SBI Simon • Bymaster Inc.

1025 East 400 North
Bountiful, Utah 84010
801.943.3100
Fax: 801.904.0007

October 24, 2014

Mr. Dade Rose
Giverny, LLC.
1020 S. Foothill Drive
Salt Lake City, Utah 84108

Subject: Response Letter
Giverny PUD Subdivision
9180 South Wasatch Boulevard
Cottonwood Heights City, Utah
SBI Project No: 2-14-501

Dear Mr. Rose,

On Wednesday, October 15, 2014 at 1:00 P.M., a conference call occurred with Giverny, LLC and Cottonwood Heights City (CH City). The participants on the conference call were Mr. Timothy J. Thompson (GeoStrata) on behalf of CH City, you for Giverny, LLC, Mr. Richard Cook on behalf of himself and Giverny, LLC, (Giverny), and myself at the request of Giverny.

The purpose of the conference call was to clarify specific items in the following CH City review letters for which CH City is requesting further clarification.

1. July 15, 2014, GeoStrata review of "SBI fault investigation, Despain property - 127 acres SW Quarter of Section 1, SE Quarter of Section 2, and NW Quarter of Section 12, T3S, R1E Salt Lake County, Utah," (SBI Project No. 2-04-232), dated July 29, 2005

2. August 14, 2014, GeoStrata review of "SBI response to Cottonwood Heights City review letter," (SBI Project No:2-14-501), dated July 31, 2014.

The August 14, 2014 CH City review letter was issued in response to the July 31, 2014 SBI response letter. Issues CH City requested clarification, prior to acceptance of the 2005 SBI report, were outlined in the above referenced GeoStrata letters (GeoStrata, 2014a; 2014b), and discussed during the October 15, 2014 conference call. During the conference call, CH City:

1. Clarified that it was impractical to require trenching of every location on Giverny. SBI agrees with the statement and further notes that even if such extensive work were done, it is not possible to predict where ground rupture will occur during a

seismic event. New faults may occur and existing faults may propagate beyond their present lengths. The primary purpose of a fault investigation is to minimize the risk of a structure being placed astride a Holocene-age fault; such investigations are based on the premise that future faulting will occur along pre-exiting faults.

2. Restated that the focus should be on the remaining items outlined in the August 14, 2014 GeoStrata letter (GeoStrata, 2014b), for which CH City is requesting further clarification.

During the Conference Call, the parties discussed:

1. The remaining CH City concerns/issues.

2. Field work and other actions taken by SBI, at the request of Giverny, to address CH City comments (GeoStrata, 2014b) regarding the 2005 SBI report (SBI, 2005).

This purpose of this letter is to clarify, in order to obtain resolution:

1. The remaining geologic issues identified during the conference call, and;

2. Summarize additional work performed by SBI, at the request of Giverny, to obtain sufficient data to support final geologic conclusions.

## 1.0 ADDITIONAL INVESTIGATION

Field work and other actions taken by SBI, at the request of Giverny, since the August 14, 2014 CH City letter (GeoStrata, 2014b) follow:

1. Analysis of LiDAR imagery (AGRC, 2006; 2013) (Figures 1A and 1B), aerial photographs not available when the 2005 SBI study was performed (SBI, 2005), and higher resolution photographs of photographs available in 2005 (see References Cited).

2. Additional geologic site reconnaissance of the property.

3. Excavation of two trenches, T-35 (excavated on September 3, 2014) and T-36 (excavated on August 28, 2014). T-35 was field inspected by CH City (Mr. Tim Thompson), on September 3, 2014.

a. The purpose of T-35 was to refine the northern terminus of fault F-2 and to assess whether or not F-2 crosses Parcel P.

b. The purpose of T-36 was to refine the northern terminus of fault F-3.

## 2.0 GEOLOGIC MAP

Drawing 1, Geologic Map, in the 2005 SBI study (SBI, 2005), shows four faults within the Giverny property. F-1 within the western part of the site and F-2, F-3, and F-4 in the east part of the property. F-2, F-3, and F-4 were depicted as splaying northward from a single scarp[1] forming antithetic fault[2] in the southeast corner of the parcel. SBI re-interpreted these faults based on LiDAR imagery (Figure 1A and 1B) and aerial photographs not available when the 2005 SBI study was performed (SBI, 2005).

A summary of the results of the LiDAR imagery (Figure 1A and 1B), aerial photographs, field reconnaissance, and subsurface exploration follow (see Figure 2, Revised Fault Map), and are also discussed in greater detail in subsequent sections.

1. Fault F-1 is a north-south fault that crosses Giverny's south border at Lot 311, and the interpretation of the fault has not changed significantly from the 2005 SBI report (SBI, 2005) (see Section 3.0).

2. F-2 has been re-named fault F-2a, which terminates within the proposed subdivision near the north property line of the Smith Property. To the south, F-2a forms the single scarp-forming antithetic fault in the southeast corner of the parcel (Figures 1B and 2). It is the primary antithetic fault on the west side of a graben[3] along Wasatch Boulevard (see Section 4.0).

3. A new fault was identified, F-2b, which splays from F-2a. F-2b crosses a relatively small part of the site, immediately adjacent to the south side of Wasatch Boulevard (designated for open space, Parcel N on Figure 2). F-2b, terminates within the Big Rock Estates property (see Section 5.0).

