APPENDIX H

Three-Dimensionial Geologic Model Technical Memorandum

TECHNICAL MEMORANDUM

To: Amelia Tallman, AMEC Geomatrix, Inc.
K. Bill Clark, AMEC Geomatrix, Inc.

Project: 0136550010

From: Gavin Hudgeons, AMEC Geomatrix, Inc.
Joel Jacobson, AMEC Geomatrix, Inc.

Date: April 1, 2011
Revised September 26, 2011

Subject: Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

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INTRODUCTION

This memorandum documents the methods and results of three dimensional (3D) geologic modeling of the Pinedale Anticline Oil and Gas Exploration and Production Area (PAPA) in Sublette County, Wyoming. AMEC Geomatrix, Inc. (Geomatrix) developed the model to improve the geologic understanding of the project area and to create a 3D finite difference grid with geologic assignments for use as the geologic framework for the regional numerical groundwater flow model of the PAPA.

We selected CTech Mining Visualization System (MVS) software to develop the geologic model (MVS 2010). This software can incorporate the following types of data, when available and applicable:

- Digital topographic data;
- Digital aerial photography;
- Geologic data from available driller's logs for stock, domestic and industrial water supply wells, and lithologic logs for PAPA study wells installed in 2009 and 2010;
- Published local and regional geologic data; and,
- Cultural features including roads, property boundaries, etc.

3D GEOLOGIC MODELING – DEVELOPMENT AND RESULTS

We obtained geologic information from well driller's logs available from the Wyoming State Engineer's Office (SEO 2009 and 2010) and from lithologic logs prepared for study wells installed as part of the Hydrogeologic Data Gaps Study (AMEC Geomatrix 2009). Data available from 243 wells were used to create a database of lithologic information for the PAPA.

Information extracted from well logs was simplified and categorized as either unconsolidated material, gravel/fill, sandstone, or shale or siltstone (Note: shale and siltstone were treated as similar lithologies). The data reduction process included interpreting lithologic units and grouping of similar units. For example,

AMEC Geomatrix, Inc.
1010 Lamar, Suite 540
Houston, Texas
USA 77002-6315
Tel (713) 460-5892
Fax (713) 460-5896
www.amecgeomatrixinc.com

units described as sand were listed in the lithologic database as sandstone and clay was listed in the database as shale. In addition, most driller's logs separated shale units based on color. In the database, vertically adjacent shale intervals on a well log were consolidated into one unit.

Besides the sandstone and shale/siltstone units, we identified two other lithologic categories to represent near surface geologic materials. The first category is "gravel/fill" which includes the surficial gravel found on top of the Mesa and "fill" material. For the purposes of the geologic model, "fill" are those surficial geologic materials representing the high elevation (e.g., Wind River Range) areas of the model domain (e.g. areas "filled-in" to honor the USGS' 10 meter digital elevation model (DEM) and allow the aerial imagery to be draped over the model domain). The second category of near surface material includes all unconsolidated material reported on driller's logs and alluvial material present in steam valleys. These unconsolidated materials consist of weathered bedrock, glacial deposits, and any other lithology that wasn't recorded by drillers as bedrock, Mesa gravel or alluvium.

Tables 1 and **2** (attached) present essential information from the database that was used for the geologic model. **Table 1** presents well information (e.g., well name, identification number), geographic position, and elevation data from several sources including: AMEC surveys in 2009 and 2010; 2009 areal imagery obtained from Sublette County, Wyoming; or ground surface elevations derived from a 10 meter digital elevation model (DEM; USGS 2001). **Table 2** presents grouped lithologic data for each well and lists bottom elevations of each lithologic contact.

Geomatrix developed a telescoping finite difference grid for an area encompassing the PAPA consisting of rectangular cells in XY space. The model domain was designed to include the administrative boundary of the PAPA and was extended out to reasonable hydrogeologic boundaries such as hydrologic divides, major rivers or regions of underflow along groundwater equipotential lines. It was also designed to serve as the geologic framework for the associated numerical groundwater flow model. Grid cells, which ranged from a maximum of 2000 feet per side to a minimum of 300 feet per side, were rotated 34 degrees to allow the finer cells of the grid to correspond with the regions of the PAPA where geologic data density is greatest (e.g., where the most wells are present). This finer grid spacing coincides with the axis of the Pinedale Anticline and the New Fork River valley in the center of the PAPA (**Figure 1**).

A geologic hierarchy consisting of 68 layers was generated from the lithologic database (**Table 2**). The lithologic surface contacts were correlated and geologic surfaces interpolated across the site using CTech's Mining Visualization System (MVS; CTech 2010) 3D kriging algorithms. The USGS' DEM data represents the ground surface. The result of this work is a 3D volumetric geologic conceptual block model representing the sandstone and shale/siltstone contacts from the database (**Figure 2**). Based on the depth of the deepest well but excluding the Wind River Mountains, the model has a maximum thickness of 1,123 feet.

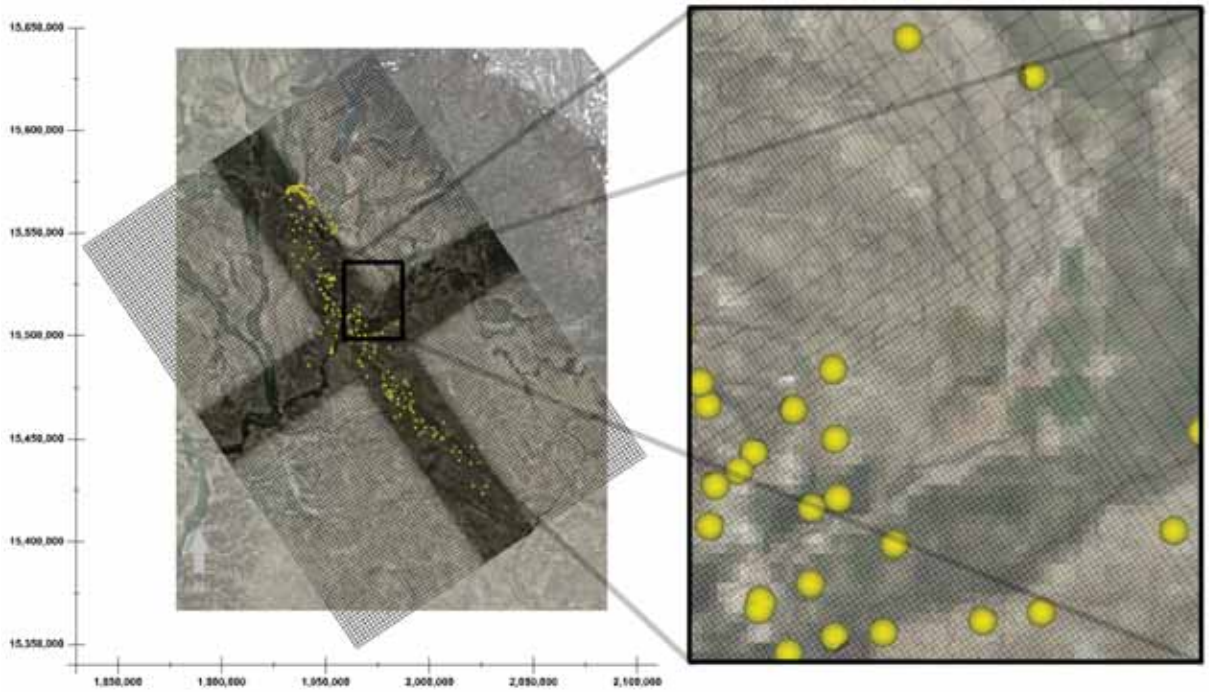

Figure 1: Location and Detail of Finite Difference Grid

Note: Yellow dots indicate well locations

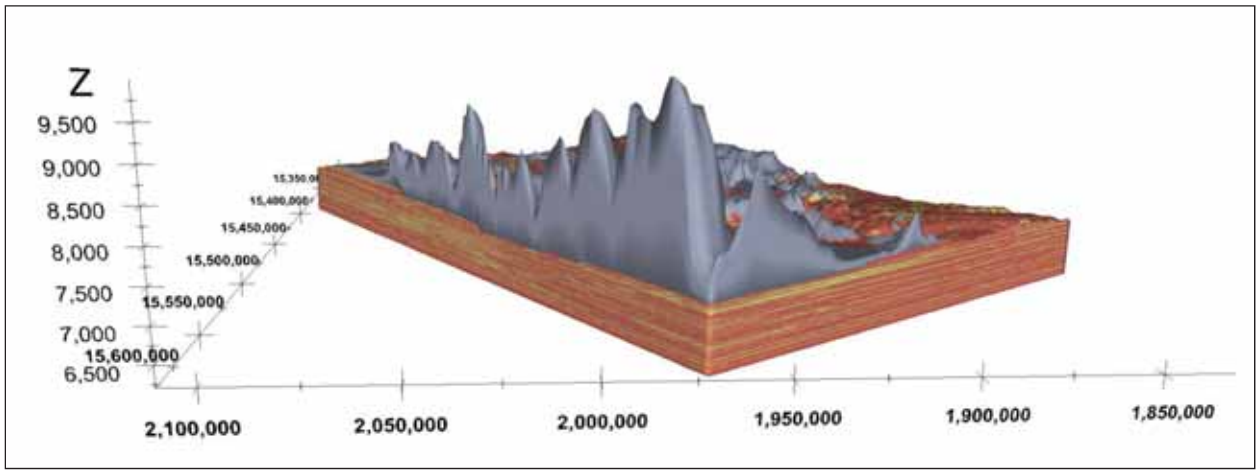

Figure 2: 3D Geologic Block Model Viewed Northeast to Southwest

Note: Vertical exaggeration = 20X

Vertical slice planes were extracted from the block model to produce 10 geologic cross-sections of the model area. **Figure 3** shows locations of cross sections A-A' through J-J', which are presented in **Figures 4** through **13**. Included on the cross-sections is the interpreted potentiometric surface (sub-horizontal blue line) based on groundwater elevations measured by Geomatrix in September 2010 (**Figure 14**). Each cross section is shown with a vertical exaggeration of 70 times, which was necessary to illustrate sandstone units.

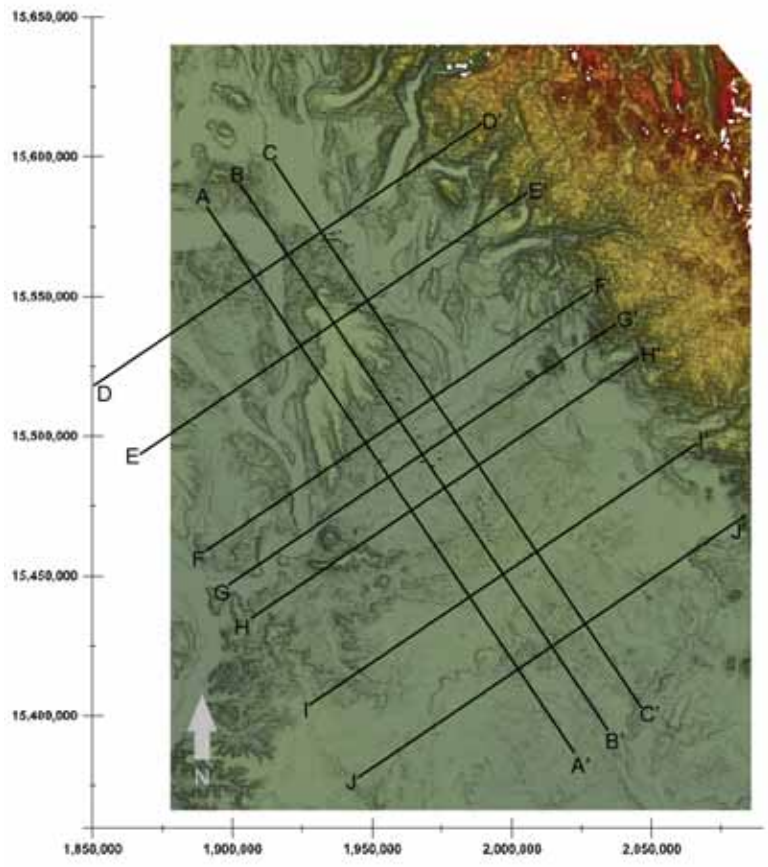

Figure 3: Cross Section Location Map

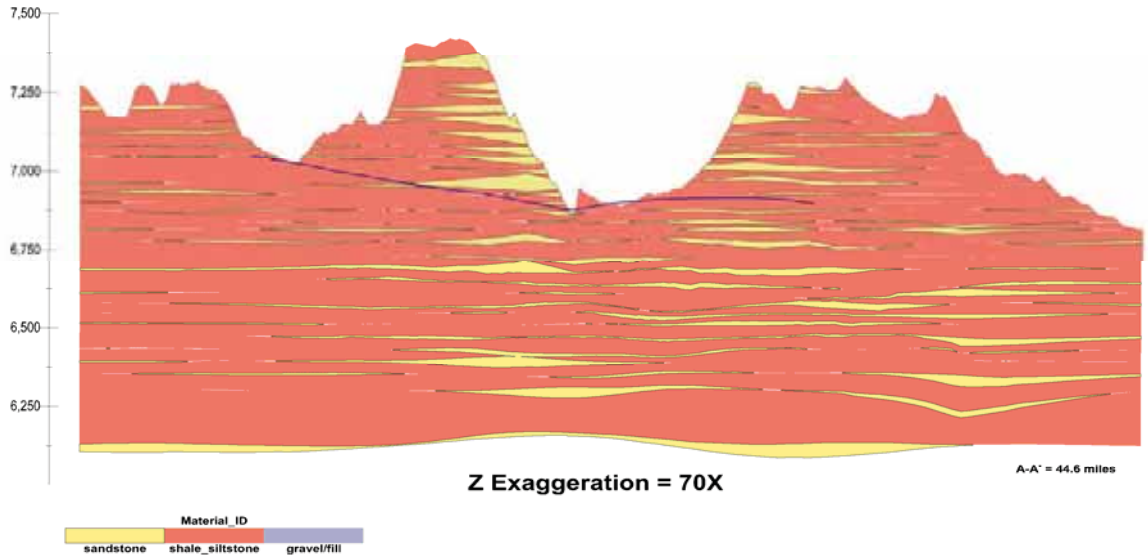

Figure 4: Cross Section A-A'

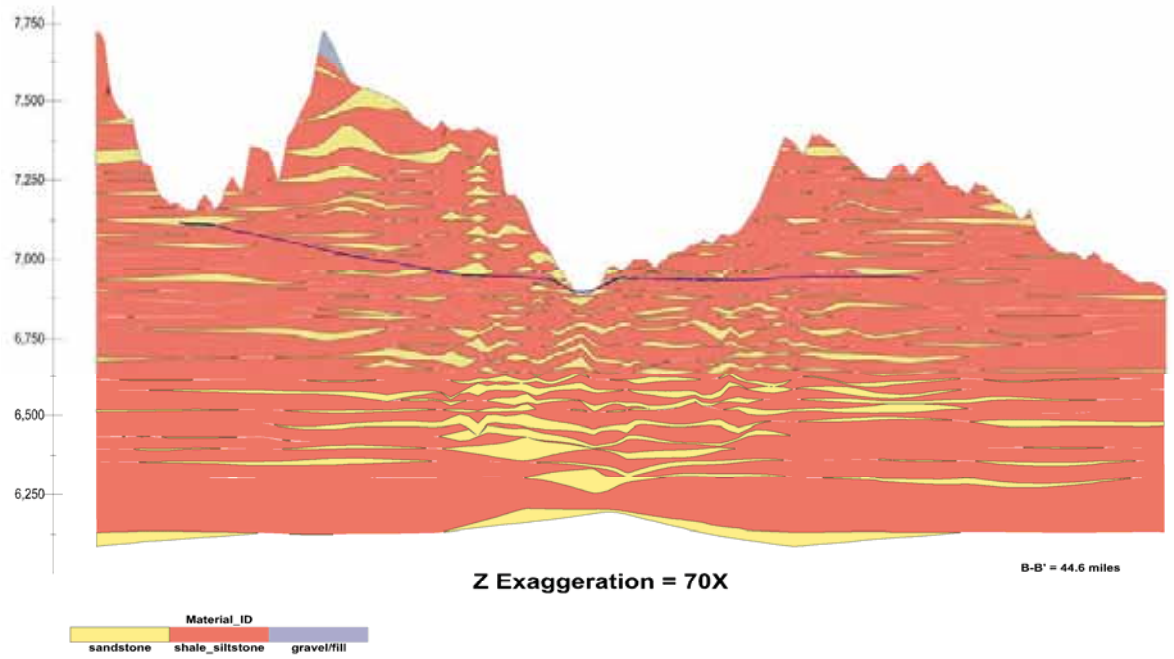

Figure 5: Cross Section B-B'

