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AFFIDAVIT

STATE OF NEBRASKA)
)
COUNTY OF LANCASTER) s.s.

SHANE DOLPH personally appeared before the undersigned officer, duly authorized to administer oaths, who after being duly sworn, deposes and states that:

1. I am a resident of Lincoln, Nebraska, over 18 years of age, and have personal knowledge of the matters set forth herein.

2. I am currently employed by The Flatwater Group, Inc. The Flatwater Group is a consulting firm that specializes in environmental engineering, water resources engineering, restoration planning and design, and information and database management services. The purpose of this declaration is to explain the geospatial information utilized to create the attached maps which depict land acquisitions by the United States in and around the Hopi Reservation.

PROFESSIONAL BACKGROUND

3. I have worked for the Flatwater Group for over ten years as a project manager and project engineer. My duties include directing the computer-aided design and drafting (“CADD”) and geographic information systems (“GIS”) services for The Flatwater Group. In doing so, I manage a variety of tasks and projects related to database management, visual basic programming, environmental/restoration engineering design,

1 and hazardous waste investigation projects. As director of these services, I am
2 responsible for quality assessment and quality control for such projects.
3

4 4. My experience includes CADD development and management, GIS
5 development, database programming and design, topographic and bathymetric surveying,
6 and various other geospatial technologies. I also am experienced in using ArcView,
7 ArcGIS and ArcView Spatial Analyst, which are GIS software products produced by
8 ESRI, as well as several other GIS software products. I am experienced with surveying
9 and data collection equipment, and the utilization of software to integrate electronic
10 survey information with geospatial technologies. As director of the Flatwater Group's
11 CADD and GIS services and at my previous positions, I have worked on hundreds of
12 projects involving the use of geospatial technology.
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16 5. Prior to joining the Flatwater Group, I managed the CADD and GIS services
17 for the Lincoln, Nebraska office of EA Engineering, Science, and Technology, Inc., from
18 1994 to 2000. From 1988 to 1994, I managed the CADD services for the Architectural
19 Division of HWS Consulting Group, Inc., in Lincoln, Nebraska. I have almost twenty
20 years of experience utilizing geospatial technologies to visualize, analyze, display and
21 manage data.
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GEOSPATIAL TECHNOLOGY

6. In their simplest form, geospatial technologies store, analyze, and display data that are referenced to the earth by a real-world coordinate system. Specific technologies include GIS, remote sensing, global positioning system (“GPS”) applications, CADD applications, and telemetry. Using computer programs, the technologies enable the answers to queries to be displayed on a map. Provided the data relied on to create the map are reliable, the visual depiction of the data is also reliable.

7. Geospatial technologies are widely used in both the private and public sectors. For example, the federal government uses such technologies to manage forests, develop defense strategies, establish tax valuations and utilize census data. Private companies use geospatial technology to make more informed decisions regarding site selection, infrastructure development and market demographics, among other uses.

HOPI RESERVATION MAPPING AND DATABASE SYSTEM

8. At the request of Fennemore Craig, P.C., I compiled a database system to analyze and display certain land acquisitions by the United States in the vicinity of the Hopi Reservation. The database system consists of an ArcGIS 9.3.1/ArcView 9.3.1 project file and an associated Microsoft Access 2003 database file.

1 9. The ArcView project file was created from drawings of plat maps generated
2 in a CADD application and thematic basemap data and table information from the Access
3 database. The individual layers of the ArcView project file are:
4

5 Sections – This layer is an ArcIMS Feature Class from the
6 BLM_FEATURE_PLSS Feature Service from the BLM NILS
7 geocommunicator mapping service <http://www.geocommunicator.gov>. It is
8 a layer of PLSS Sections throughout the U.S. This layer was cropped to
create a layer of local PLSS Sections in and around the Hopi Reservation.
More information about this layer can be found at
<http://www.blm.gov/nils/GeoComm/Metadata/home.html>

9 PLSS Sections wdata forLayoutUpdate – This is a shapefile layer created
10 from the Sections layer of the BLM_FEATURE_PLSS feature service. It is
11 comprised of the PLSS sections in and around the Hopi Reservation. This
layer is linked to data from the “Sections Table New” table in the “Section
Grants 2000” database.

