275.8	-62.1	MAXI
327	275.8	-62.1	MAXI
330	275.7	-62.1	MAXI
333	275.7	-62.1	MAXI
336	275.7	-62	MAXI
339	275.7	-62	MAXI
342	275.7	-62	MAXI
345	275.7	-61.9	MAXI
348	275.7	-61.8	MAXI
351	275.8	-61.7	MAXI
354	275.7	-61.7	MAXI
357	275.7	-61.4	MAXI
360	275.7	-61.4	MAXI
363	275.7	-61.5	MAXI
366	275.6	-61.6	MAXI
369	275.6	-61.6	MAXI
372	275.7	-61.6	MAXI
375	275.7	-61.6	MAXI
378	275.8	-61.5	MAXI
381	275.9	-61.5	MAXI
384	275.9	-61.5	MAXI
387	275.9	-61.6	MAXI
390	275.8	-61.7	MAXI
393	275.6	-61.7	MAXI
396	275.5	-61.5	MAXI
399	275.5	-61.5	MAXI
402	275.4	-61.6	MAXI
405	275.5	-61.6	MAXI
408	275.4	-61.6	MAXI
411	275.4	-61.7	MAXI
414	275.3	-61.7	MAXI
417	275.4	-61.6	MAXI
420	275.4	-61.6	MAXI
423	275.5	-61.5	MAXI
426	275.5	-61.6	MAXI
429	275.6	-61.7	MAXI
432	275.4	-61.7	MAXI
435	275.4	-61.5	MAXI
438	275.4	-61.6	MAXI
441	275.5	-61.4	MAXI
444	275.5	-61.5	MAXI
447	275.5	-61.7	MAXI
450	275.4	-61.5	MAXI
453	275.5	-61.5	MAXI
456	275.5	-61.5	MAXI
459	275.5	-61.5	MAXI
462	275.6	-61.5	MAXI
465	275.5	-61.5	MAXI
468	275.5	-61.4	MAXI
471	275.6	-61.4	MAXI
474	275.6	-61.6	MAXI
477	275.5	-61.5	MAXI
480	275.5	-61.4	MAXI
483	275.6	-61.3	MAXI

# MUSSELWHITE MINE - GEOLOGY

Hole: **15-WEL-050**

Project: **WEL**

Mine Grid Easting: 8457.798

Planned Depth(m): 600

Drill Start Date: 7/20/2015

Mine Grid Northing: 11944.49

Actual Depth (m): 600

Drill End Date: 7/29/2015

Elevation: 5298.32

Core Diameter: NQ2

UTM East: 676522.5

Plugged: YES

**Target 1:** WEL-A

UTM North: 5833779

Grout Test: YES

**Target 2:**

Result: GOOD

**Target 3:**

Drill Instructions:

Collar Comments:

## **Survey**

Depth	Azimuth	Dip	Survey Type
486	275.6	-61.5	MAXI
489	275.6	-61.4	MAXI
492	275.7	-61.5	MAXI
495	275.7	-61.6	MAXI
498	275.7	-61.6	MAXI
501	275.7	-61.5	MAXI
504	275.6	-61.6	MAXI
507	275.6	-61.5	MAXI
510	275.6	-61.5	MAXI
513	275.7	-61.6	MAXI
516	275.6	-61.4	MAXI
519	275.7	-61.3	MAXI
522	275.8	-61.3	MAXI
525	275.9	-61.3	MAXI
528	275.8	-61.3	MAXI
531	275.8	-61.2	MAXI
534	275.8	-61.2	MAXI
537	275.8	-61.2	MAXI
540	275.9	-61.1	MAXI
543	275.9	-61.1	MAXI
546	275.9	-61.1	MAXI
549	275.9	-61	MAXI
552	275.9	-61	MAXI
555	276	-61	MAXI
558	276	-60.9	MAXI
561	276	-60.9	MAXI
564	276	-60.8	MAXI
567	276	-60.8	MAXI
570	276.1	-60.8	MAXI
573	276.1	-60.7	MAXI
576	276.1	-60.7	MAXI
579	276.1	-60.7	MAXI
582	276.1	-60.6	MAXI
585	276.2	-60.6	MAXI
588	276.2	-60.6	MAXI
591	276.2	-60.5	MAXI
594	276.2	-60.5	MAXI
597	276.2	-60.5	MAXI
600	276.2	-60.4	MAXI