4. F-3 does not extend southward and connect to the single scarp-forming antithetic fault in the southeast corner of the parcel as documented in SBI, 2005. F-3

[1] Fault scarp: A steep, near linear slope formed directly by movement along a fault, representing the exposed surface of the fault before modification by erosion and weathering. (modified from AGI, 2011).

[2] Antithetic fault: A fault that is subsidiary to a larger fault whose dip is opposite to the dip of the larger fault (AGI, 2011).

[3] Graben: An elongate trough or basin, bounded on both sides by high-angle normal faults that dip toward one another (AGI, 2011).

either terminates within the Big Rock Estates property or extends southward, across Wasatch Boulevard, connecting to a fault on the east side of Wasatch Boulevard. The north end of F-3 terminates somewhere south of T-36 (see Section 6.0).

5. F-4 does not cross Wasatch Boulevard to connect with the scarp-forming antithetic fault in the southeast corner of the parcel as documented in SBI, 2005. F-4 remains within the area on the east side of Wasatch Boulevard as shown on Figures 1B and 2.

## 3.0 FAULT F-1

Fault F-1 is a north-south trending fault that crosses Giverny's south border at Lot 311. During SBI's excavation of Trench T-17, T-18 and T-23, Fault F-1 was found to be inactive[4] for the reasons set forth in SBI, 2005 and in SBI, 2014. In the August 14, 2014 CH City letter (GeoStrata, 2014b), CH City requested that additional analysis be performed by SBI to support the conclusion that Fault F-1 is inactive.

SBI reviewed LiDAR imagery (AGRC, 2006; 2013) of the property and surrounding area (Figure 1A and 1B) that were not available when the 2005 SBI investigation was performed (SBI, 2005). Aerial photographs that were not readily available in 2005 and higher resolution of photographs available in 2005 were also reviewed (see references cited).

As shown on Figure 2, fault F-1:

1. Is about 200 feet in length;

2. Extends about 50 feet south of the south property line of the proposed subdivision;

3. Does not connect to any faults discernable on LiDAR or aerial photograph imagery[5], and;

[4] Active fault is defined in the Cottonwood Heights Code of Ordinances (Section 19.75.020) as: a fault displaying evidence of greater than four inches of displacement along one or more of its traces during Holocene time (Cottonwood Heights, 2011).

[5] Evidence of past surface faulting not identified included fault scarps, sag ponds, springs, aligned or disrupted drainages, faceted spurs, grabens, and displaced landforms (e.g., terraces, shorelines) and/or geologic units), and fault-related lineaments, such as vegetation lineaments, gullies, vegetation/soil contrasts, and aligned springs and seeps, etc.

4. Based on prior subsurface exploration (SBI, 2005), analysis of LiDAR and aerial photograph imagery, and field reconnaissance, F-1 is judged to be a down to the west subsidiary fault on the footwall of the primary antithetic fault that forms the west side of a graben along Wasatch Boulevard. For these reasons, reiterated in the July 31, 2014 SBI Letter, (SBI, 2014), CH City agreed during the conference call that fault F-1 should not affect the proposed Giverny Project and does not require additional investigation.

## 4.0 FAULT F-2

Based on recent subsurface exploration (Trench T-35, see Figure 3, Log of Trenches T-35 and T-36) and review of LiDAR imagery and aerial photographs, F-2 has been re-named fault F-2a. Fault F-2a is a north-south trending, down to the east antithetic fault that forms the northern terminus of the single scarp-forming antithetic fault in the southeast corner of the parcel. Near the proposed subdivision, F-2a is located principally within the Big Rock Estates Subdivision (see Figure 2).

South of the Big Rock Estates subdivision, F-2a crosses the southeast corner of the property, in an area designated as Parcel N (reserved as open space for the Giverny development). The northern end of F-2a terminates within the proposed subdivision near the north property line of the Smith Property (i.e., at trench T-35).

Displacement along F-2a increases southward from T-35, where the fault was not documented, to about 1.8 ft. in T-21. In T-35, no faults were documented within a 6-foot thick sequence of stratigraphically continuous Bonneville lake cycle sediments (≥ 14,000 years old) (Figure 3).

F-2a in T-21 was documented as a 28 ft. wide zone, comprised of four faults. The fault zone closely coincides with the northward projection of Lineament B (SBI, 2005) and is presumably the same fault identified by others (SHB, 1992), on the adjacent property to the south (Big Rock Estates Subdivision).

Field measured displacement along the four faults comprising F-2a in T-21 ranged from 0.6 to 1.8 feet. Net cumulative displacement across the 28-foot wide fault zone was 2.4 feet. The trend (i.e., strike) of the four faults defining the fault zone vary by 7° (N15°E to N22°E), with an average trend of N19°E.

In T-21, the faults displaced Bonneville Lake cycle sediments, glacial till, a week to moderately developed Bw horizon and the lower part of the modern A-horizon. The displaced soil horizons indicate last displacement likely occurred in the Holocene, and therefore the faults were considered active.