12 Townships– This layer is an ArcIMS Feature Class from the
13 BLM_FEATURE_PLSS Feature Service from the BLM NILS
14 geocommunicator mapping service <http://www.geocommunicator.gov>. It is
15 a layer of PLSS Townships throughout the U.S. This layer was cropped to
create a layer of local PLSS Townships in and around the Hopi Reservation.
More information about this layer can be found at
<http://www.blm.gov/nils/GeoComm/Metadata/home.html>

16 PLSS Townships – This is a shapefile layer created from the Townships
17 layer of the BLM_FEATURE_PLSS feature service. It is comprised of the
PLSS townships in and around the Hopi Reservation.

18 BLM_MAP_SURFACE_MGMT_AGY – This is an ArcIMS Image Service
19 from the BLM NILS geocommunicator mapping service
<http://www.geocommunicator.gov>. It includes sub layers of various lands
20 managed by the BLM. The BIA lands layer is displayed on the Exhibit
21 maps, indicating Indian reservations managed by BIA, including the
22 boundary of the Navajo Indian Reservation. More information about this
layer can be found at
<http://www.blm.gov/nils/GeoComm/Metadata/home.html>

23 BLM_MAP_BASEMAPS – This is an ArcIMS Image Service from the
24 BLM NILS geocommunicator mapping service
<http://www.geocommunicator.gov>. It includes sub layers of various
25 mapping features for display purposes in GIS maps. The Major Roads,
Highways, States, Counties, and Urban Areas sub layers are displayed on
26 the Exhibit maps. More information about this layer can be found at
<http://www.blm.gov/nils/GeoComm/Metadata/home.html>

1 World Shaded Relief – This is an ArcGIS Map Service from the ESRI
2 arcgisonline website <http://services.arcgisonline.com/arcgis/services>. This
3 map portrays surface elevation as shaded relief. This map is used as a
4 basemap layer to add shaded relief to other GIS maps.

5 Hopi Boundaries.shp – This is a shape file from the Hopi Tribe website
6 <http://www.hopitribe.org/gis.htm>. It depicts Boundaries of the Hopi
7 Reservation including the joint use lands partitioned to the Hopi Tribe and
8 1934 Act lands partitioned to the Hopi Tribe.

9 Hopi Streams.shp - This is a shape file from the Hopi Tribe website
10 <http://www.hopitribe.org/gis.htm>. It depicts Major streams in northeast
11 Arizona. Developed by the Arizona State Land Department and edited by
12 Hopi Water Resources Program.

13 Land Management District 6 – This shape file was generated from a CADD
14 drawing. The CADD drawing was generated from bearing and distance
15 parameters listed on BLM plat maps (Boundary, Management District No.
16 6, Hopi Indian Reservation, Arizona, Sheets 1 – 15). The Plat are disclosed
17 at FCHP00790-805.

18 Executive Order of Dec. 16, 1882 – This layer was generated from a CADD
19 drawing. The CADD drawing was generated by creating a polygon as
20 described in the original executive order.

21 10. The Access database originates from records of parcels associated with land
22 transfer documents in and around the Hopi Reservation.

23 11. The Access database contains the following information for each
24 transaction: a unique identifier field to link the Access database table with the ArcView
25 PLSS sections table; the document recording data (recording data); Recording Dates
26 (Recording date); and Grantor and Grantee. Township, Range, and Section data are also
recorded in the database as well as the acres of land transferred, where available. The data
can be sorted based upon the criteria above. The data are then linked to the ArcView
project file to create a spatial representation of the data.