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15-WEL-050

Depth	Assay				MAJOR UNIT								MINOR UNIT				ALTERATION									
	Sample	From	To	AU ppm	From	To	Unit	Col	Text	Comments				Comments	Unit	Comments				Bio	Car	Chl	Gru	Hem	Ser	Si
	E700356	280	281	0.03																						
	E700357	281	282	0.027																						
	E700358	282	283	0.028																						
	E700359	283	284	0.048																						
285	E700361	284	285	0.068																						
	E700362	285	286	0.146																						
	E700363	286	287	0.066																						
	E700364	287	288	0.232																						
	E700365	288	289	0.019																						
290	E700366	289	290	0.068																						
	E700367	290	291	0.011																						
	E700368	291	292	0.068																						
	E700369	292	293	0.059																						
	E700371	293	294	0.124																						
295	E700372	294	295	0.012																						
	E700373	295	296	0.038																						
	E700374	296	297	0.001																						
	E700375	297	298	0.011																						
	E700376	298	299	0.03																						
300	E700377	299	300	0.014																						
	E700378	300	301	0.011	235.6	329.5	2	G	FOL	Dark grey to light green, fine gr. foliated 2. Some weak mineralization in first 10 meters, non-magnetic otherwise. 2% qtz-carb veins, wide range of thickness (.2mm-2cm, and a few ~7cm). Two mod brittle faults near end of unit.						In high strain zones, core becomes much greener due to higher % amph. Tr% po mineralization in some qtz veins. From 312-317m flecks of po with varying intensity seen.										
	E700379	301	302	0.109																						
	E700381	302	303	0.032																						
	E700382	303	304	0.073																						
305	E700383	304	305	0.015																						
	E700384	305	306	0.001																						
	E700385	306	307	0.001																						
	E700386	307	308	0.001																						
	E700387	308	309	0.001																						
310	E700388	309	310	0.016																						
	E700389	310	311	0.001																						
	E700391	311	312	0.034																						
	E700392	312	313	0.021																						
	E700393	313	314	0.045																						
	E700394	314	315	0.201																						
	E700395	315	316	0.614																						
	E700396	316	317	1.64																						
	E700397	317	318	0.05																						
	E700398	318	319	0.023																						
	E700399	319	320	0.012																						
320	E700401	320	321	0.019																						



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## 15-WEL-050

Depth	Assay				MAJOR UNIT								MINOR UNIT				ALTERATION								
	Sample	From	To	AU ppm	From	To	Unit	Col	Text	Comments			Comments	Unit	Comments			Bio	Car	Chl	Gru	Hem	Ser	Si	Comments
E700549	440.3	441	0.001		440.3	442.6	4F	POR	BL	Grey-maroon-green, porphyroblastic, non-magnetic 4FE. ~30% grt grts (0.2-0.5cm) in bt groundmass. ~20% bands of grt in amph varying in size from 2-15cm. Few well-defined bands of grt in bt matrix (~1cm wide). ~2% chert in very distorted bands.			In last 20cm of unit, edges of amph and bt bands have grt-gru on edges. Unit doesn't have well-defined folds, but bands are all moderately wavy. Local minor Po mineralization up to 3%.												
E700551	441	441.8	0.028																						
E700552	441.8	442.6	0.022																						
E700553	442.6	443	0.021																						
E700554	443	444	0.019																						
E700555	444	445	0.077																						
E700556	445	446	0.028																						
E700557	446	447	0.019																						
E700558	447	447.7	0.263																						
E700559	447.7	448.1	0.04																						
E700561	448.1	449	0.037																						
E700562	449	450	0.04																						
E700563	450	451	0.039																						
E700564	451	451.5	0.024																						
E700565	451.5	452.2	0.027																						
E700566	452.2	452.5	1.002																						
E700567	452.5	453	0.109																						
E700568	453	453.7	0.021																						
E700569	453.7	454.1	0.084																						
E700571	454.1	455	0.028																						
E700572	455	455.7	0.485																						
E700573	455.7	456.2	0.298																						
E700574	456.2	457	0.297																						
E700575	457	458	0.039																						
E700576	458	458.4	0.027																						
E700577	458.4	459	0.05																						
E700578	459	460	0.024																						
E700579	460	461	0.044																						
E700581	461	462	0.03																						
E700582	462	463	0.036																						
E700583	463	464	0.063																						
E700584	464	465	0.023																						
E700585	465	466	0.014																						
E700586	466	467	0.027																						
E700587	467	468	0.016																						
E700588	468	469	0.011																						
E700589	469	470	0.028																						
E700591	470	470.4	0.037																						
E700592	470.4	471.4	0.022																						
E700593	471.4	472.4	0.66																						
E700594	472.4	473.4	2.598																						
E700595	473.4	474.4	0.048																						
E700596	474.4	475.4	0.045																						
E700597	475.4	476.4	0.033																						
E700598	476.4	477.4	0.036																						
E700599	477.4	478.4	0.033																						
E700601	478.4	479.3	0.059																						
E700602	479.3	480	0.035																						
E700603	480	481	0.033																						
	479.3	486																							