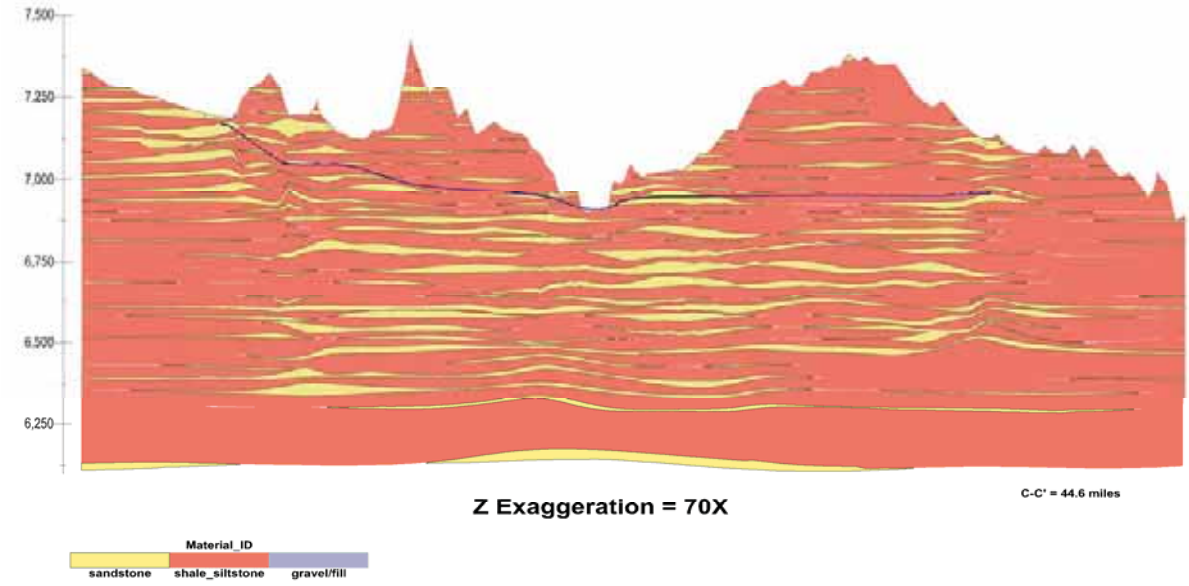

Figure 6: Cross Section C-C'

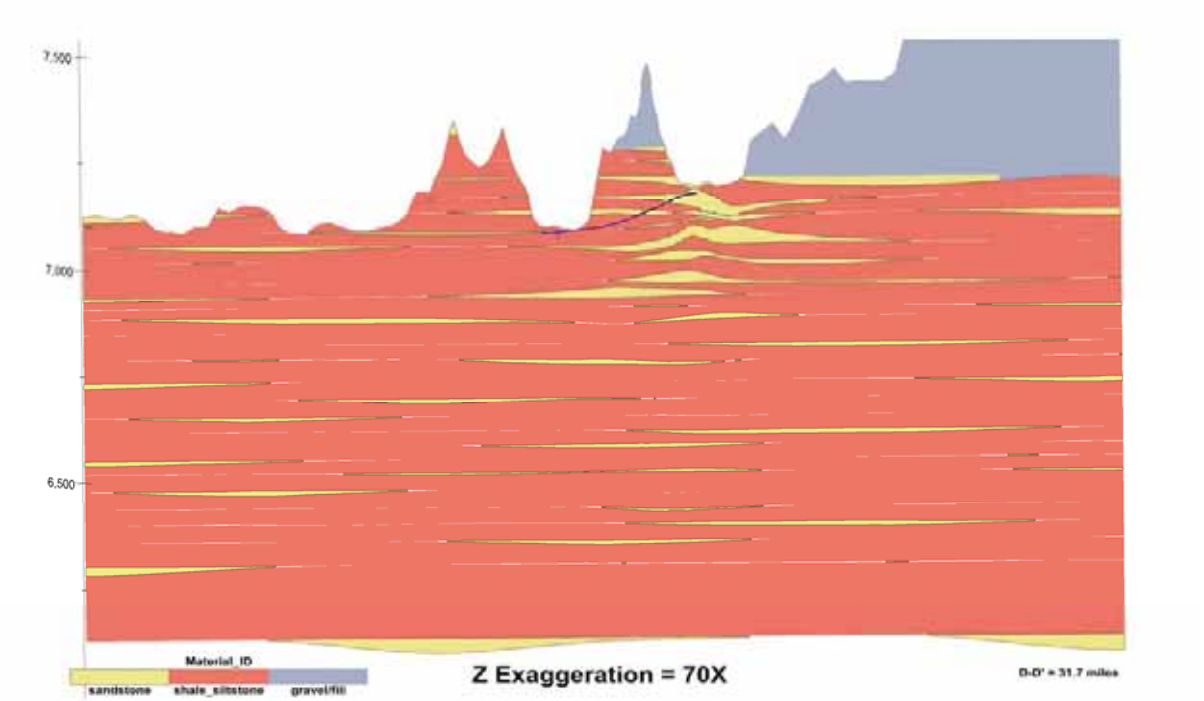

Figure 7: Cross Section D-D'

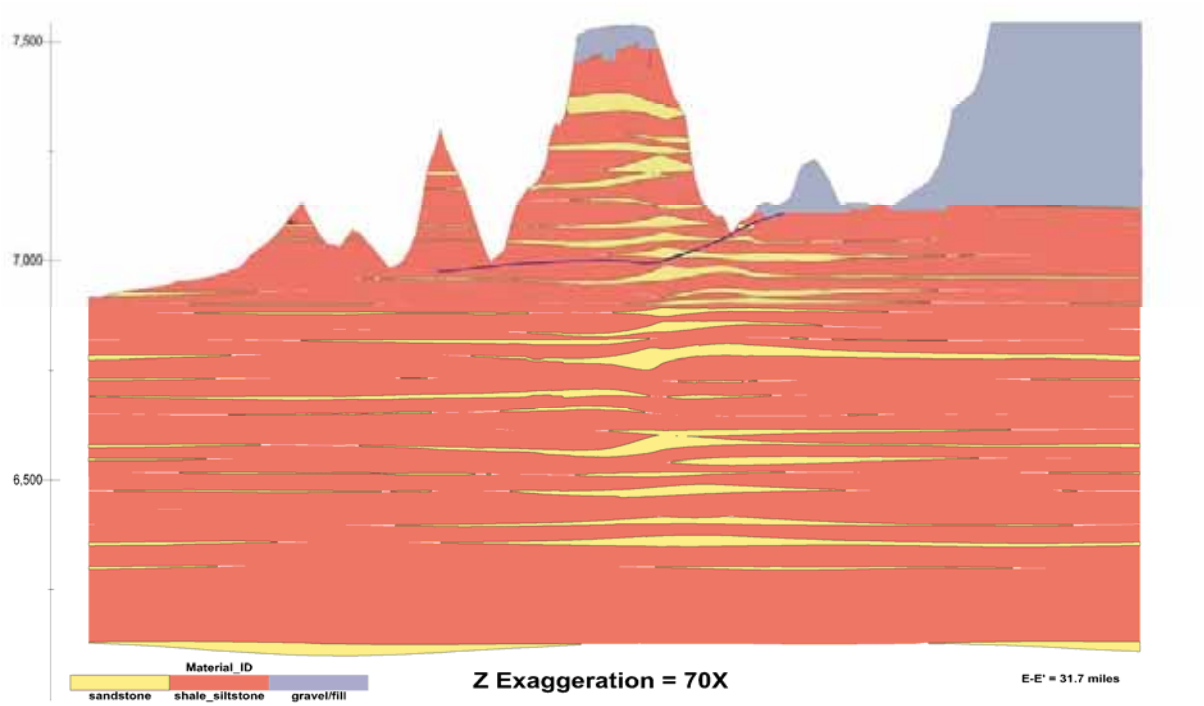

Figure 8: Cross Section E-E'

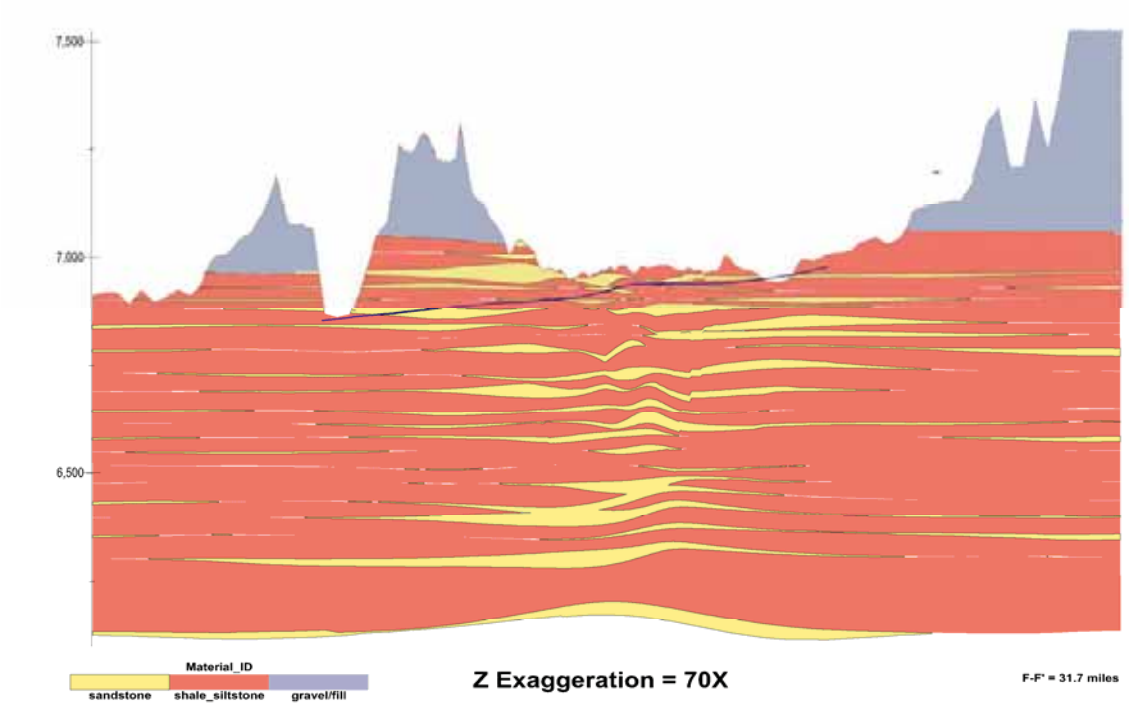

Figure 9: Cross Section F-F'

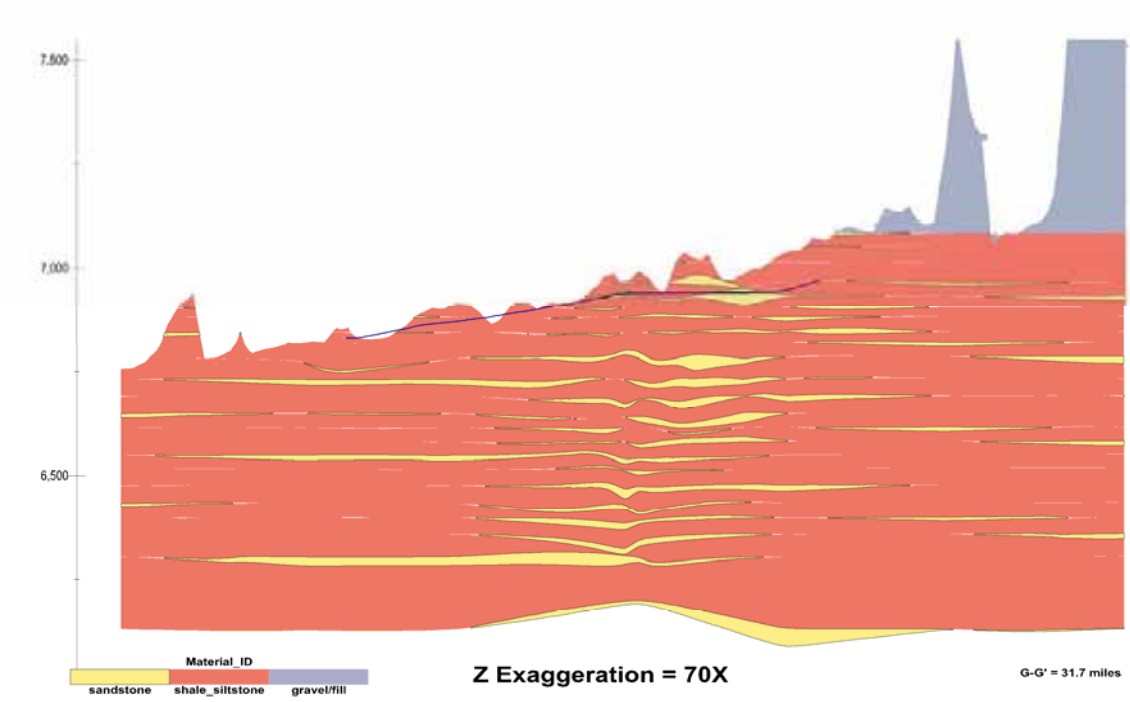

Figure 10: Cross Section G-G'

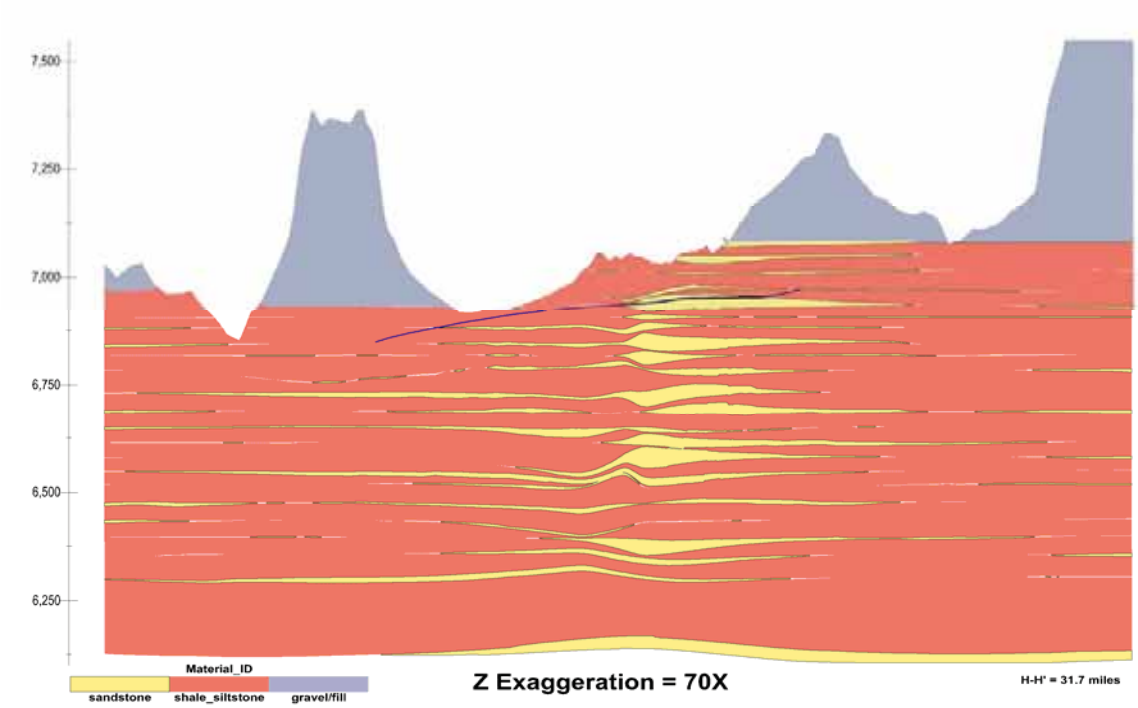

Figure 11: Cross Section H-H'