1 12. The final product of the database system is set of maps illustrating the
2 property acquired by the United States in the vicinity of the Hopi Reservation. The
3 method utilized to create the maps is a geospatial methodology generally accepted in the
4 industry.
5

6 13. Attached as Exhibit 1 is a map depicting land acquisitions by the United
7 States in the vicinity of the Hopi Reservation. As described in Paragraph 9 above, the
8 map depicts the area subject to the Executive Order of December 16, 1882; Land
9 Management District 6; the Hopi Reservation including joint use lands partitioned to the
10 Hopi Tribe; 1934 Act lands partitioned to the Hopi Tribe; and a subset of the southwest
11 portion of the Navajo Reservation. The map also depicts the location of the land acquired
12 by the United States and provides the identity of the grantor. The deeds depicted in this
13 map are disclosed at FCHP00105-43, 533-58, 567-74, 592-94, 602-07, 609-10, 615-16,
14 620-54, 657-60, 672-74, 684-91, 703-05, 707-16, 763-67, 784-89. Due to the scale of the
15 map, if only a portion of a section was conveyed in the deed, the entire section is marked
16 on the map. Furthermore, a number of deeds conveying land immediately west of the area
17 subject to the Executive Order of December 16, 1882 and continuing south to the southern
18 boundary of the Navajo Reservation refer to protracted sections that do not match the
19 current township, range and section designations. Accordingly, those sections are not
20 depicted on this map. Subject to the limitations herein described, this map fairly and
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1 accurately depicts the lands conveyed by deeds to the United States in and around the
2 Hopi Reservation.

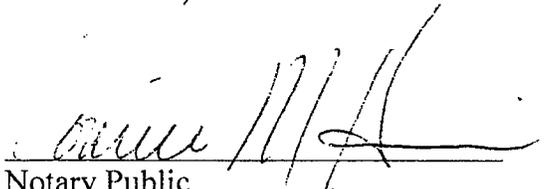
3
4 14. Attached as Exhibit 2 is a map depicting the chronology of land acquisitions
5 by the United States in the vicinity of the Hopi Reservation by year of conveyance. As
6 described in Paragraph 9 above, the map depicts the area subject to the Executive Order of
7 December 16, 1882; Land Management District 6; the Hopi Reservation including joint
8 use lands partitioned to the Hopi Tribe; 1934 Act lands partitioned to the Hopi Tribe; and
9 a subset of the southwest portion of the Navajo Reservation. The map also depicts the
10 location of the lands acquired by the United States and indicates the years of the
11 acquisitions. The deeds depicted in this map are disclosed at FCHP00105-43, 533-58,
12 567-74, 592-94, 602-07, 609-10, 615-16, 620-54, 657-60, 672-74, 684-91, 703-05, 707-
13 16, 763-67, 784-89. Due to the scale of the map, if only a portion of a section was
14 conveyed in the deed, the entire section is marked on the map. Furthermore, a number of
15 deeds conveying land immediately west of the area subject to the Executive Order of
16 December 16, 1882 and continuing south to the southern boundary of the Navajo
17 Reservation refer to protracted sections that do not match the current township, range and
18 section designations. Accordingly, those sections are not depicted on this map. Subject to
19 the limitations herein described, this map fairly and accurately depicts the chronology of
20 land acquisitions by the United States in and around the Hopi Reservation.
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SHANE DOLPH

SUBSCRIBED AND SWORN to before me this 29 day of March, 2010, by
Shane Dolph.