The fault shown on Drawing 1 of the 2005 SBI report (SBI, 2005), is the eastern-most fault documented in T-21. CH City requested that the location and setback ramifications of the western-most fault also be considered. In that regard, the building/fault setback area on the west side of the fault shown on Figure 2 has been increased by 43 feet (28 feet for the width of the zone and an additional 15 feet for the recommended building setback.
The western-most fault (fault F3 on Drawing 23 in SBI, 2005) is a down to the east antithetic fault with 0.6 feet of displacement. The eastern-most fault (fault F4 on Drawing 23 in SBI, 2005) is a down to the east antithetic fault with 1.8 feet of displacement. Projection of the eastern- and western-most faults to the north would intersect trench T-35 (Figure 2), at about stations 0+25 and station 0+48, respectively.

Stratigraphically continuous late Pleistocene-age Bonneville lake cycle sediments were documented throughout T-35 (Figure 3). The stratigraphic continuous nature of the Bonneville lake cycle sediments in T-35 constitutes reasonable geologic evidence for the absence of Holocene-age faulting. Therefore, it is judged that no Holocene-age faults are present in T-35 and the faults documented in T-21 terminate somewhere north of T-21 and south of T-35. The area between T-21 and T-35 will not be developed.

## 5.0 FAULT 2b

A new fault was identified on the LiDAR and aerial imagery, F-2b, which splays from F-2a (Figure 2). F-2b crosses a relatively small part of the site, immediately adjacent to the south side of Wasatch Boulevard (designated for open space). Based on analysis of LiDAR imagery (Figure 1A and 1B) and aerial photographs, F-2b, terminates within the Big Rock Estates property. Therefore, it is judged that F-2b does not impact the proposed development.

## 6.0 FAULT F-3

Based on analysis of LiDAR imagery and aerial photographs, the length of F-3 has been revised. It is our opinion that F-3 does not extend southward and connect to the single scarp-forming antithetic fault in the southeast corner of the parcel as documented in SBI, 2005. The southern end of F-3 likely terminates within the Big Rock Estates property or F-3 may extend to the southeast, across Wasatch Boulevard, connecting to a fault on the east side of Wasatch Boulevard.

Trench T-36 (Figure 3), was excavated on August 28, 2014, to refine the northern terminus of fault F-3. In T-36, an antithetic fault was identified at Station 0+29.5. The fault trended 163°, was inclined (dip) about 76° to the east, and about 8 inches of displacement was documented. Of importance is the fault was demonstrably overlain by

about 5 feet of stratigraphically continuous, undisplaced late Pleistocene-age Bonneville lake cycle sediments.

Analysis of LiDAR imagery, aerial photographs, and topographic data, supports the absence of surface faulting north of T-36. Based on these data, including exposures in T-36, the north terminus of F-3 is judged to be at T-36.

CH City stated in their review letters (GeoStrata, 2014a; 2014b): “Since SBI considers F-3 to be active and also reports observing F-3 in Trenches T-31 and T-32, the projection of F-3 should be shown trending through T-32 and to a point that SBI has demonstrated is the northern terminus of F-3. The entire length of F-3 should be considered active; not just the portion of F-3 “exhibiting evidence of greater than four inches of displacement along one or more of its traces during Holocene time … SBI also reports F-3 to extend north of T-32 as shown on Drawing 37.”

For clarification purposes, SBI did not terminate any faults within the proposed subdivision based on displacement less than 4 inches (although that certainly exists). Faults were terminated at locations where the faults were demonstrably overlain by stratigraphically continuous, undisplaced late Pleistocene-age Bonneville lake cycle sediments (≥14,000 years old).

A paleoseismic study performed on the main trace of the Wasatch fault (located about 400 feet east of Giverny) (McCalpin, 2002), presented evidence for four paleo-surface-faulting earthquakes in the past 6,000 years and 8 surface-faulting earthquakes in the past 9,000 years. Termination of faults overlain by stratigraphically continuous, undisplaced late Pleistocene-age Bonneville lake cycle sediments is not unreasonable considering there were at least 8 “opportunities” for the faults to “re-activate.”

## 7.0 FAULT F-4

Based on analysis of LiDAR imagery and aerial photographs, the location of F-4 has been revised. It is our opinion that F-4 does not cross Wasatch Boulevard to connect with the scarp-forming antithetic fault in the southeast corner of the parcel as documented in SBI, 2005; F-4 is located entirely on the east side of Wasatch Boulevard as shown on Figures 1 and 2.

## 8.0 SETBACKS FOR LOTS 302 TO 308

The east-most corner of Lot 302 is at the top of the fault scarp (i.e., slope) of the antithetic fault near the southeast corner of the parcel (Figure 2). The southeast boundary of Lots 303 through 308 are located from 5 feet (Lot 308) to 30 feet (Lot 303) west of the top of the fault scarp of the antithetic fault near the southeast corner of the

parcel. The scarp is about 60 feet high and descends to the east at a gradient greater than or equal to 1:1 (horizontal to vertical) (i.e., ≥45°). The fault scarp area, designated as Parcel N, will not be developed and has been slated for open space.

Due to the steepness of the scarp/slope (which exceeds 45° in places) and abundant boulders in the underlying earth materials, trenching of the scarp was not logistically feasible. Because of the difficulty of physically locating fault F-2 in Parcel N's rugged terrain, in the SBI, 2005, investigation, the fault was located at an elevation corresponding to about one-third of the slope height. Faults in fault scarps are generally located within the lower third of the slope/scarp (McCalpin, 1987; 2002; DuRoss, 2008).