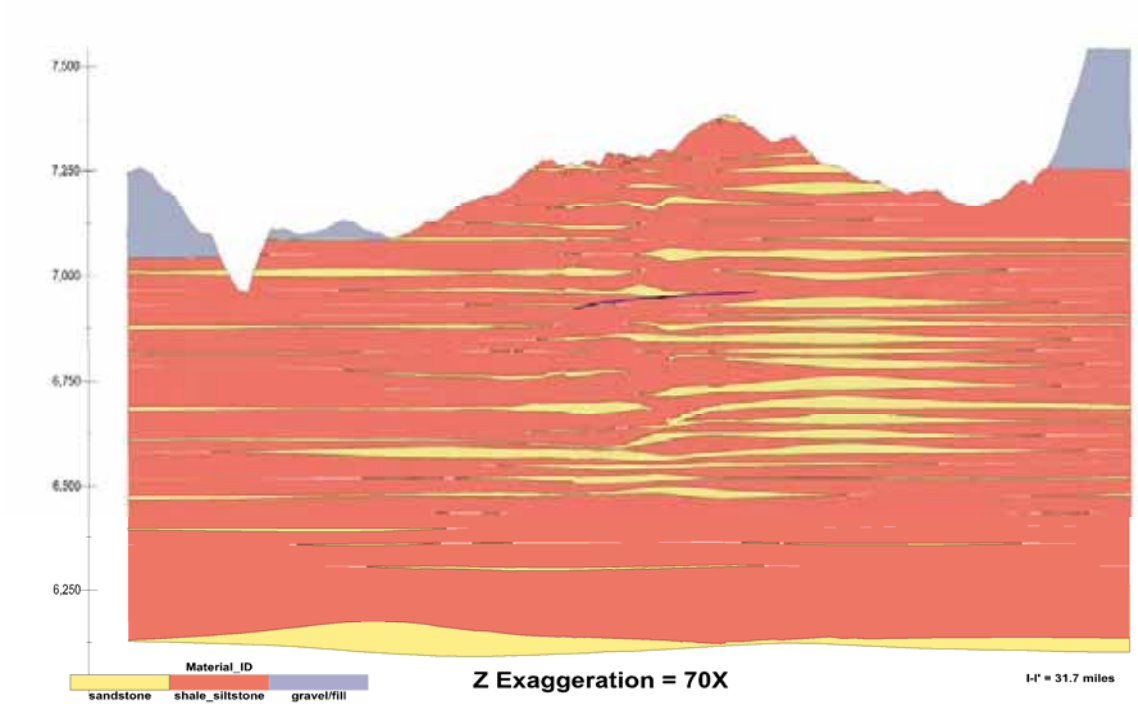

Figure 12: Cross Section I-I'

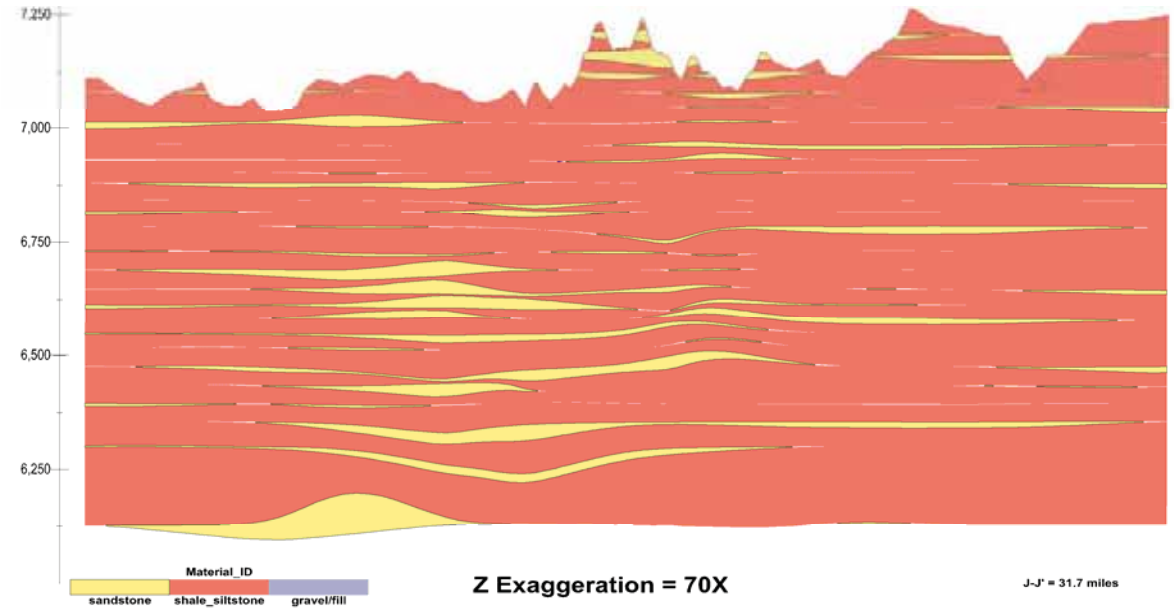

Figure 13: Cross Section J-J'

DISCUSSION

The maximum vertical extent of each layer of the model was restricted to less than 100 feet to honor lithologic data detail recorded on well driller's logs (**Table 2**). However, for layers 62 through 68, the maximum vertical extent was increased up to 162 feet based on the scarcity of lithologic data for deep regions of the model.

In regions of the model with high data density (e.g., anticline axis, along the New Fork River), pinch outs and lateral extents of layers were determined by interpreting driller's logs for the presence of absence of the particular lithology. Lithologies from the logs were interpolated into regions of scarce data density (few or absent wells) using the MVS 3-D kriging algorithms. At some locations artificial geologic descriptions were introduced into the model within regions where data density was low. The attributes of the artificial points were determined based on the average thicknesses and depths of the working model layers. By adding artificial points, the kriging algorithms were forced to produce reasonable layer arrangements and thicknesses in data-scarce regions of the model. Because every fourth artificial point is identical, more variability and less repetition exist in the model in regions where data density is high, and less variability and more repetition exist where data density is low. Due to the absence of data regarding structural features and faulting in the modeled area, these were not considered when creating the model.

In general, the shallow stratigraphy of the PAPA consists predominantly of shale/siltstone strata with vertically and laterally discontinuous beds or lenses of sandstone of varying thickness. Based on driller's logs, each of these two lithologic units can vary in thickness from as little as two feet to more than 500 feet. Near surface gravel-rich and other unconsolidated units likely represent glaciofluvial and/or more recent alluvial deposits. Groundwater elevation data collected in September 2010 (**Figures 14** and **15**) indicates that the groundwater flow direction is variable within the PAPA, but generally to the west-southwest.

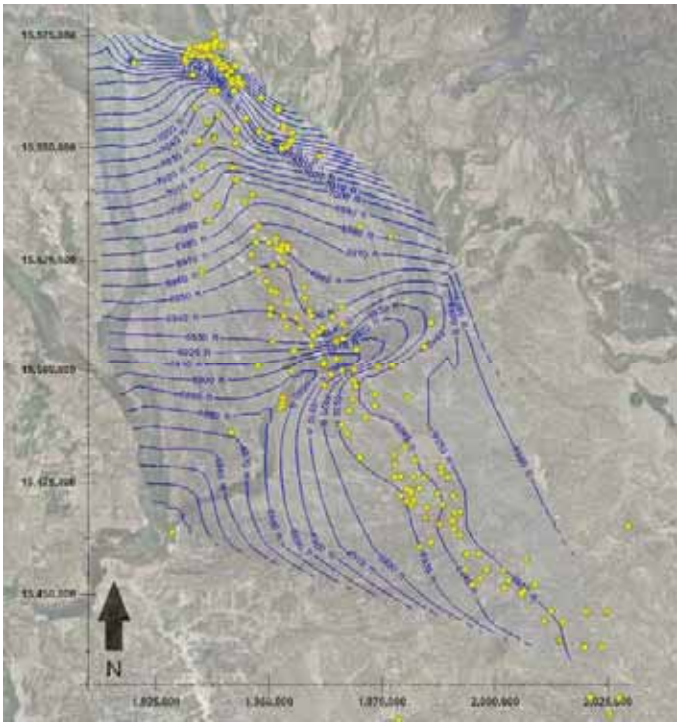

Figure 14: September 2010 Potentiometric Surface Isolines
Note: Wells shown as yellow dots

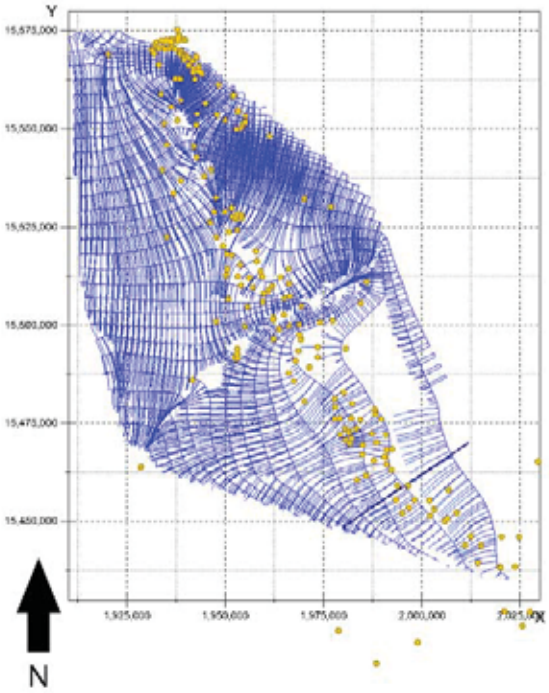

Figure 15: Streamlines Depicting Groundwater Flow Direction
Note: Wells shown as yellow dots

Based on cross-sections from the geoconceptual model, 66 points were chosen and vertical measurements were taken to determine the percent of each lithologic material contained in the upper Wasatch Formation underlying the PAPA (**Figure 16**). Points were evenly distributed at five mile intervals along each cross-section and spatially referenced screen captures were used to measure the thickness of each lithologic unit (**Figures 17 through 26**). **Table 3** presents statistics for each vertical measurement point and average values for each statistic. The average length of each vertical section is 988 feet. Based on these vertical measurements, the upper Wasatch Formation underlying the PAPA consists of 34.6 percent sandstone, 59.9 percent siltstone/shale, 4.7 percent gravel/fill, and 0.8 percent unconsolidated material. The mean thickness of each lithologic unit is: sandstone = 18.4 feet (n = 1,219), siltstone/shale = 33.0 feet (n = 1,189), gravel/fill = 56.5 feet (n = 16) and unconsolidated material = 7.4 feet (n = 22). All measurements have an accuracy of ±1.5 feet based on pixel size of the original screen capture for each cross-section.

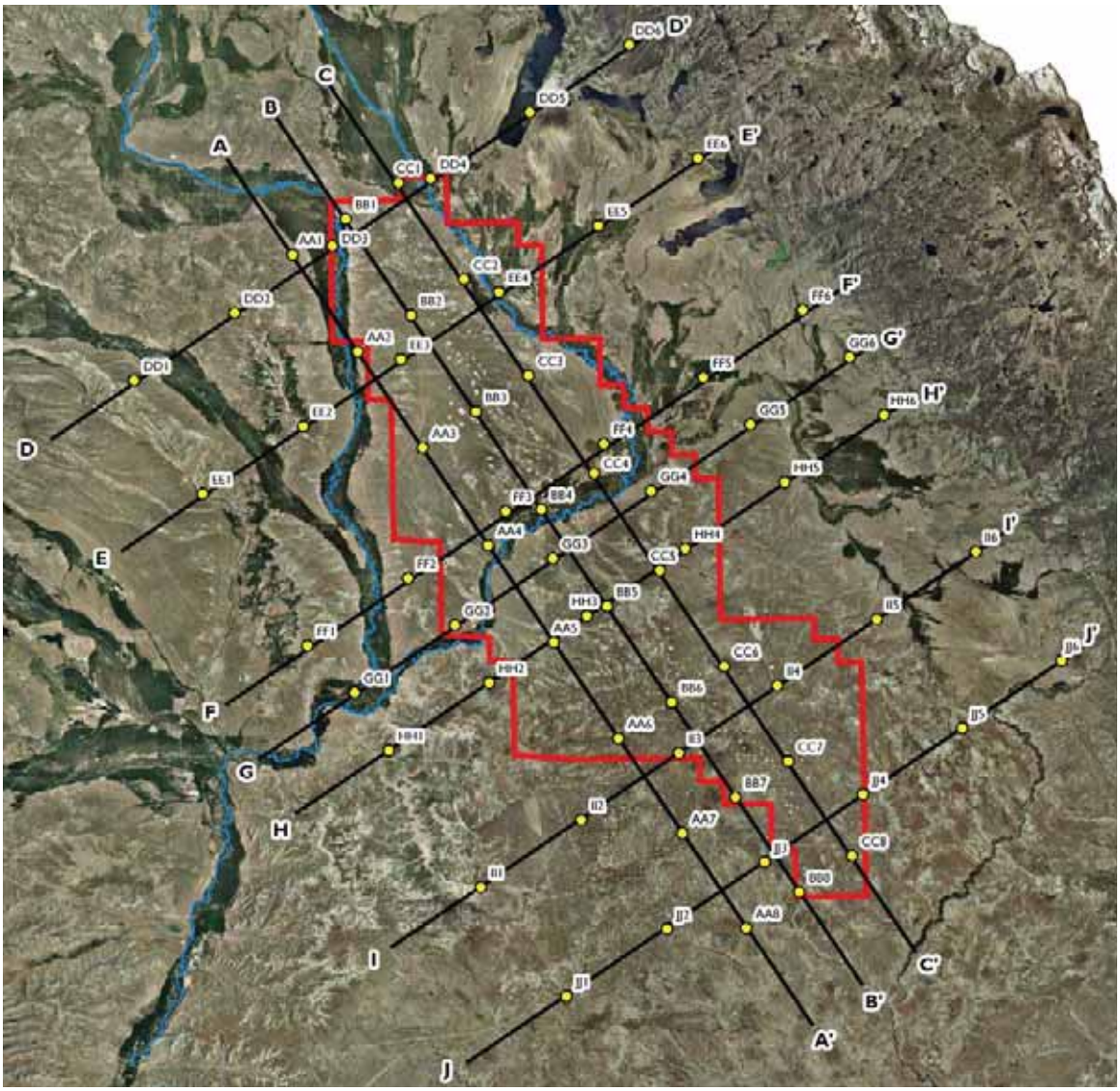

Figure 16: Points Selected for Vertical Lithology Measurements

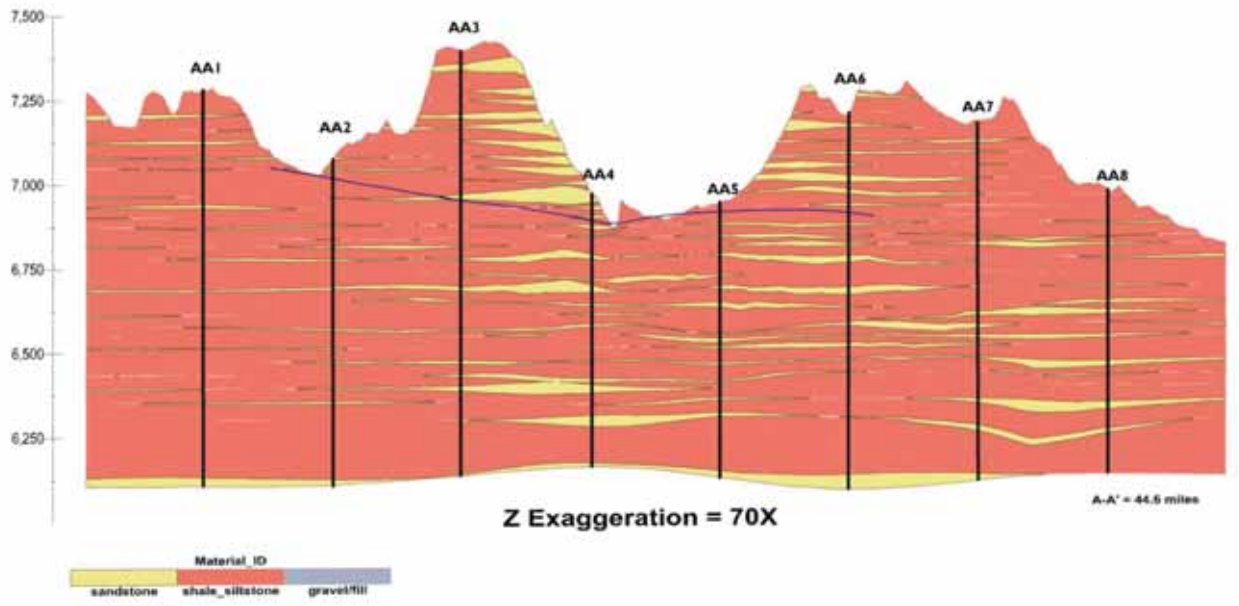

Figure 17: Vertical Measurement Points, Section A-A'

