

1 proposed site. I assisted in the preparation of the Application for Site Certification for this
2 Project.

3
4 Q Would you please identify what has been marked for identification as Exhibit 23-1 (JB-1)?

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6 A Exhibit 23-1 (JB-1) is a résumé of my educational background and employment experience.

7
8 Q Are you sponsoring any portions of the “Application for Site Certification for the Wild Horse
9 Wind Power Project?

10
11 A Yes. I am sponsoring the following sections for which I was primarily responsible for the
12 analysis and development:

13 Section 3.1.2.2 Earth Impacts of Proposed Project, On-Site Rock Pit Geology

14 Section 3.1.2.4 Earth Impacts of Proposed Project, Soils

15
16 Q What exhibits that are part of the Application are you are sponsoring?

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18 A I am sponsoring the following exhibits to the Application:

19 Exhibit 4 Geotechnical Data Report

20
21 Q Are you familiar with these sections and exhibit?

22
23 A Yes.

1 Q Did you prepare these sections and exhibit, or, if not, did you direct and/or supervise its
2 preparation?

3
4 A I prepared this exhibit.

5
6 Q Is the information in this exhibit within your area of authority and /or expertise?

7
8 A Yes.

9
10 Q Are the contents of these sections and exhibit either based upon your own knowledge, or
11 upon evidence, such as studies and reports, as a reasonably prudent persons in your field
12 and expertise are accustomed to rely on in the conduct of their affairs?

13
14 A Yes.

15
16 Q To the best of your knowledge, are the contents of these sections and exhibits of the
17 Application true?

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19 A Yes.

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21 Q Do you incorporate the facts and content of these sections and exhibits as part of your
22 testimony?

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24 A Yes.

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Q Are you able to answer questions under cross-examination regarding these sections and exhibits?

A Yes.

Q Do you sponsor the admission into evidence of these sections and exhibits of the Application?

A Yes.

Q Are there any modifications or corrections to be made to those portions of the Application that you are sponsoring?

A No.

Q. Would you please summarize and briefly describe the geotechnical features of the site.

A The predominant subsurface conditions for the project consist of dry to moist silty clay topsoil overlying basalt bedrock. At some locations, a multicolored cemented clay and sand with glassy clasts was also encountered near the surface. This material was sometimes intruded by pockets of basalt rock, and by basalt tubes. In one test pit, a layer of blocky, brown, weak claystone was encountered near the bottom of the test pit. This material was weathered into fine gravel-sized particles.

1 Cemented Clay and Sand. In two test pits, a highly-cemented clay and sand layer was
2 encountered below the topsoil, up to a depth of 8.5 feet below ground surface. Near the
3 bottom of this layer, this material was highly plastic and more moist, and did not exhibit
4 the degree of cementation found closer to the surface. This material is believed to be part
5 of the Vantage Member of the Ellensburg formation, and appears to have weathered in-
6 place to a more plastic state. This material contained varying percentages of fine sand and
7 gravels.

8
9 Weak Claystone. In one test pit a layer of brown, blocky, weak claystone was encountered
10 overlying basalt, between the depths of 3.5 and 5.5 feet. This material was broken up into
11 gravel-sized pieces, and was similar in texture to a soapstone.

12
13 Basalt Rock. Basalt rock encountered at the site consisted of two flows—the Grande
14 Ronde Basalt, and the Frenchman Springs Member of the Wanapum Basalt. Both of these
15 formations are part of the Columbia River Basalt Group. All test pits were terminated in
16 this material, at depths between 0.5 and 9.0 feet. The rock was typically weathered and
17 more fractured in the upper 2 to 3 feet, becoming harder with depth and very difficult to
18 excavate further with the equipment used.

19
20 Groundwater was not observed in any of the test pits excavated at the project area.
21 However, some zones of soil in the test pits were observed to have free water in the voids,
22 which was likely water from surface infiltration. There are numerous springs mapped and
23 unmapped in the area, and a few ponds that are anticipated to be seasonal only. The
24 springs are consistently at elevations between approximately 3300 and 3400 feet across

1 the site, and are believed to coincide with the low-permeability Vantage Member of the
2 Ellensburg formation. Fine-grained and cemented soils have lower porosity and
3 permeability, and were typically found in the upper 1 to 4 feet of test pits excavated at the
4 project area.

5
6 The quality of rock at the Wild Horse site was explored in several borings advanced in
7 three general areas, to depths up to 23 feet below ground surface. The quality of the basalt
8 rock mass ranges from poor to very poor in the areas explored. Rock hardness was
9 estimated to range from R2 to R5, although most rock was in the R3-R4 range.