A 50-foot setback was recommended for fault (F-2a) south of Big Rock Estates. Fifty feet was considered conservative, given the likely location of the fault and the absence of faulting documented in Trenches T-17 and T-19 (SBI, 2005). The east end of T-17 and T-19 are about 25 and 15 feet, respectively, from the top of fault scarp/slope.

The rear yard setback for proposed residential structures on Lots 303 to 308 is fifteen feet. Should a fault should be located immediately east of the east end of T-19, there would be at least 15 feet between the hypothetical fault and the building envelope. It is our recollection that CH City agreed in the conference call that 15 feet between a hypothetical fault and the building envelope for Lots 303 to 308 would be sufficient and further investigation in this area will not be required.

## 9.0 CLOSURE

The findings and recommendations of this addendum were prepared in accordance with generally accepted professional engineering geologic principles and practices in this area of Utah, at this time. There is no other warranty, either express or implied.

This addendum is issued solely in response to the potential for surface-fault-rupture and does not address other geotechnical/geologic issues, the investigations for which are either not specifically required by CH City, are addressed by present professional engineering and geologic standards-of-care, or have previously been submitted to CH City for the parcel.

Recommendations presented herein are:

1. Based on the results of the 2005 SBI fault investigation (SBI, 2005) and the subsequent investigations documented herein. As the project evolves, SBI's continued consultation and field verification should be considered an extension of the services performed to date.

2. Predicated upon the assumption that SBI will be permitted to observe all construction cuts and foundation excavations to substantiate the findings contained herein and in SBI, 2005, and that recommendations presented herein and in SBI, 2005, were properly implemented.

Subsurface conditions may differ in some locations from those documented herein and/or in SBI, 2005, and may require additional analyses and/or possible modified recommendations. If conditions observed during construction appear to be different from those indicated herein and/or in SBI, 2005, this office should be notified immediately.

Development of property in the vicinity of Holocene-age (active) faults involves a specific level of risk. It is not possible to predict where ground rupture will occur during a seismic event. New faults may occur and existing faults may propagate beyond their present lengths. The primary purpose of a fault investigation is to minimize the risk of a structure being placed astride a Holocene-age fault; such investigations are based on the premise that future faulting will occur along pre-exiting faults.

This report was written for the exclusive use of Giverny, LLC, and only for the proposed project described herein. SBI is not responsible for technical interpretations by others of the information described or documented in this report. Specific questions or interpretations concerning the findings and conclusions presented herein may require written clarification to avoid any possible misunderstandings.

If you have any questions, please feel free to contact the undersigned. The opportunity to assist on this project is appreciated.

Sincerely,

SBI

LICENSED PROFESSIONAL GEOLOGIST
DAVID B. SIMON
5231221-2250
10/24/14
STATE OF UTAH

David B. Simon, P.G.
Principal Geologist

Dist: 1/addressee.

Encl: Figure 1A, LiDAR Imagery.
Figure 1B, Annotated LiDAR Imagery.
Figure 2, Revised Fault Map.
Figure 3, Log of Trenches T-35 and T-36.

## References Cited

AGI, 2011, American Geological Institute, Glossary of Geology, Fifth Edition, revised, Neuendorf, K.K.E, Mehl, Jr., J.P., and, Jackson, J.A., editors: American Geological Institute, Alexandria, Virginia, 783 p.

AGRC, 2005, Utah Automated Geographic Reference Center, LiDAR and surface models for the Wasatch front urban area, 2 meter resolution.

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Bowman, S.D. and Beisner, K, 2008, Historical aerial photography, 1938 Salt Lake Aqueduct project, Salt Lake, Utah, and Wasatch Counties, Utah: Utah Geological Survey Open File Report 537.

Bowman, S. D., Beisner, K., and Unger, C. 2009, Compilation of 1970s Woodward-Lundgren & Associates Wasatch fault investigation reports and oblique aerial photography, Wasatch Front and Cache Valley, Utah and Idaho: Utah Geological Survey Open file report OFR-548, 9 DVD set, 3 p, 6 plates.

Cottonwood Heights, 2011, Cottonwood Heights Code of Ordinances, Chapter 19.75, Geological Hazard Areas, revised February 2011, (pp. 19-123 to 19-127).

DuRoss, C.B., 2008, Holocene vertical displacement on the central segments of the Wasatch fault zone, Utah: Bulletin of the Seismological Society of America, v. 98, no. 6, p. 2918–2933.

GeoStrata, 2014a, (dated July 15, 2014), Review of Fault Investigation Despain Property - 127 Acres SW Quarter of Section 1, SE Quarter of Section 2, and NW Quarter of Section 12, T3S, R1E Salt Lake County, Utah (SBI Project No. 2-04-232) prepared by SBI and dated July 29, 2005: prepared for Mr. Brad Gilson P.E., Cottonwood Heights City Engineer, 4 p.

GeoStrata, 2014b, (August 14, 2014), Review of Response to Cottonwood Heights City Review Letter SBI Project No. 2-14-501 dated July 31, 2014 prepared by SBI and dated July 29, 2005: prepared for Mr. Brad Gilson P.E., Cottonwood Heights City Engineer, 4 p.

McCalpin, J., 1987, Recommended setbacks from normal faults, in Proceedings of the 23rd Symposium on Engineering Geology and Soil Engineering pp. 35-54: Published by the Symposium on Engineering Geology and Soil Engineering, Idaho Department of Transportation, Boise, Idaho.