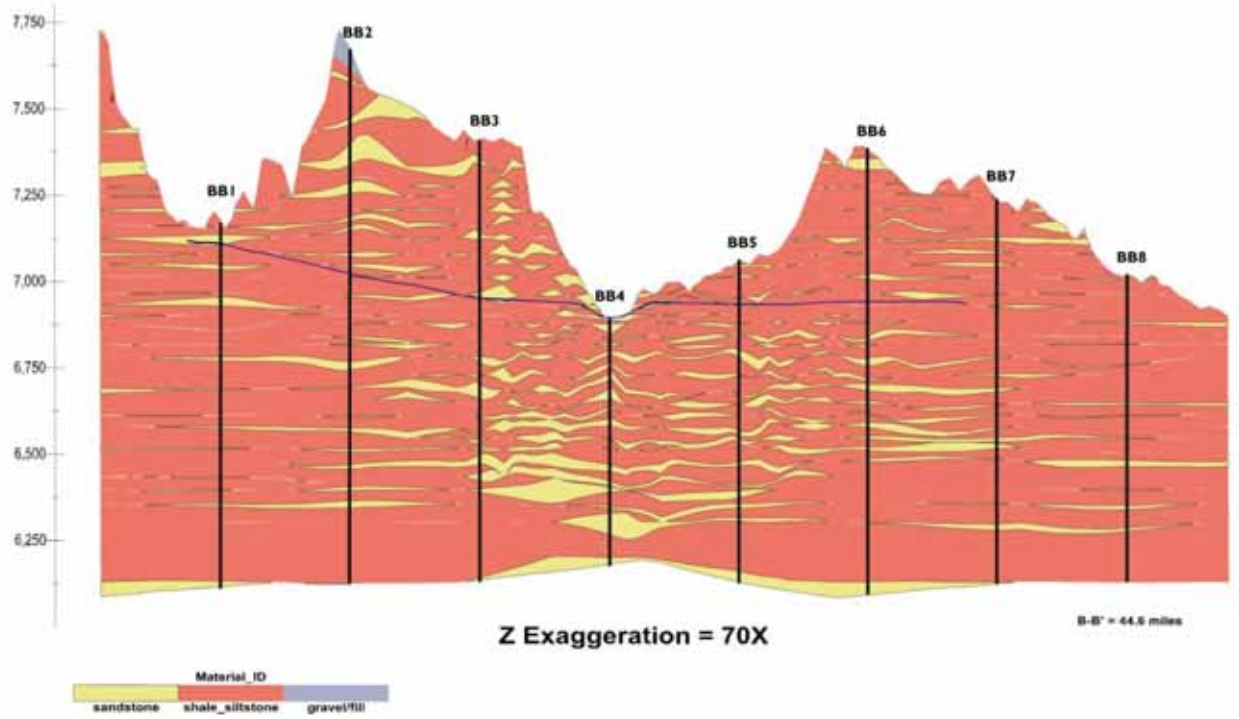

Figure 18: Vertical Measurement Points, Section B-B'

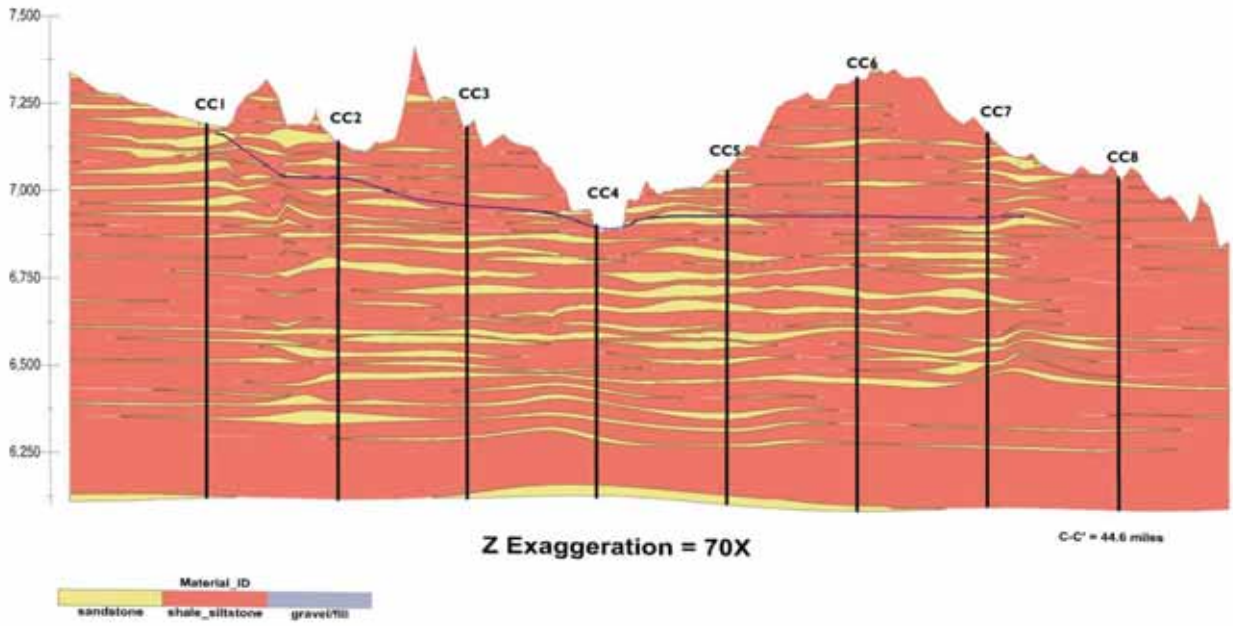

Figure 19: Vertical Measurement Points, Section C-C'

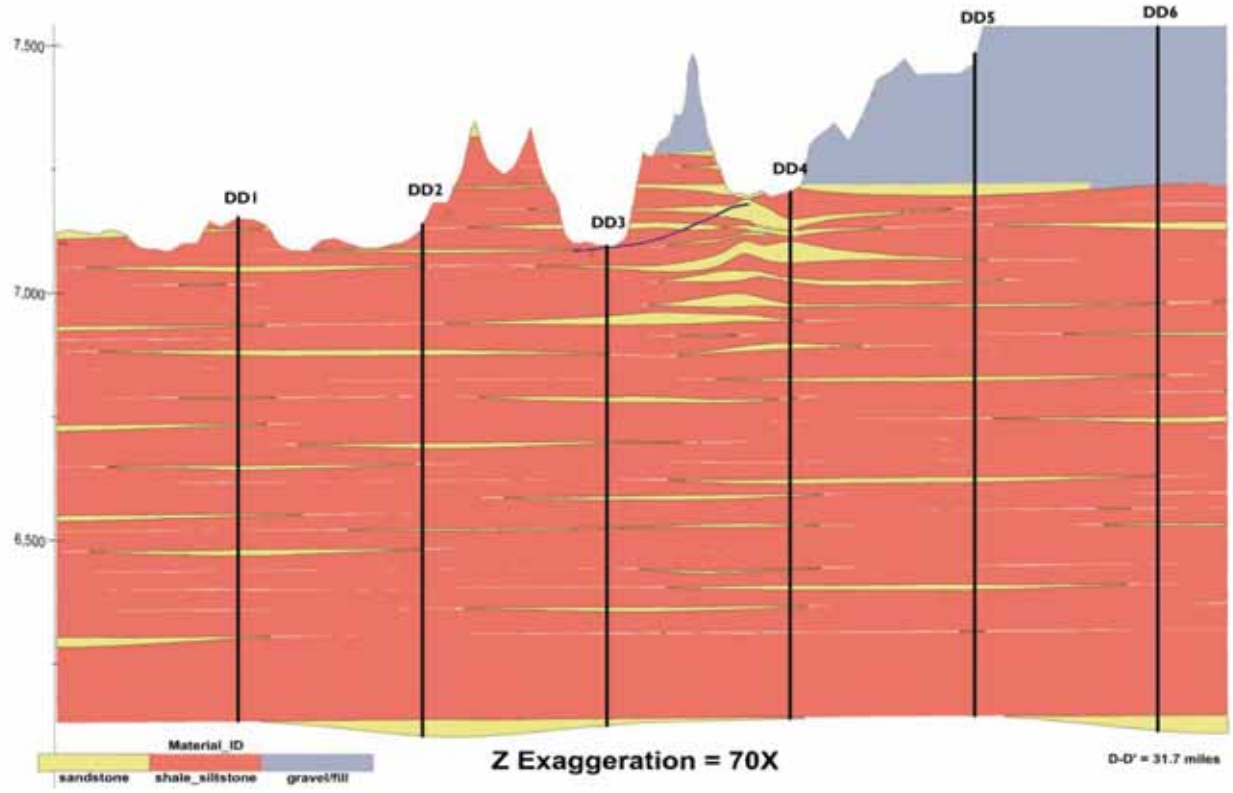

Figure 20: Vertical Measurement Points, Section D-D'

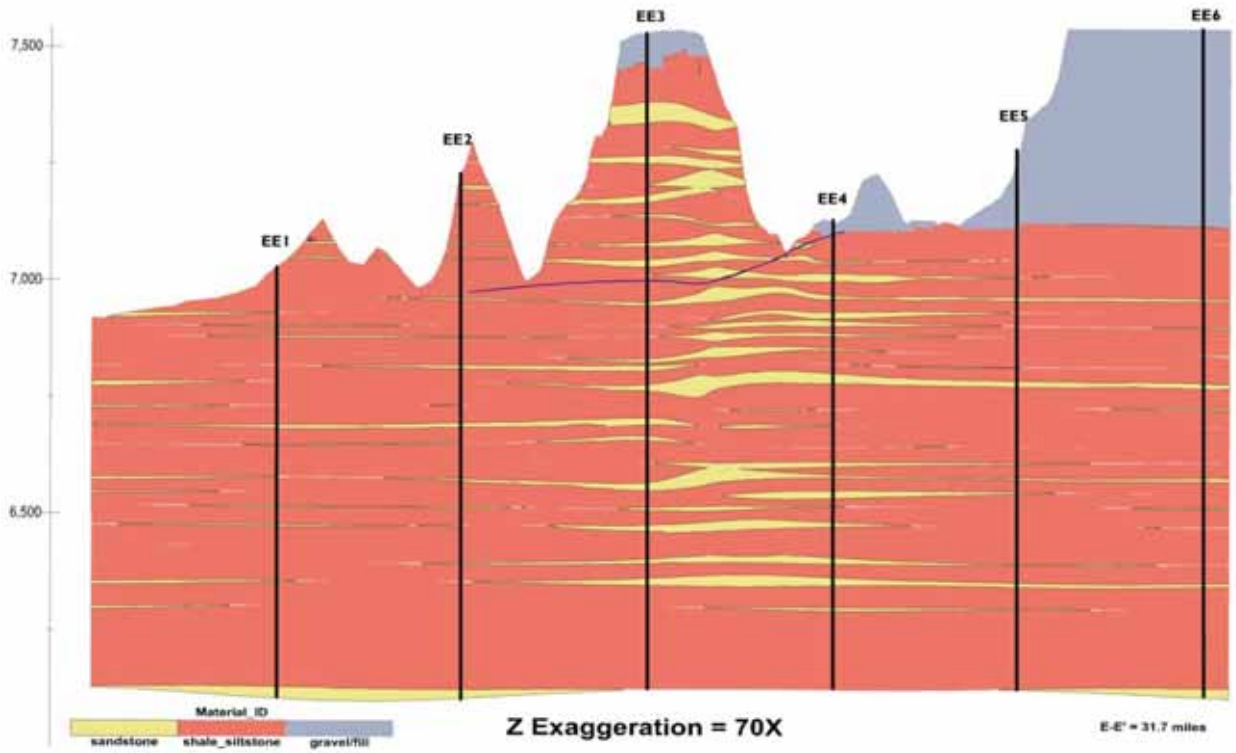

Figure 21: Vertical Measurement Points, Section E-E'

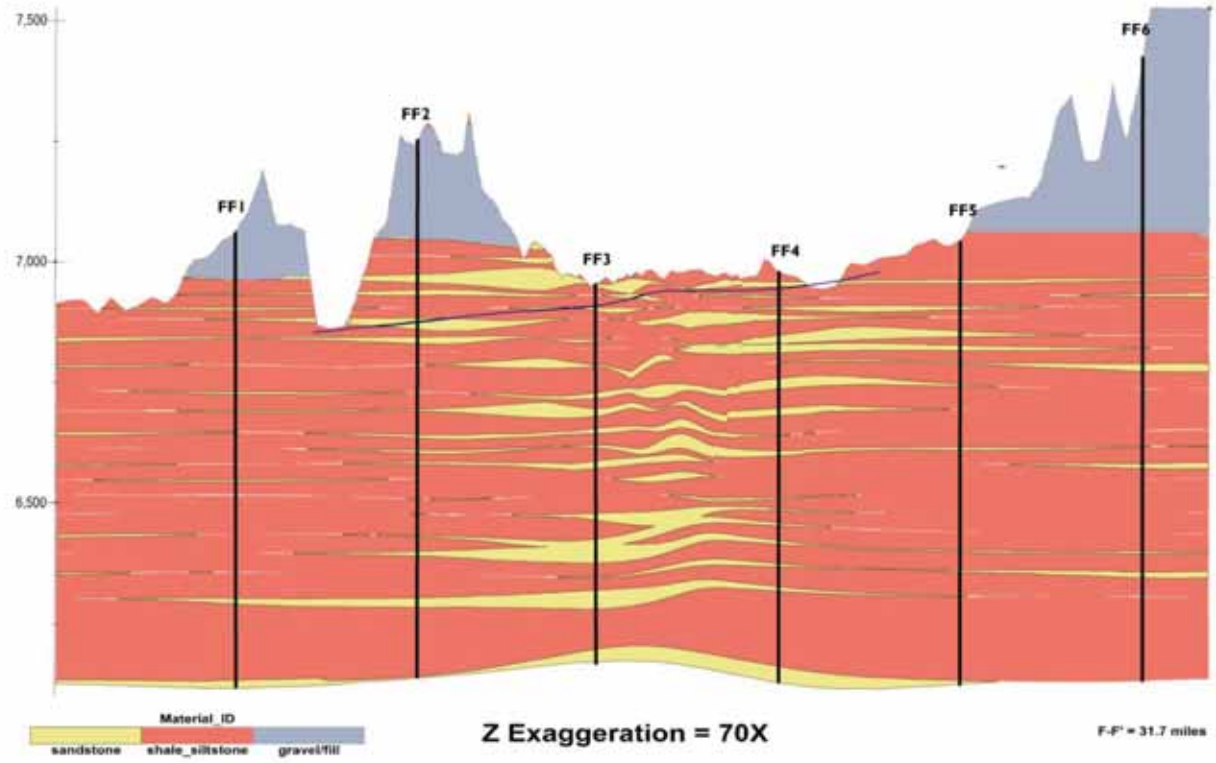

Figure 22: Vertical Measurement Points, Section F-F'

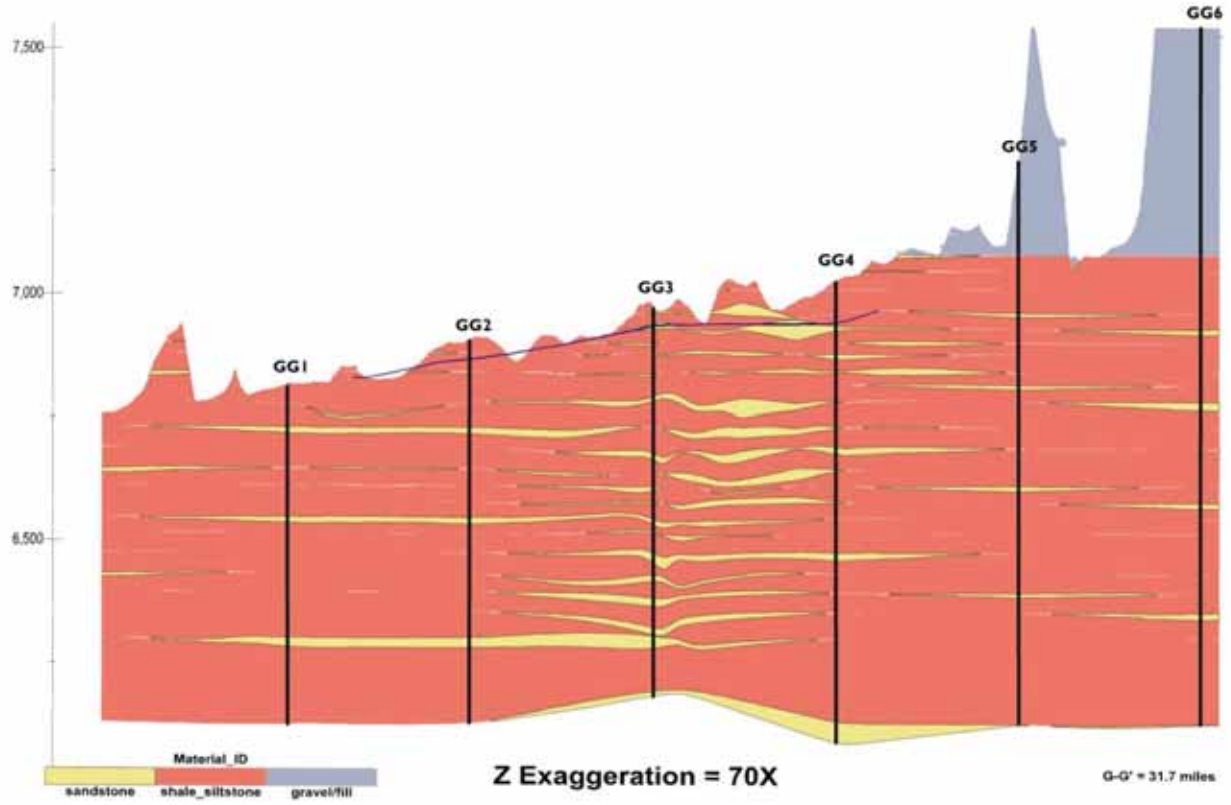

Figure 23: Vertical Measurement Points, Section G-G'