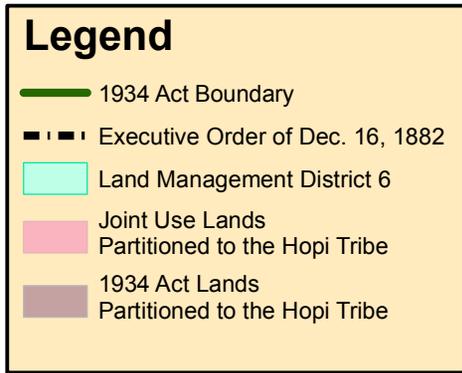
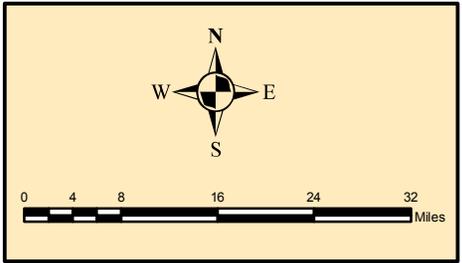
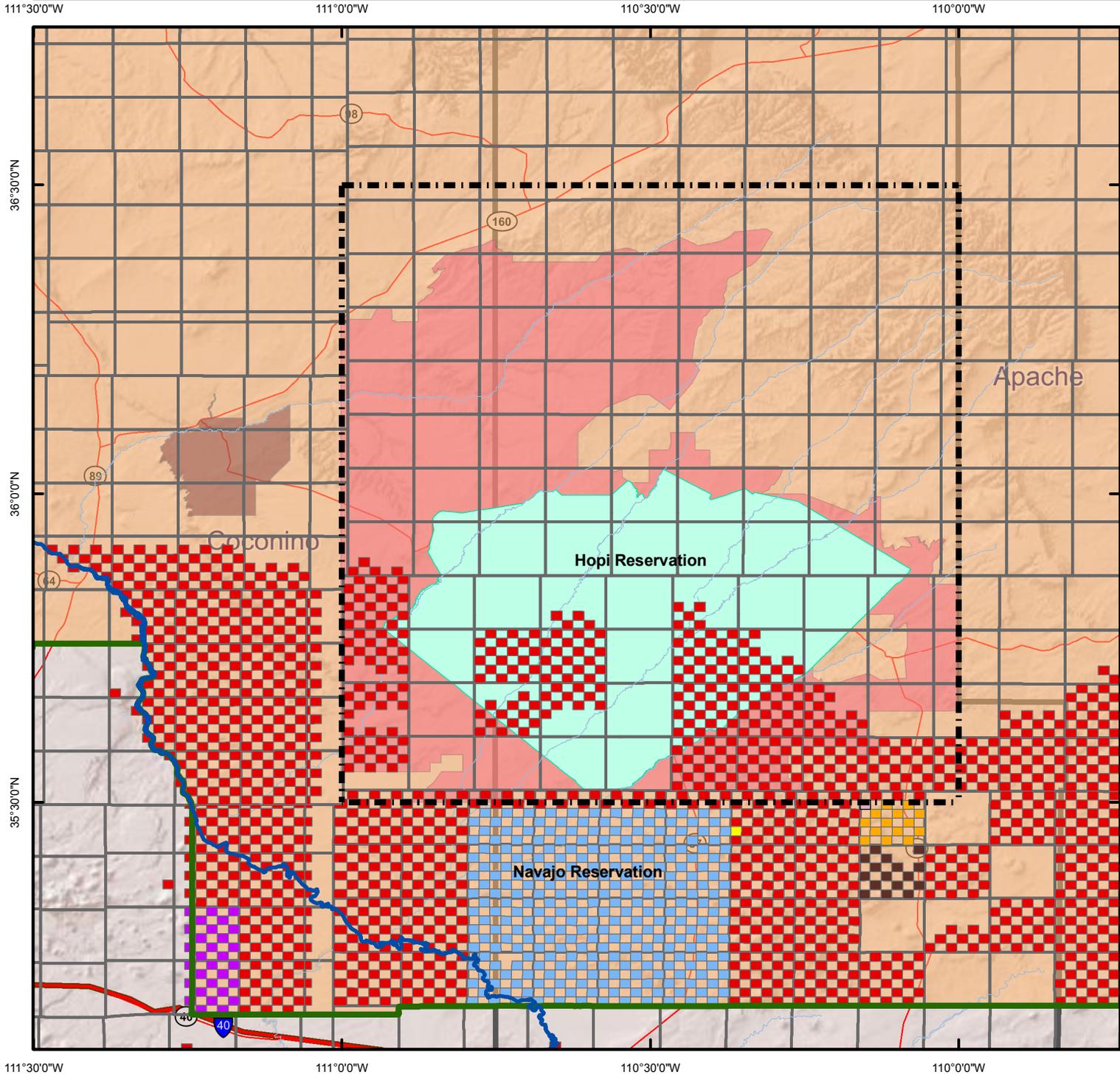



Notary Public

My Commission Expires: 7-7-2012

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Land Acquisitions by the United States - Exhibit 1



Chronology of Land Acquisitions by the U.S. - Exhibit 2