McCalpin, J., 2002, Post-Bonneville paleoearthquake chronology of the Salt Lake City segment, Wasatch fault zone, from the 1999 (mega-trench) site; Utah Geological Survey Miscellaneous Publication 02-7, 38 p.

Personius, S.F. and Scott, W.E., 1992, Surficial geologic map of the Salt Lake City segment and parts of adjacent segments of the Wasatch fault zone, Davis, Salt Lake and Utah counties, Utah: U.S. Geological Survey Miscellaneous Investigation Series Map I-2106, 2 plates, scale: 1:50,000.

SBI, 2005, Fault investigation, Despain Property - 127 Acres, SW Quarter of Section 1, SE Quarter of Section 2, and NW Quarter of Section 12, T3S, R1E, Salt Lake County, Utah (SBI Project No. SBI Project No. 2-04-232), dated July 29, 2005: prepared for L.C. Canyon Partners, L.L.C., 7561 Brighton Point Drive, Salt Lake City, Utah 84121, 23 p.

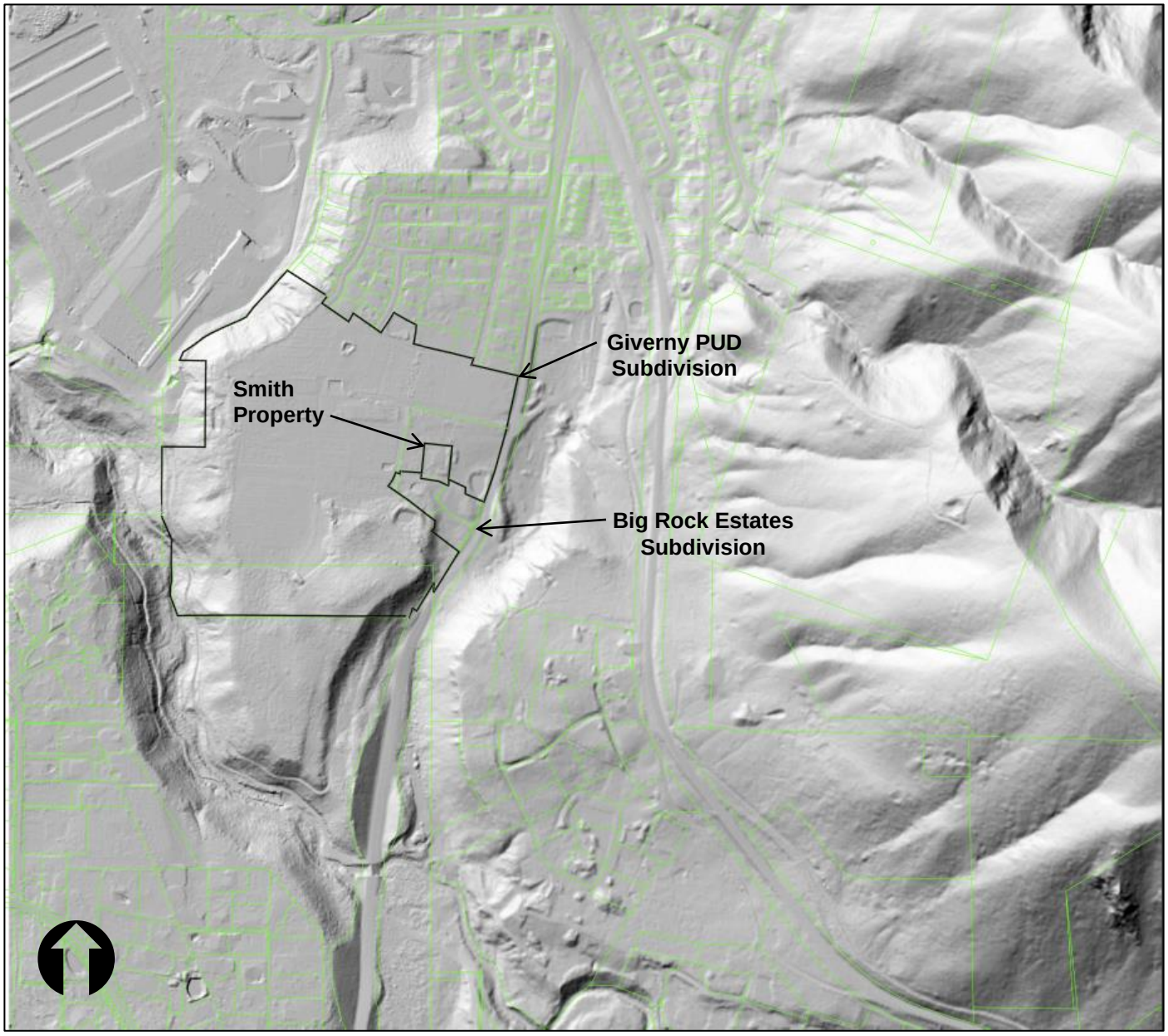
SBI, 2014, Response to Cottonwood Heights City Review Letter (SBI Project No: 2-14-501), dated July 31, 2014: prepared for Mr. Dade Rose, Giverny, LLC., 1020 S. Foothill Drive, Salt Lake City, Utah 84108.