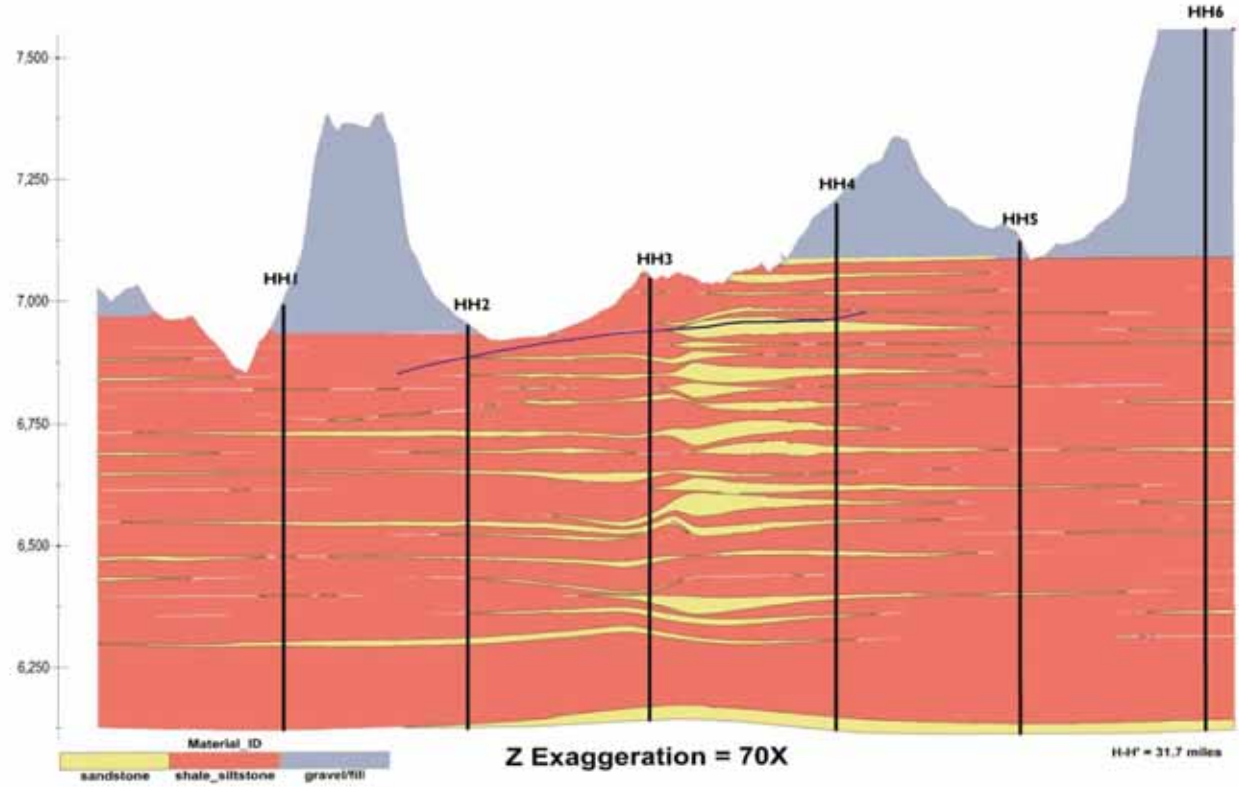

Figure 24: Vertical Measurement Points, Section H-H'

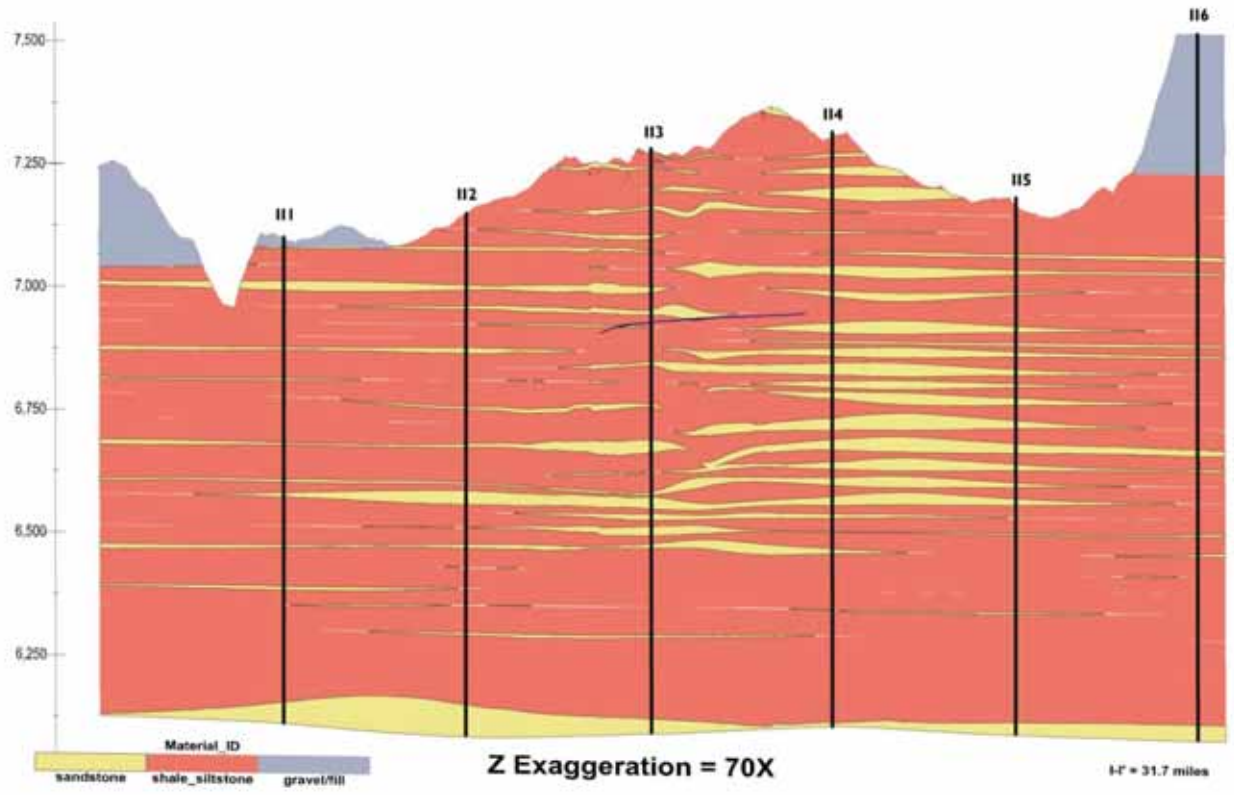

Figure 25: Vertical Measurement Points, Section I-I'

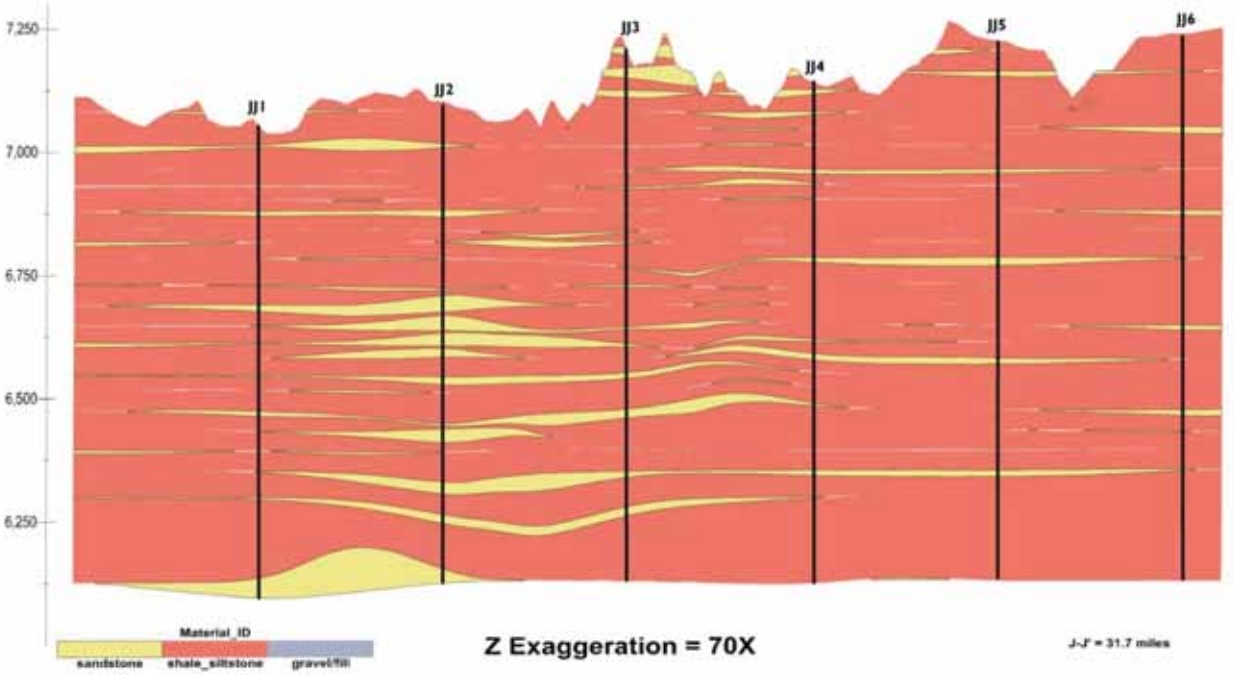

Figure 26: Vertical Measurement Points, Section J-J'

Confidence values were analyzed for the geologic model and plots of the results are presented for representative layers in **Figures 27 through 30**. Both horizontally and vertically higher confidence percentiles exist where data is dense and lower confidence percentiles exist where data is scarce. Therefore, confidence decreases horizontally away from well borings along the axis of the anticline, and with depth where fewer well borings reach.