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## 15-WEL-050

MAJOR UNIT			MINERALS								QTZ VEINING						FABRIC						FOLD						FAULT							
Depth	From	To	Unit	As%	Cp%	Mt%	Po%	Py%	VG Specks	Comments	From	To	Vein Type	Vein %	Tex	Contact Type	Alpha deg	Comments	From	To	Alpha deg	Int	Type	Comments	From	To	Alpha deg	Int	Type	Comments	From	To	Alpha deg	Int	Type	Comments
45																																				
35.8	57.3																																			
50																																				
55																																				
60	57.3	65.6	1																																	
65	65.6	67.2																																		
70	67.2	70.7	3C																																	
75	70.7	165.8																																		

49.9 50 30 WEK S1

59.9 60 53 MOD S1

67 67.1 40 MOD S1

69.9 70 35 WEK S1

79.9 80 45 MOD S1

60.9 61.2 90 WEK SF

57.3 57.7 45 WEK SZ  
 59.2 60.1 35 MOD E SZ  
 60.7 61.8 30 WEK SC  
 Highly variable degree throughout, quite distorted. Variable degree, changes with shear and folding.

65.6 66.2 30 WEK SC

70.6 72 25 WEK SZ

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MAJOR UNIT			MINERALS						QTZ VEINING						FABRIC						FOLD				FAULT					
Dep	From	To	Unit	As%	Cp%	Mt%	Po%	Py%	VG Specks	Comments	From	To	Vein Type	Vein %	Tex	Contact Type	Alpha deg	Comments	From	To	Alpha deg	Int	Type	Comments	From	To	Alpha deg	Int	Type	Comments
	436.8	440.3	6W							5			Diss						440	440.1	55	WEK	S1		440.85	440.9	60	WEK	FD	
	440.3	442.6	AFE																											
	445																		443.7	443.75	45	WEK	FD		444	444.1	45	WEK	FD	
	450	442.6	4F								7	1	Diss-blebs						444.35	444.45	65	MO	FD		444.85	445	45	WEK	FD	
	455										3		Diss						445.53	445.56	65	MO	FD		446.7	446.8	45	WEK	FD	
	458.4	459	4E								5		Stringers						447.5	447.55	90	ZF			449.2	449.4	90	WEK	FD	
	460	459	4F										Bleb and stringers						450	450.1	60	MO	FD		450.8	450.85	80	WEK	SE	
	465	462	4F																451.85	451.95	80	WEK	FD		456.3	456.4	85	WEK	S1	
	470																		459	459.1	80	WEK	S1		460	460.1	30	WEK	S1	
	475	470.4	2																464.9	465	40	WEK	S1		467.9	468	45	WEK	S1	
	479.3	479.3	4F																468.8	468.9	70	WEK	S1		472.7	472.8	45	WEK	FD	
	479.3	486	2																469.9	470	55	WEK	S1		473.1	473.15	85	WEK	MF	
																		470.1	470.2	40	WEK	S1		473.55	473.75	60	MO	FD		
																		470.7	470.8	75	WEK	S1		474.6	474.7	55	WEK	FD		
																			477.5	477.6	25	MOD	S1		475.4	475.8	85	MO	FD	
																			479.4	479.5	65	WEK	S1							

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