SHB, 1993, Report, Geotechnical/fault rupture hazard, proposed Big Rock Estates subdivision, 9250 South Wasatch Boulevard, Salt Lake County, Utah, unpublished technical report by SHB Agra, Inc., Salt Lake City, Utah, dated August 17, 1993, prepared for Ms. Jill McGee (SHB Agra Job No. E93-2321), on file at Salt Lake County Public Works, Planning Division, 2001 South State Street, Suite N3700, Salt Lake City, Utah, Salt Lake County property/file no. PL-93-1096.

***AERIAL PHOTOGRAPHS***

| SOURCE | DATE | FLIGHT | PHOTOGRAPHS | SCALE |
|---|---|---|---|---|
| Farm Service Agency | 1937 | 10AAL-4 | 51, 52, 53 | 1:20,000 |
| Bowman and Beisner, 2008 | 1938 | sla1 | 16, 17, 18, 19, 20 | 1:20,000 |
| Bowman and others, 2009 | 1971 | WF5-4 | 060, 061 | 1:12,000 |
| | | WF1-13B | 198, 199, 200 | |
| | | WF5-5 | 0876, 087 | |
| | | WF1-2B | 143, 144, 145 | |
| | | WF3-13A | 061, 062 | 1:6,000 |
| | | WF3-2A | 021, 022 | 1:12,000 |
| | | WF4-9 | 150, 151, 152 | 1:24,000 |

Poor quality prints of photographs in flights WF3-13A, WF3-2A, WF4-9 were available in 2005, however, in 2009, in these flights were scanned from negatives, significantly increasing the resolution (Bowman and others, 2009).




Approved by

LICENSED PROFESSIONAL GEOLOGIST
DAVID B. SIMON
5234321-2250
10-24-14
STATE OF UTAH

735 ft. 0 735 ft.

Scale: 1 inch = 735 feet

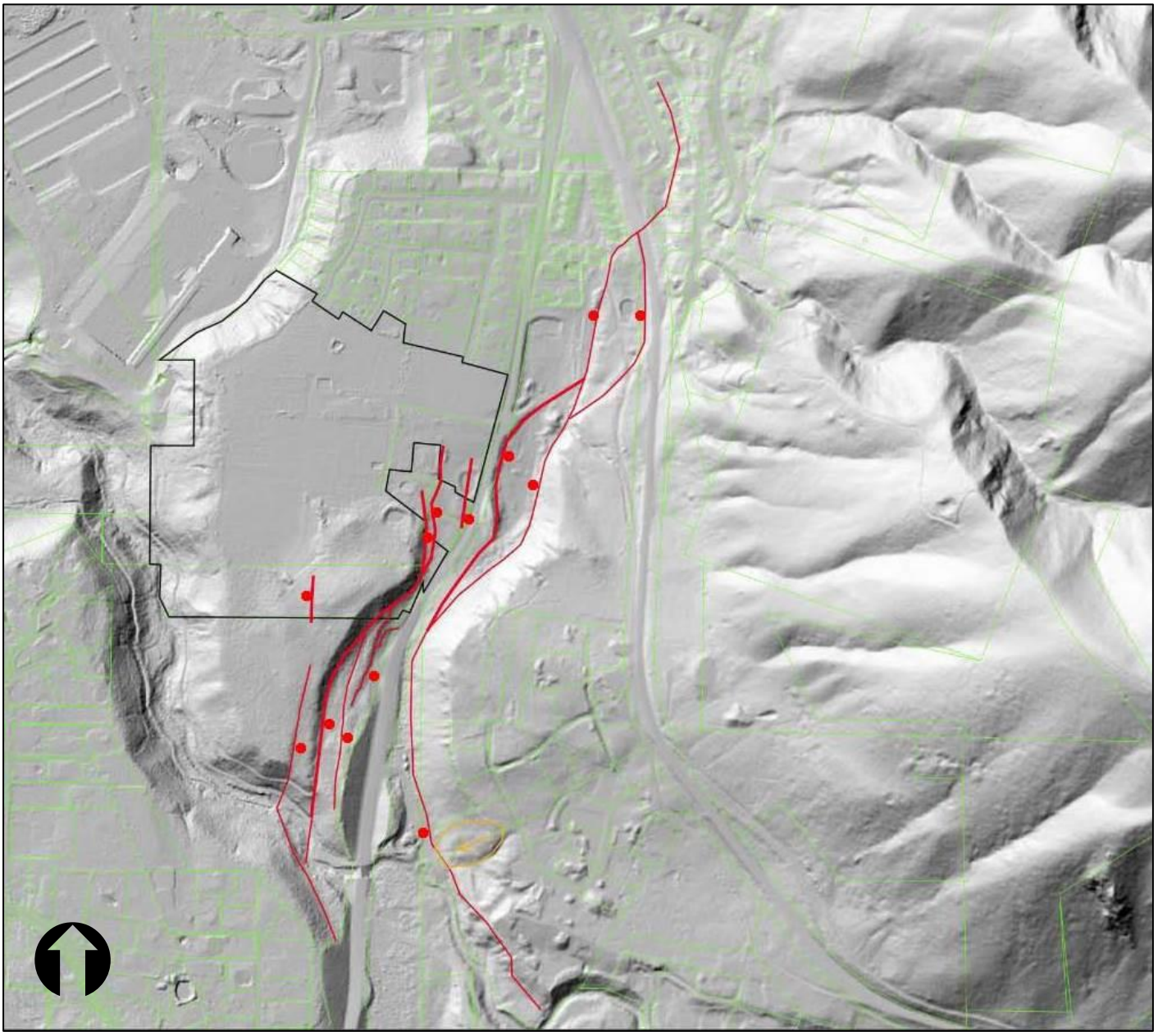
# LIDAR IMAGERY

SBI

**Giverny PUD Subdivision**
9180 South Wasatch Boulevard
Cottonwood Heights City, Utah

Project No.
2-14-501

Figure No.
**1A**



F-4 Location of fault, ball on down-dropped block.