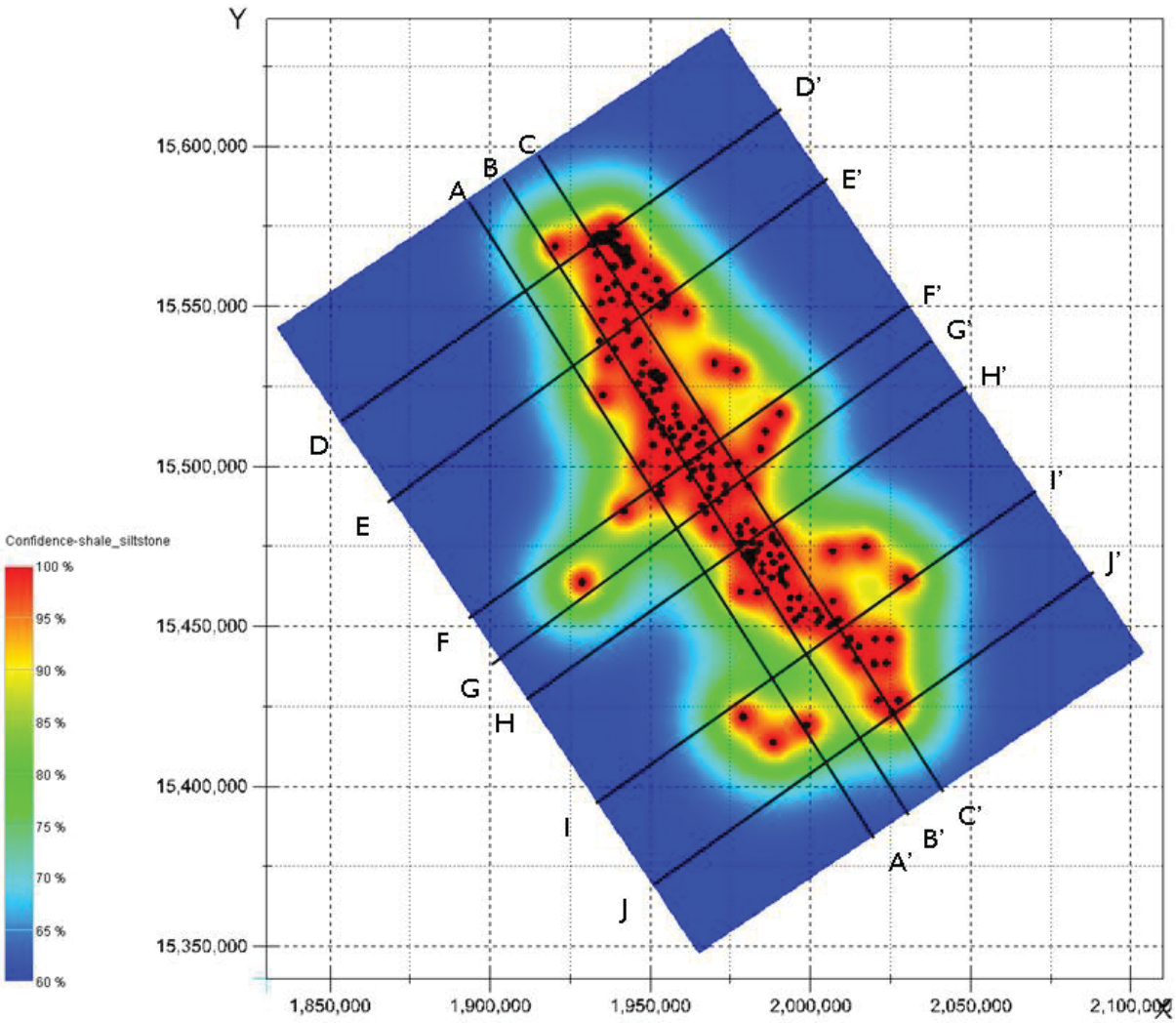

Figure 27: Confidence Values for Layer 4

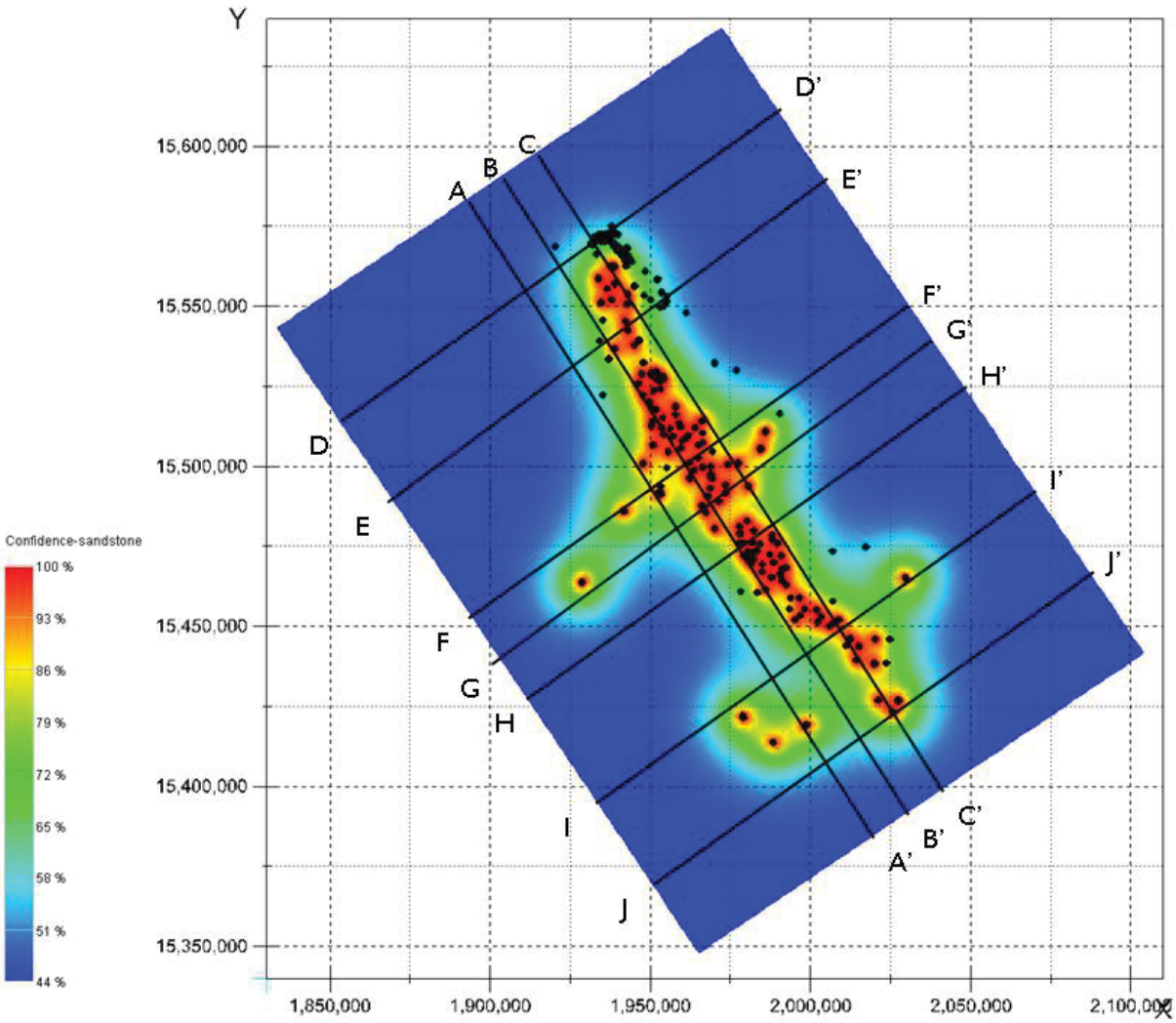

Figure 28: Confidence Values for Layer 46

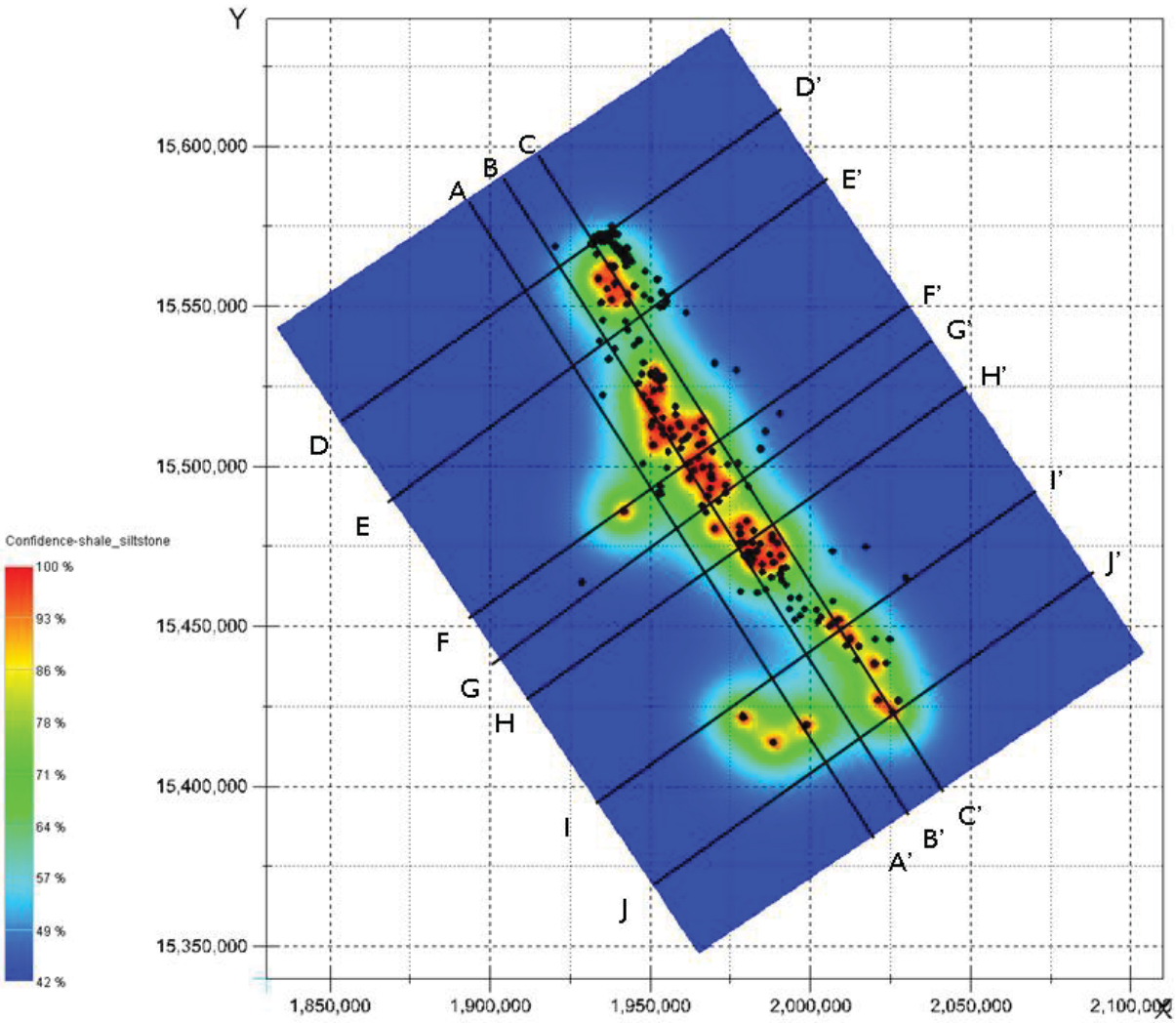

Figure 29: Confidence Values for Layer 55

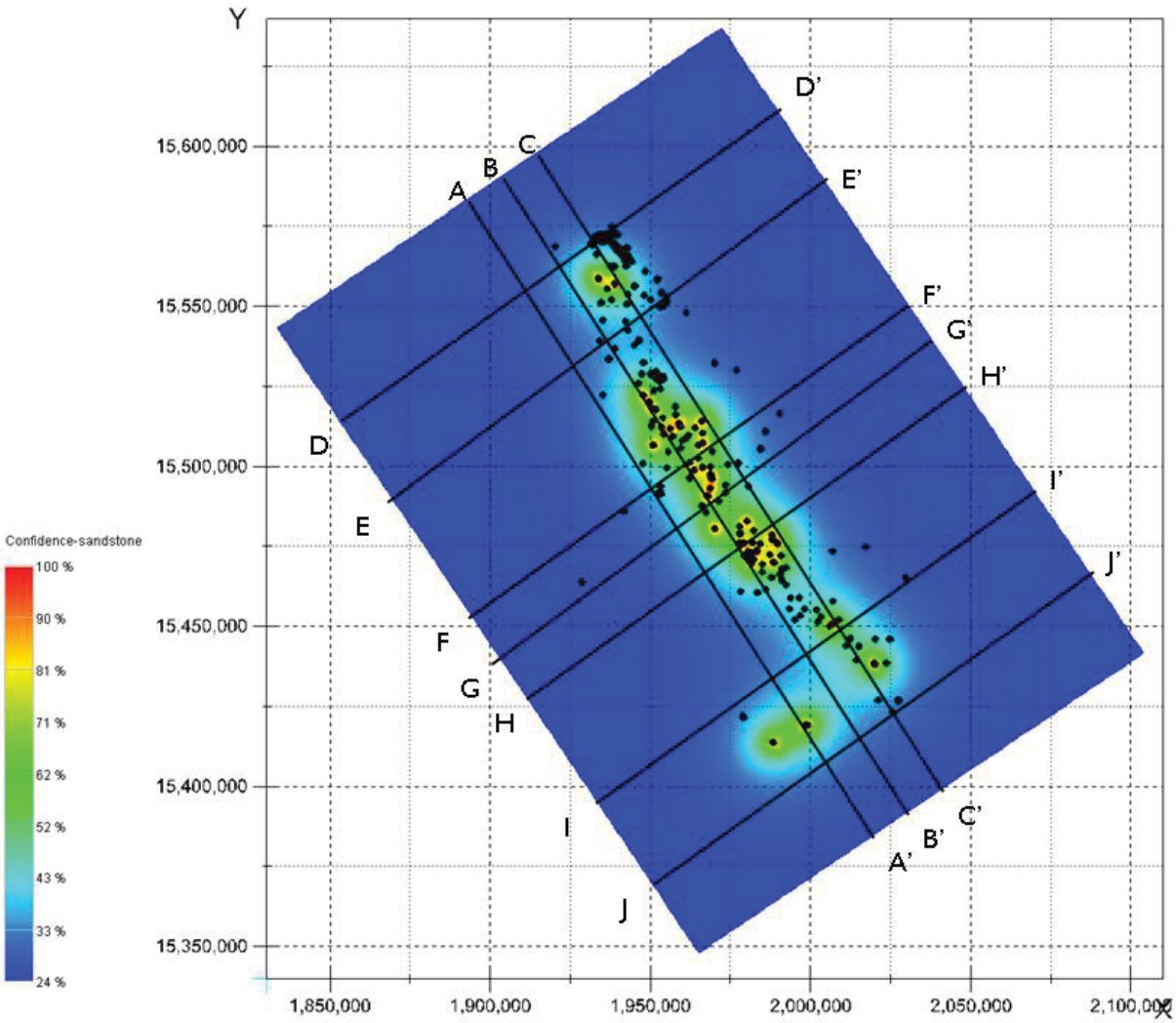

Figure 30: Confidence Values for Layer 60

REFERENCES CITED

AMEC Geomatrix, Inc., 2009. Final Plan of Study, Hydrogeologic Data Gaps, Interim Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan, Pinedale Anticline Oil and Gas Exploration and Development Project, Sublette County, Wyoming. Issued to USDI Bureau of Land Management, Pinedale Field Office. May 15.

C Tech Development Corporation, Mining Visualization System (MVS), 2010. EVS/MVS Version 9.42 – Released 6/21/2010, Developed by C Tech Development Corporation. http://www.ctech.com/index.php

U.S. Geological Survey, 2001. USGS National Elevation Data Set, Web Mapping Service. http://ned.usgs.gov

Wyoming State Engineer's Office (SEO), 2010. http://seo.state.wy.us/wrdb/index.aspx

ATTACHMENTS

Table 1 Well Identification, Location and Elevation
Table 2 Lithologic Data
Table 3 Summary Statistics for Geologic Model

Table1

Well Identification, Location and Elevation

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well Identification	Well Name (if available)	Easting (UTM Zone 12 NAD83 meter)	Northing (UTM Zone 12 NAD83 meter)	Ground Surface Elevation (feet amsl)
30-107-06dd01		611,824	4,717,545	7,229
30-107-4-da01		615,009	4,717,936	7,291
30-108-20ba01		603,078	4,713,737	7,236
32-108-27-da		606,833	4,730,675	7,000
33-109-10a01		594,699	4,745,866	7,232
AD007	Possibles #1	595,874	4,724,353	6,851
AD016	Schell #1	595,290	4,722,561	6,892
AD018	Edwards #1	595,273	4,722,143	6,857
AD020	Jeremy #1	595,310	4,721,849	6,877
AD021	Christina Rae #1	595,130	4,721,785	6,881
AD022	Watersdown #1	595,145	4,722,012	6,865
AD033	Bloom #4	590,653	4,746,473	7,180
AD035	Vance #2	590,081	4,746,465	7,162
AD036	Koch #1	590,137	4,746,465	7,156
AD037	Delmue #1	590,080	4,746,461	7,188
AD038	Susan #1	590,055	4,746,382	7,149
AD039	Mortenson #1	590,187	4,746,370	7,157
AD040	Bryant #1	590,261	4,745,976	7,184
AD041	Burrough 1 (deepened)	590,197	4,745,997	7,143
AD044	Hay #1	590,847	4,745,713	7,170
AD045	Grossman #1	590,936	4,745,688	7,190
AD046	Trombly #1	591,151	4,745,038	7,223
AD047	Stevens #1	591,087	4,745,288	7,193
AD056	Roberts Well #1	589,699	4,746,477	7,153
AD057	Wood #1	589,647	4,745,841	7,194
AD058	Kenyon #1	589,715	4,746,482	7,157
AD060	Marys #1	588,832	4,746,065	7,166
AD063	Brown #1	590,793	4,745,430	7,211
AD084	Max #1	591,521	4,744,585	7,205
AD085	Dave #1	591,798	4,744,879	7,111
AD086	LaMere 99	592,290	4,744,463	7,080
AD087	Leslie Well #1	591,869	4,744,331	7,000
AD089	Abercrombie #1	592,402	4,744,088	6,986
AD106	Belveal #2	595,923	4,740,663	7,124
AD118	Spence No. 1	595,914	4,740,157	7,098
AD123	Rossetter #1	595,207	4,739,641	7,062
AD135	Hoke #1	590,715	4,746,669	7,163
AD136	Andy	590,472	4,745,843	7,177
AD149	Swinger's Green 2nd, Lot 2 Well	591,261	4,745,369	7,157
AD151	D.C. # 1	589,183	4,745,933	7,203
AD157	Blooming Ranch #1	590,753	4,746,931	7,196
AD192	Washburn #1	592,231	4,744,152	7,145
AD194	Chief #1	589,508	4,746,003	7,180
AD195	Industrial Well #4	588,819	4,745,478	7,257
AD196	PBC #1	588,982	4,746,335	7,185
AD200	FAIRWAY LOOP WELL #3	591,348	4,745,282	7,157
AD202	CONWAY HAWKS WELL #1	591,470	4,745,154	7,157
AD207	JAMIE #1	592,080	4,745,285	7,154
AD210	LAINEY'S WISH # 1	592,117	4,745,207	7,157
ADS003	Chidsey #2	600,269	4,725,923	6,893

Table1

Well Identification, Location and Elevation

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well Identification	Well Name (if available)	Easting (UTM Zone 12 NAD83 meter)	Northing (UTM Zone 12 NAD83 meter)	Ground Surface Elevation (feet amsl)
ADS007	Gosar #1	589,851	4,746,538	7,155
ADS008	Elwood Meyers #1	589,927	4,745,868	7,195
ADS011	Kramer #1	591,858	4,744,032	7,130
ADS012	Almquist #1	591,998	4,743,502	7,160
ADS015	Fenn Hole 1	594,988	4,742,306	7,147
ADS016	Fenn Hole 2	594,962	4,742,190	7,150
ADS017	Hagenstein #3	595,361	4,741,080	7,134
ADS026	McCormick Airport #1	595,757	4,740,034	7,091
ADS027	Ecklund No. 1	595,568	4,739,722	7,078
ADS029	Snow #1	592,541	4,743,919	7,095
ADS035	SKW #1	589,390	4,746,521	7,170
ADSM001	Rellstab #1	589,768	4,746,562	7,150
AMI007	Mesa Water Well NO 15-8	593,639	4,734,324	7,476
AMI008	Warbonnet 9-23	608,526	4,711,939	7,374
AMI010	Lizard Head 11-8	602,671	4,724,792	6,992
AMI011	Falcon #1-36W	610,235	4,709,601	7,273
AMI012	Pinedale Federal #13-19W	600,871	4,721,145	6,992
AMI013	Stewart Point 3-28	592,097	4,739,941	7,226
AMI014	Mesa Water Well NO 3-22	596,164	4,732,386	7,453
AMI015	Antelope #14-22	616,002	4,702,192	7,134
AMI016	Sherlock Federal 15-8	590,813	4,743,543	7,232
AMI018	Antelope 15-23 WSW	617,961	4,702,144	7,112
AMI020	Mocroft 11-22	593,702	4,740,740	7,083
AMI023	Mocroft 1-21	592,812	4,741,632	7,098
AMI026	New Fork Unit #11-24W	599,788	4,721,648	6,949
AMI027	Mesa 3-20	593,166	4,732,419	7,465
AMI028	Stewart Point 11-33	592,152	4,737,427	7,518
AMI029	Mesa 13-5	592,748	4,736,006	7,500
AMI030	STEWART POINT WATER WELL #05-20	590,173	4,741,342	7,373
AMI033	Highway #11	615,773	4,708,001	7,255
AMI034	Antelope #11-4W	614,171	4,707,304	7,159
AMI036	County Shop #1	595,342	4,740,955	7,127
AMI037	Rainbow #7-31	611,364	4,709,188	7,322
AMI043	Mesa Lovatt Draw 15-8	593,612	4,724,721	7,022
AMI047	Crosswinds #1	591,153	4,746,557	7,143
AMI054	Grove #1	591,233	4,746,557	7,148
AMI064	Dew Lumber #1	588,751	4,745,841	7,179
AMI065	Dew Lumber #2	588,663	4,745,742	7,193
AMI071	Wenz #2	597,761	4,739,086	7,082
AMI078	Riverside 1-4	595,561	4,727,526	7,126
AMI079	Pinedale 2-2 (may be duplicate of Riverside 2-2)	597,970	4,727,444	6,962
AMI081	Mesa 7-27-32-109	596,728	4,730,172	7,146
AMI089	Warbonnet 6-26	607,577	4,710,842	7,388
AMI090	Mesa 4-28-32-109W	594,187	4,730,577	7,447
AMI099	Paradise Ditch State 36-13 Water Well	599,305	4,727,663	7,037
AMI107	Riverside 9-2	598,917	4,726,522	7,513
AMI108	Jensen # 11-11W	598,074	4,724,991	6,893
AMI111	Stewart Point 15-17 WSW	590,908	4,741,842	7,257
AMI113	Stewart Point 11-21 WSW	592,178	4,740,822	7,202
AMI114	Mesa 6-16 Water Source Well	594,834	4,733,535	7,465