735 ft. 0 735 ft.

Scale: 1 inch = 735 feet

LICENSED PROFESSIONAL GEOLOGIST
DAVID B. SIMON
5234321-2250
10-24-14
STATE OF UTAH

Approved by

# ANNOTATED LIDAR IMAGERY

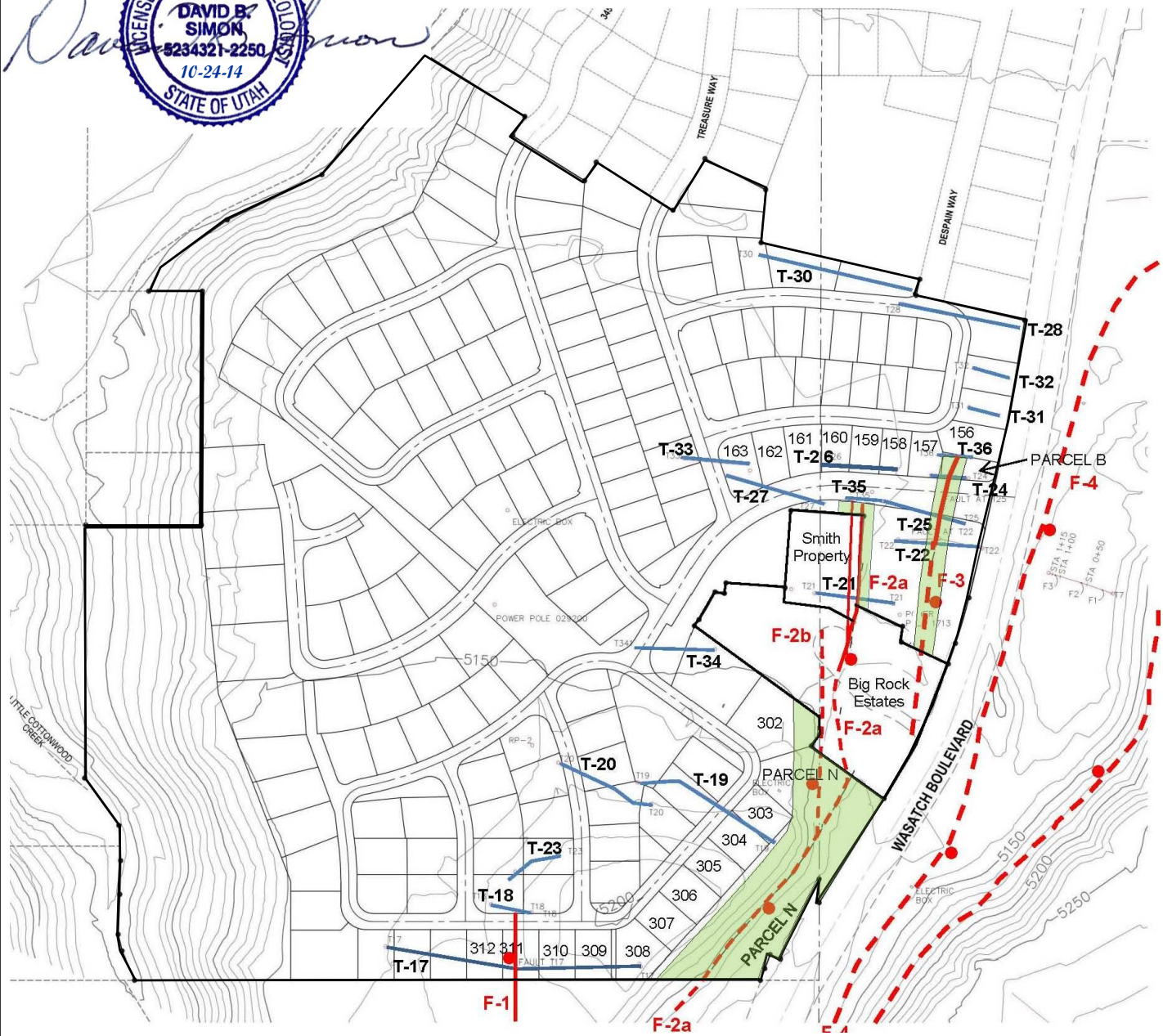
SBI

**Giverny PUD Subdivision**
9180 South Wasatch Boulevard
Cottonwood Heights City, Utah

Project No.
2-14-501

Figure No.
**1B**

LICENSED PROFESSIONAL GEOLOGIST
DAVID B. SIMON
5234321-2250
10-24-14
STATE OF UTAH




Approved by

275 0 275 ft.

Scale: 1 inch = 275 feet
Contour interval 10 feet

Reference: Ensign Engineering (2014)

**EXPLANATION**

T-36 — Approximate location of exploratory trench.