Table1

Well Identification, Location and Elevation

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well Identification	Well Name (if available)	Easting (UTM Zone 12 NAD83 meter)	Northing (UTM Zone 12 NAD83 meter)	Ground Surface Elevation (feet amsl)
AMI115	Mesa 12-16 Water Source Well	594,337	4,733,265	7,463
AMI116	Mesa 14-16 Water Source Well	594,866	4,732,834	7,472
AMI117	Mesa 9-16 Water Source Well	595,594	4,733,003	7,448
AMI118	Mesa 10-16 Water Source Well	595,240	4,733,065	7,457
AMI119	Mesa 15-16 Water Source Well	595,191	4,732,621	7,452
AMI120	Mesa 16-16 Water Source Well	595,623	4,732,765	7,475
AMI121	Mesa 7-21 Water Source Well	595,266	4,731,861	7,443
AMI122	Riverside 3-3	596,480	4,727,367	7,076
AMI123	Riverside 16-3	597,243	4,726,221	6,989
AMI124	Riverside 8-3	597,339	4,726,892	7,009
AMI127	Mesa 7-34	597,088	4,728,594	7,164
AMI128	Mesa 9-34	597,207	4,728,224	7,081
AMI130	Riverside 4-10	596,055	4,725,847	7,027
AMI132	Riverside 15-12 Water Well	600,090	4,724,457	6,929
AMI133	Riverside 2-14W	598,535	4,724,117	6,903
AMI135	Warbonnet 7-4 Water Well	604,818	4,717,057	7,118
AMI137	Warbonnet 9-26	608,594	4,710,224	7,331
AMI139	Stewart Point 14-20 WSW	590,629	4,740,318	7,471
AMI140	North Mesa 4-7-32-109W	590,915	4,735,685	7,513
AMI145	Warbonnet 11-10	606,084	4,715,279	7,216
AMI146	Antelope 11-10D	615,650	4,705,667	7,170
AMI147	Warbonnet 13-11	607,261	4,714,772	7,330
AMI148	Warbonnet 13-14	607,237	4,713,171	7,421
AMI149	Blue Rim State # 2	604,966	4,714,354	7,240
AMI150	Stewart Point 16-18D Water Source Well	589,358	4,742,344	7,306
AMI151	Boulder 7-19 Water Well	601,514	4,721,941	7,027
AMI154	Mesa 11-21 WSW	594,631	4,731,683	7,361
AMI156	Riverside 2-24	600,025	4,722,408	6,976
AMI159	Mesa 11-28-32-109 W	594,838	4,729,872	7,419
AMI160	MESA 12-28	594,484	4,729,952	7,440
AMI161	Stewart Point 5-29D Water Source Well	589,624	4,740,068	7,724
AMI164	Mesa 1-33	595,516	4,729,115	7,228
AMI165	Stewart Point 4-33 WSW	591,927	4,738,294	7,537
AMI166	Mesa 10-33	595,330	4,728,214	7,254
AMI167	Mesa 12-33	594,413	4,728,309	7,421
AMI168	Mesa 5-33	594,498	4,728,775	7,408
AMI182	HIGHWAY #7 WATER WELL	613,938	4,705,986	7,271
AMI186	WARBONNET 8-6	602,003	4,717,261	7,021
AMI188	NORTH PINEDALE 14-8	590,463	4,743,567	7,273
AMI190	RIVERSIDE 11-14	598,099	4,723,362	6,936
AMI191	VIBLE 1-11D	598,895	4,725,266	6,895
AMI192	RAINBOW 13-30	610,541	4,710,085	7,301
AMI193	WARBONNET 4-10	605,719	4,716,003	7,184
AMI194	LOVATT DRAW STATE 36-4	599,263	4,728,810	7,047
AMI197	WARBONNET 11-23	607,699	4,711,908	7,406
AMI198	WARBONNET 16-5	603,643	4,716,368	7,082
AMI201	RIVERSIDE 13-12	599,291	4,724,392	6,929
AMI202	WARBONNET 3-3	605,967	4,717,487	7,274
AMI204	WARBONNET 16-10	606,865	4,714,713	7,347
AMI209	WARBONNET 15-26	608,088	4,709,805	7,313

Table1

Well Identification, Location and Elevation

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well Identification	Well Name (if available)	Easting (UTM Zone 12 NAD83 meter)	Northing (UTM Zone 12 NAD83 meter)	Ground Surface Elevation (feet amsl)
AMI210	WARBONNET 10-9D	604,987	4,715,099	7,186
AMI212	WARBONNET 9-15	606,855	4,713,605	7,415
AMI213	PETROGULF STATE 36-9	600,494	4,718,477	7,049
AMI214	WARBONNET 12-9	603,987	4,715,215	7,136
AMI231	Riverside 10-13	600,213	4,723,295	7,013
AMI232	Warbonnet 5-25	609,021	4,710,841	7,335
AMI233	Boulder 15-4	604,840	4,726,146	6,982
AMI234	Warbonnet 5-4	604,116	4,717,176	7,140
AMI235	Warbonnet 2-8	603,261	4,715,909	7,082
AMI237	Warbonnet 7-15D	606,789	4,714,178	7,351
AMI238	Mesa 12-17 Water Source Well	593,480	4,733,266	7,469
AMI239	Mesa 15-20 Water Source Well	593,637	4,731,285	7,459
AMI242	Warbonnet 8-25	610,177	4,710,788	7,319
AMI247	Boulder 15-18	601,517	4,722,715	6,986
AMI248	Boulder 12A-33	604,183	4,718,326	7,060
AMI249	Warbonnet 2D-3D	606,435	4,717,111	7,238
AMI250	Boulder 1-32	603,533	4,719,194	7,094
AMI251	BOULDER 14-34	605,942	4,717,849	7,196
AMI252	Boulder 15D-7D	601,714	4,724,650	7,017
AMI253	Boulder 6-32	602,824	4,718,686	7,046
AMI254	JONAH FIELD OFFICE	617,383	4,701,075	7,095
AMI255	Mesa 15B-27D	596,781	4,729,400	7,183
AMI257	Mesa 7C-35D	598,614	4,728,154	7,047
AMI258	Riverside 11-25	599,659	4,720,069	6,999
AMI259	Riverside 13-4 Water Well	594,576	4,726,470	7,054
AMI261	Riverside 4D-1D	599,346	4,726,686	6,939
AMI262	Riverside 4D-25D	599,274	4,720,692	6,950
AMI263	Warbonnet 1-21	605,276	4,712,711	7,283
AMI265	Warbonnet 5D-15D	605,878	4,713,892	7,333
AMI266	Warbonnet 6-5	602,836	4,717,143	7,092
AMI267	Warbonnet 8B-10D	606,794	4,715,900	7,270
AMI269	Warbonnet 8-8	603,659	4,715,508	7,135
AMI272	Mesa 7-34B Water Well	597,087	4,728,606	7,188
AMI274	RIVERSIDE 7-13	600,101	4,723,661	6,981
AMI275	Warbonnet 5-9 *	604,138	4,715,601	7,118
AMI276	Riverside 4D-2D	597,725	4,727,140	7,025
AMI280	BOULDER 14-32	602,879	4,718,043	7,049
AMI285	WARBONNET 7-5	603,232	4,717,174	7,070
AMI291	Warbonnet 4-9	603,926	4,716,053	7,110
AMI301	WARBONNET 11-4 WW	604,516	4,716,382	7,114
AMI304	Jensen 11-11	598,106	4,724,944	6,888
AS001	Blue Rim Well 4084	604,541	4,712,402	7,286
AS007	MT. Airy Well #19	593,234	4,736,460	7,394
AS010	Buckhorn Well #307	612,923	4,707,355	7,196
AS011	Mud Hole Well #69	616,812	4,705,676	7,093
AS013	Mount Airy-2 #4694	589,798	4,738,403	7,626
AS014	N.W. Squaretop	611,680	4,711,595	7,382
AS015	Water Hole Draw	617,132	4,707,969	7,254
AS016	Morcroft #4	594,340	4,740,320	7,049
AS019	Clark Bloom Well	589,200	4,744,630	7,403

Table1

Well Identification, Location and Elevation

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well Identification	Well Name (if available)	Easting (UTM Zone 12 NAD83 meter)	Northing (UTM Zone 12 NAD83 meter)	Ground Surface Elevation (feet amsl)
AS034	Two Buttes	600,489	4,734,297	7,091
AS036	Middle Mesa Well #509 (deepened)	590,341	4,734,705	7,520
AS047	Bloomfield #2	590,756	4,746,807	7,158
AS054	RAMSEY #1	590,651	4,746,716	7,219
AS063	Stockwell #5	590,621	4,747,376	7,196
SHB-11-29W		603,348	4,701,715	7,101
SHB-4-36W		609,273	4,700,980	7,255
T-1-RW		590,868	4,743,493	7,229
T-1-SW		590,862	4,743,489	7,229
T-2a-G		589,439	4,736,442	7,531
T-2b-G		589,813	4,731,290	7,468
T-2-RW		595,137	4,732,765	7,459
T-2-SW		595,142	4,732,765	7,458
T-3-RW		606,659	4,714,183	7,357
T-3-SW		606,658	4,714,188	7,357
T-4-RW-a		615,681	4,705,606	7,176
T-4-RW-b		615,665	4,705,616	7,176
T-4-SW		615,671	4,705,607	7,176
T-5-RW		603,690	4,722,581	7,017
T-6-RW		591,791	4,720,153	6,999
T-7-RW		585,256	4,745,424	7,330
T-7-SW		585,255	4,745,427	7,330
T-8-A		605,294	4,727,790	6,929
T-8-SW		605,294	4,727,788	6,929
T-9-RW		618,590	4,713,818	7,296
X-1-A		590,231	4,746,653	7,180
X-1-SW		590,227	4,746,654	7,180
X-2-A		593,811	4,743,062	7,113
X-2-SW		593,817	4,743,061	7,113
X-3-A		602,529	4,733,659	6,994
X-3-SW		602,534	4,733,660	6,994
T-6-RW		591,791	4,720,153	6,999
T-6-SW		591,795	4,720,149	6,998
T-7-RW		585,256	4,745,424	7,330
T-8-SW		605,294	4,727,788	6,929
T-9-RW		618,590	4,713,818	7,296
X-3-SW		602,534	4,733,660	6,994
X-4a-A		598,055	4,724,838	6,888
X-4-RW		598,040	4,724,840	6,888
X-4-SW		598,060	4,724,838	6,888
X-5-A		587,807	4,713,398	6,813
X-5-SW		587,805	4,713,398	6,809
YP-10-11W		601,515	4,697,814	7,104

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
30-107-06dd 01	0	Shale
30-107-06dd 01	35	Shale
30-107-06dd 01	47	Sandstone
30-107-06dd 01	81	Shale
30-107-06dd 01	100	Sandstone
30-107-06dd 01	141	Shale
30-107-06dd 01	153	Sandstone
30-107-4-da 01	0	Sandstone
30-107-4-da 01	20	Sandstone
30-107-4-da 01	30	Shale
30-107-4-da 01	70	Sandstone
30-107-4-da 01	80	Shale
30-107-4-da 01	140	Sandstone
30-107-4-da 01	150	Shale
30-108-20ba 01	0	Sandstone
30-108-20ba 01	5	Sandstone
30-108-20ba 01	35	Shale
30-108-20ba 01	65	Sandstone
30-108-20ba 01	155	Shale
30-108-20ba 01	191	Sandstone
30-108-20ba 01	280	Shale
30-108-20ba 01	368	Sandstone
30-108-20ba 01	470	Shale
30-108-20ba 01	480	Sandstone
30-108-20ba 01	500	Shale
30-108-20ba 01	540	Sandstone
30-108-20ba 01	570	Shale
30-108-20ba 01	600	Sandstone
32-108-27-da	0	Shale
32-108-27-da	60	Shale
32-108-27-da	80	Sandstone
32-108-27-da	115	Shale
32-108-27-da	148	Sandstone
32-108-27-da	150	Shale
33-109-10a 01	0	Unconsolidated
33-109-10a 01	52	Unconsolidated
33-109-10a 01	190	Shale
AD007	0	Unconsolidated
AD007	16	Unconsolidated
AD007	54	Shale
AD007	69	Sandstone
AD007	70	Shale
AD016	0	Unconsolidated
AD016	15	Unconsolidated
AD016	17	Sandstone
AD016	40	Shale
AD016	43	Sandstone
AD016	44	Shale
AD018	0	Unconsolidated
AD018	30	Unconsolidated
AD018	94	Shale
AD018	106	Sandstone
AD018	168	Shale
AD018	180	Sandstone
AD020	0	Unconsolidated
AD020	10	Unconsolidated
AD020	85	Shale
AD020	89	Sandstone
AD020	120	Shale
AD084	0	Unconsolidated
AD084	67	Unconsolidated
AD084	104	Sandstone
AD084	108	Shale
AD084	111	Sandstone
AD084	132	Shale
AD084	141	Sandstone
AD084	142	Shale
AD085	0	Unconsolidated
AD085	45	Unconsolidated
AD085	70	Shale
AD085	85	Sandstone
AD085	96	Shale
AD086	0	Unconsolidated
AD086	50	Unconsolidated
AD086	80	Shale
AD086	90	Sandstone
AD086	110	Shale
AD087	0	Unconsolidated
AD087	55	Unconsolidated
AD087	70	Shale
AD087	90	Sandstone
AD087	110	Shale
AD089	0	Unconsolidated

Well ID	Depth	Lithology
AD020	132	Sandstone
AD021	0	Shale
AD021	30	Shale
AD021	35	Sandstone
AD021	40	Shale
AD021	45	Sandstone
AD021	170	Shale
AD021	190	Sandstone
AD021	213	Shale
AD021	218	Sandstone
AD021	220	Shale
AD022	0	Unconsolidated
AD022	18	Unconsolidated
AD022	98	Shale
AD022	100	Sandstone
AD022	120	Shale
AD033	0	Shale
AD033	60	Shale
AD033	70	Siltstone
AD033	285	Shale
AD033	306	Sandstone
AD035	0	Unconsolidated
AD035	120	Unconsolidated
AD035	182	Shale
AD035	186	Sandstone
AD035	200	Shale
AD036	0	Shale
AD036	98	Shale
AD036	105	Sandstone
AD036	147	Shale
AD036	164	Sandstone
AD036	165	Shale
AD037	0	Unconsolidated
AD037	14	Unconsolidated
AD037	36	Shale
AD037	42	Sandstone
AD037	112	Shale
AD037	125	Sandstone
AD037	126	Shale
AD038	0	Unconsolidated
AD038	25	Unconsolidated
AD038	30	Sandstone
AD038	75	Shale
AD038	85	Sandstone
AD038	100	Shale
AD039	0	Unconsolidated
AD039	62	Unconsolidated
AD039	82	Shale
AD039	100	Sandstone
AD039	103	Shale
AD039	112	Sandstone
AD039	143	Shale
AD039	155	Sandstone
AD039	157	Shale
AD040	0	Unconsolidated
AD040	29	Unconsolidated
AD040	38	Sandstone
AD040	46	Shale
AD040	69	Sandstone
AD040	73	Shale
AD157	0	Unconsolidated
AD157	62	Unconsolidated
AD157	64	Sandstone
AD157	68	Shale
AD157	74	Sandstone
AD157	80	Shale
AD157	100	Sandstone
AD192	0	Unconsolidated
AD192	50	Unconsolidated
AD192	58	Shale
AD192	68	Sandstone
AD192	79	Shale
AD192	80	Sandstone
AD194	0	Unconsolidated
AD194	15	Unconsolidated
AD194	25	Shale
AD194	30	Sandstone
AD194	60	Shale
AD194	75	Sandstone
AD194	80	Shale
AD194	85	Sandstone
AD194	95	Shale
AD195	0	Unconsolidated