F-4 — Location of fault, dashed where approximately located, ball on down-dropped block.

Recommended building/fault setback area.

# REVISED FAULT MAP

SBI

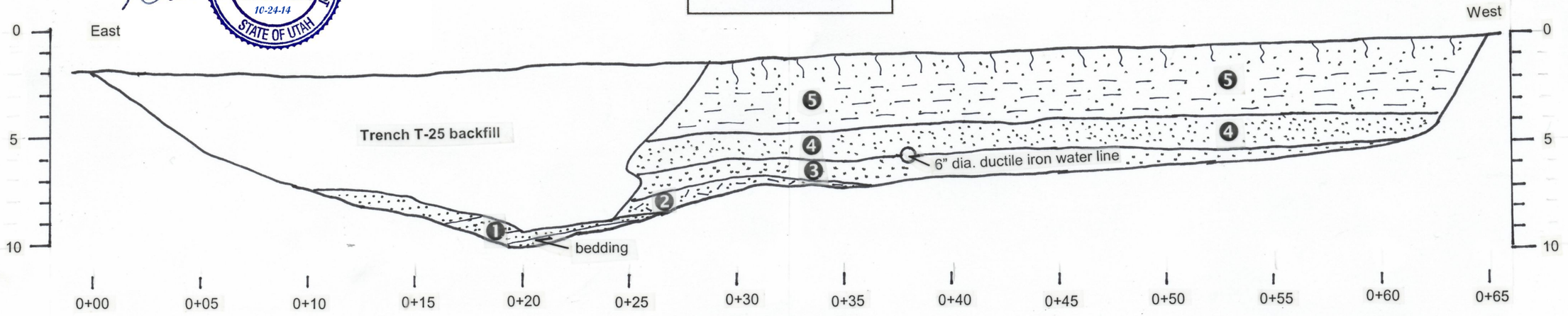
**Giverny PUD Subdivision**
9180 South Wasatch Boulevard
Cottonwood Heights City, Utah

Project No.
2-14-501

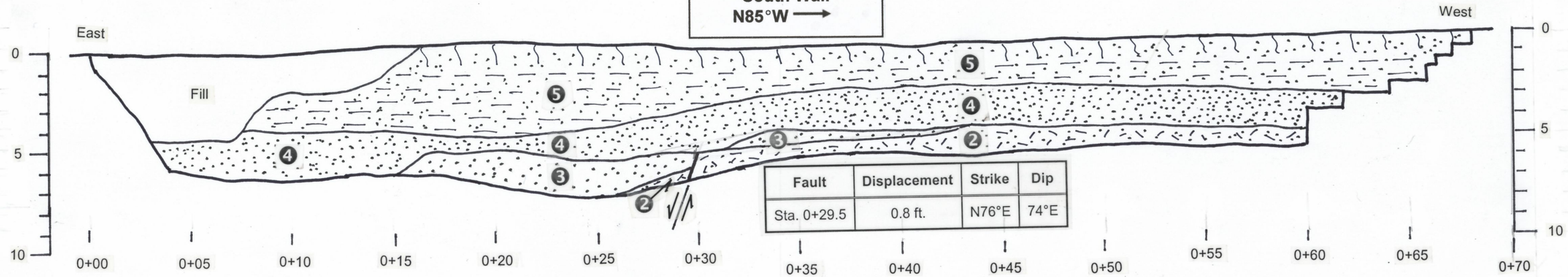
Figure No.
**2**

LICENSED PROFESSIONAL GEOLOGIST
DAVID B. SIMON
5234321-2250
10-24-14
STATE OF UTAH

**TRENCH T-35**
**South Wall**
**←S86°E**




**TRENCH T-36**
**South Wall**
**N85°W→**




| Fault | Displacement | Strike | Dip |
|---|---|---|---|
| Sta. 0+29.5 | 0.8 ft. | N76°E | 74°E |

## EXPLANATION

*Bonneville Lake Cycle Sediments* (late Pleistocene)

1. Sandy Silt (ML) to Silty Sand (SM), very fined grained, slight moist medium dense, pale yellow (2.5Y 7/3), with very thin (0.1-inch thick) layers of silt (ML) with iron-oxide coatings along bedding surfaces.
2. Sand (SP) with some silt, very fine to fine grained, moist, medium dense, pale brown (10YR 6/3) to very pale brown (10YR 7/3).
3. Sand (SP), fine to medium grained, slightly moist, medium dense, light yellowish brown (10YR 6/4) to yellowish brown (10YR 5/6).
4. Sand (SP) with some silt, very fine grained, slightly moist, yellowish brown (10YR 5/8).
5. Silty Sand (SM), very fine grained, slightly moist, medium dense, with pin-hole voids and 2±% subrounded gravels ≤0.25 inches long, yellowish brown (10YR 5/4), with moderately developed pedogenic B-horizon, dark brown (10YR 3/3).

Scale: 1 inch = 5 feet (horizontal and vertical)

# LOG OF TRENCHES T-35 and T-36

SBI

**Giverny PUD Subdivision**
9180 South Wasatch Boulevard
Cottonwood Heights City, Utah

Project No. 2-14-501

Figure No. 3

Logged by: DBS/EJS.
Date: 8-28-14 (T-36) and 9-3-14 (T-35).