Well ID	Depth	Lithology
AD040	79	Sandstone
AD040	82	Shale
AD040	87	Sandstone
AD041	0	Unconsolidated
AD041	30	Unconsolidated
AD041	52	Shale
AD044	0	Unconsolidated
AD044	5	Unconsolidated
AD044	25	Shale
AD044	100	Sandstone
AD044	110	Shale
AD044	120	Sandstone
AD044	135	Shale
AD044	150	Sandstone
AD045	0	Unconsolidated
AD045	109	Unconsolidated
AD045	133	Shale
AD045	151	Sandstone
AD045	152	Shale
AD046	0	Shale
AD046	100	Shale
AD046	106	Sandstone
AD046	160	Shale
AD046	180	Sandstone
AD046	185	Shale
AD047	0	Unconsolidated
AD047	25	Unconsolidated
AD047	59	Sandstone
AD047	65	Shale
AD047	85	Sandstone
AD047	95	Shale
AD047	105	Sandstone
AD056	0	Unconsolidated
AD056	47	Unconsolidated
AD056	61	Shale
AD056	88	Sandstone
AD056	90	Shale
AD057	0	Shale
AD057	58	Shale
AD057	62	Sandstone
AD057	83	Shale
AD057	107	Sandstone
AD057	243	Shale
AD057	255	Sandstone
AD057	275	Shale
AD057	283	Sandstone
AD058	0	Unconsolidated
AD058	50	Unconsolidated
AD058	71	Shale
AD058	88	Sandstone
AD058	90	Shale
AD060	0	Shale
AD060	58	Shale
AD060	60	Sandstone
AD060	75	Shale
AD063	0	Unconsolidated
AD063	74	Unconsolidated
AD063	98	Shale
AD063	111	Sandstone
AD063	112	Shale
AD210	60	Unconsolidated
AD210	102	Shale
AD210	147	Sandstone
AD210	163	Shale
ADS003	0	Unconsolidated
ADS003	20	Unconsolidated
ADS003	31	Shale
ADS003	35	Sandstone
ADS003	78	Shale
ADS003	84	Sandstone
ADS007	0	Unconsolidated
ADS007	50	Unconsolidated
ADS007	82	Shale
ADS007	87	Sandstone
ADS007	107	Shale
ADS007	114	Sandstone
ADS007	127	Shale
ADS007	136	Sandstone
ADS007	144	Shale
ADS007	151	Sandstone
ADS007	160	Shale
ADS008	0	Unconsolidated
ADS008	120	Unconsolidated

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AD089	67	Unconsolidated
AD089	68	Shale
AD106	0	Unconsolidated
AD106	60	Unconsolidated
AD106	78	Shale
AD106	85	Sandstone
AD106	90	Shale
AD118	0	Unconsolidated
AD118	52	Unconsolidated
AD118	88	Shale
AD118	95	Sandstone
AD118	96	Shale
AD123	0	Unconsolidated
AD123	38	Unconsolidated
AD123	50	Shale
AD123	60	Sandstone
AD123	70	Shale
AD135	0	Unconsolidated
AD135	43	Unconsolidated
AD135	75	Sandstone
AD135	80	Shale
AD136	0	Unconsolidated
AD136	110	Unconsolidated
AD149	0	Unconsolidated
AD149	65	Unconsolidated
AD149	82	Shale
AD149	91	Sandstone
AD149	100	Shale
AD151	0	Unconsolidated
AD151	4	Unconsolidated
AD151	180	Shale
AD151	240	Sandstone
AD151	255	Shale
AD151	270	Sandstone
AD151	295	Shale
AD151	303	Sandstone
ADS027	61	Unconsolidated
ADS027	80	Shale
ADS027	99	Sandstone
ADS027	100	Shale
ADS029	0	Unconsolidated
ADS029	50	Unconsolidated
ADS029	68	Shale
ADS029	82	Sandstone
ADS029	100	Shale
ADS035	0	Unconsolidated
ADS035	95	Unconsolidated
ADS035	120	Shale
ADSM001	0	Unconsolidated
ADSM001	40	Unconsolidated
ADSM001	90	Sandstone
ADSM001	100	Shale
AMI007	0	Unconsolidated
AMI007	14	Unconsolidated
AMI007	22	Shale
AMI007	75	Sandstone
AMI007	145	Shale
AMI007	175	Sandstone
AMI007	190	Shale
AMI007	210	Sandstone
AMI007	545	Shale
AMI007	555	Sandstone
AMI007	585	Shale
AMI007	625	Sandstone
AMI007	660	Shale
AMI007	690	Sandstone
AMI007	740	Shale
AMI007	775	Sandstone
AMI007	813	Shale
AMI008	0	Shale
AMI008	24	Shale
AMI008	45	Sandstone
AMI008	80	Shale
AMI008	115	Sandstone
AMI008	175	Shale
AMI008	200	Sandstone
AMI008	455	Shale
AMI008	475	Sandstone
AMI008	520	Shale
AMI008	540	Sandstone
AMI008	565	Shale
AMI008	580	Sandstone
AMI008	660	Shale

Well ID	Depth	Lithology
AD195	23	Unconsolidated
AD195	51	Shale
AD195	95	Sandstone
AD195	96	Shale
AD195	101	Sandstone
AD195	115	Shale
AD195	129	Sandstone
AD195	186	Shale
AD195	221	Sandstone
AD195	240	Shale
AD196	0	Unconsolidated
AD196	31	Unconsolidated
AD196	40	Sandstone
AD196	55	Shale
AD196	62	Sandstone
AD196	74	Shale
AD196	79	Sandstone
AD196	84	Shale
AD196	107	Sandstone
AD196	120	Shale
AD200	0	Unconsolidated
AD200	16	Unconsolidated
AD200	31	Shale
AD200	45	Sandstone
AD200	54	Shale
AD200	64	Sandstone
AD200	96	Shale
AD200	135	Sandstone
AD202	0	Unconsolidated
AD202	59	Unconsolidated
AD202	60	Sandstone
AD207	0	Unconsolidated
AD207	57	Unconsolidated
AD207	80	Shale
AD207	90	Sandstone
AD207	95	Shale
AD210	0	Unconsolidated
AMI010	370	Sandstone
AMI010	413	Shale
AMI011	0	Unconsolidated
AMI011	8	Unconsolidated
AMI011	14	Shale
AMI011	19	Sandstone
AMI011	55	Shale
AMI011	70	Sandstone
AMI011	125	Shale
AMI011	140	Sandstone
AMI011	300	Shale
AMI011	345	Sandstone
AMI011	420	Shale
AMI011	435	Sandstone
AMI011	540	Shale
AMI011	555	Sandstone
AMI011	650	Shale
AMI011	685	Sandstone
AMI011	733	Shale
AMI012	0	Shale
AMI012	12	Shale
AMI012	16	Sandstone
AMI012	36	Shale
AMI012	38	Sandstone
AMI012	165	Shale
AMI012	180	Sandstone
AMI012	190	Shale
AMI012	200	Sandstone
AMI012	220	Shale
AMI012	230	Sandstone
AMI012	260	Shale
AMI012	275	Sandstone
AMI012	345	Shale
AMI012	370	Sandstone
AMI012	380	Shale
AMI012	400	Sandstone
AMI012	425	Shale
AMI012	440	Sandstone
AMI012	475	Shale
AMI012	485	Sandstone
AMI012	493	Shale
AMI013	0	Shale
AMI013	60	Shale
AMI013	70	Sandstone
AMI013	105	Shale
AMI013	120	Sandstone

Well ID	Depth	Lithology
ADS008	160	Shale
ADS008	185	Sandstone
ADS008	225	Shale
ADS008	235	Sandstone
ADS008	350	Shale
ADS011	0	Sandstone
ADS011	50	Sandstone
ADS011	90	Shale
ADS011	100	Sandstone
ADS011	120	Shale
ADS012	0	Unconsolidated
ADS012	90	Unconsolidated
ADS012	100	Shale
ADS015	0	Unconsolidated
ADS015	45	Unconsolidated
ADS015	85	Shale
ADS015	95	Sandstone
ADS015	125	Shale
ADS016	0	Unconsolidated
ADS016	45	Unconsolidated
ADS016	82	Shale
ADS016	85	Sandstone
ADS016	95	Shale
ADS016	100	Sandstone
ADS016	115	Shale
ADS017	0	Unconsolidated
ADS017	55	Unconsolidated
ADS017	87	Shale
ADS017	97	Sandstone
ADS017	105	Shale
ADS026	0	Unconsolidated
ADS026	40	Unconsolidated
ADS026	50	Sandstone
ADS026	80	Shale
ADS026	90	Sandstone
ADS026	100	Shale
ADS027	0	Unconsolidated
AMI014	550	Sandstone
AMI014	645	Shale
AMI014	650	Sandstone
AMI014	745	Shale
AMI014	750	Sandstone
AMI014	772	Shale
AMI015	0	Sandstone
AMI015	20	Sandstone
AMI015	180	Shale
AMI015	190	Sandstone
AMI015	400	Shale
AMI015	410	Sandstone
AMI015	495	Shale
AMI015	510	Sandstone
AMI015	555	Shale
AMI015	565	Sandstone
AMI015	575	Shale
AMI015	585	Sandstone
AMI015	650	Shale
AMI015	685	Sandstone
AMI015	705	Shale
AMI015	710	Sandstone
AMI016	0	Shale
AMI016	40	Shale
AMI016	85	Sandstone
AMI016	110	Shale
AMI016	120	Sandstone
AMI016	305	Shale
AMI016	325	Sandstone
AMI016	535	Shale
AMI016	545	Sandstone
AMI016	620	Shale
AMI016	635	Sandstone
AMI016	670	Shale
AMI018	0	Shale
AMI018	205	Shale
AMI018	210	Sandstone
AMI018	242	Shale
AMI018	249	Sandstone
AMI018	530	Shale
AMI018	570	Sandstone
AMI018	595	Shale
AMI018	601	Sandstone
AMI018	650	Shale
AMI020	0	Gravel
AMI020	57	Gravel

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI008	700	Sandstone
AMI008	753	Shale
AMI010	0	Unconsolidated
AMI010	24	Unconsolidated
AMI010	45	Shale
AMI010	75	Sandstone
AMI010	145	Shale
AMI010	155	Sandstone
AMI010	240	Shale
AMI010	280	Sandstone
AMI010	300	Shale
AMI010	320	Sandstone
AMI010	350	Shale
AMI023	18	Gravel
AMI023	45	Shale
AMI023	50	Sandstone
AMI023	140	Shale
AMI023	145	Sandstone
AMI023	165	Shale
AMI023	175	Sandstone
AMI023	200	Shale
AMI023	220	Sandstone
AMI023	240	Shale
AMI023	270	Sandstone
AMI023	292	Shale
AMI026	0	Shale
AMI026	45	Shale
AMI026	55	Sandstone
AMI026	80	Shale
AMI026	90	Sandstone
AMI026	160	Shale
AMI026	170	Sandstone
AMI026	285	Shale
AMI026	295	Sandstone
AMI026	370	Shale
AMI026	395	Sandstone
AMI026	405	Shale
AMI026	415	Sandstone
AMI026	430	Shale
AMI026	440	Sandstone
AMI026	450	Shale
AMI026	460	Sandstone
AMI026	485	Shale
AMI026	495	Sandstone
AMI026	540	Shale
AMI026	555	Sandstone
AMI026	580	Shale
AMI027	0	Gravel
AMI027	8	Gravel
AMI027	80	Shale
AMI027	115	Sandstone
AMI027	300	Shale
AMI027	340	Sandstone
AMI027	730	Shale
AMI027	790	Sandstone
AMI027	910	Shale
AMI027	935	Sandstone
AMI027	940	Shale
AMI028	0	Unconsolidated
AMI028	16	Unconsolidated
AMI028	270	Shale
AMI028	330	Sandstone
AMI028	690	Shale
AMI028	795	Sandstone
AMI028	900	Shale
AMI028	965	Sandstone
AMI028	980	Shale
AMI029	0	Gravel
AMI029	15	Gravel
AMI029	170	Shale
AMI029	310	Sandstone
AMI029	335	Shale
AMI029	385	Sandstone
AMI078	220	Sandstone
AMI078	347	Shale
AMI078	362	Sandstone
AMI078	485	Shale
AMI078	492	Sandstone
AMI078	515	Shale
AMI078	537	Sandstone
AMI078	542	Shale
AMI078	567	Sandstone
AMI078	576	Shale

Well ID	Depth	Lithology
AMI013	210	Shale
AMI013	220	Sandstone
AMI013	290	Shale
AMI013	330	Sandstone
AMI013	380	Shale
AMI013	400	Sandstone
AMI013	540	Shale
AMI013	555	Sandstone
AMI013	593	Shale
AMI014	0	Gravel
AMI014	16	Gravel
AMI014	140	Shale
AMI014	145	Sandstone
AMI014	540	Shale
AMI029	480	Shale
AMI029	560	Sandstone
AMI029	780	Shale
AMI029	840	Sandstone
AMI029	890	Shale
AMI029	930	Sandstone
AMI029	940	Shale
AMI030	0	Shale
AMI030	180	Shale
AMI030	190	Sandstone
AMI030	330	Shale
AMI030	335	Sandstone
AMI030	445	Shale
AMI030	455	Sandstone
AMI030	485	Shale
AMI030	495	Sandstone
AMI030	605	Shale
AMI030	625	Sandstone
AMI030	680	Shale
AMI030	695	Sandstone
AMI030	745	Shale
AMI033	0	Shale
AMI033	126	Shale
AMI033	157	Sandstone
AMI033	182	Shale
AMI033	197	Sandstone
AMI033	295	Shale
AMI033	475	Sandstone
AMI033	512	Shale
AMI033	528	Sandstone
AMI033	536	Shale
AMI033	551	Sandstone
AMI033	622	Shale
AMI033	700	Sandstone
AMI034	0	Shale
AMI034	30	Shale
AMI034	45	Sandstone
AMI034	90	Shale
AMI034	100	Sandstone
AMI034	125	Shale
AMI034	130	Sandstone
AMI034	145	Shale
AMI034	155	Sandstone
AMI034	192	Shale
AMI034	200	Sandstone
AMI034	285	Shale
AMI034	295	Sandstone
AMI034	400	Shale
AMI034	415	Sandstone
AMI034	445	Shale
AMI034	480	Sandstone
AMI034	520	Shale
AMI034	530	Sandstone
AMI034	590	Shale
AMI034	625	Sandstone
AMI034	700	Shale
AMI036	0	Unconsolidated
AMI036	48	Unconsolidated
AMI036	84	Sandstone
AMI036	110	Shale
AMI090	720	Sandstone
AMI090	810	Shale
AMI090	870	Sandstone
AMI090	960	Shale
AMI090	1000	Sandstone
AMI090	1050	Shale
AMI099	0	Unconsolidated
AMI099	8	Unconsolidated
AMI099	50	Shale

Well ID	Depth	Lithology
AMI020	65	Shale
AMI020	75	Sandstone
AMI020	128	Shale
AMI020	132	Sandstone
AMI020	168	Shale
AMI020	174	Sandstone
AMI020	205	Shale
AMI020	210	Sandstone
AMI020	226	Shale
AMI020	232	Sandstone
AMI020	255	Shale
AMI020	265	Sandstone
AMI020	292	Shale
AMI023	0	Gravel
AMI036	145	Sandstone
AMI036	165	Shale
AMI036	172	Sandstone
AMI036	194	Shale
AMI036	225	Sandstone
AMI036	226	Shale
AMI037	0	Shale
AMI037	45	Shale
AMI037	55	Sandstone
AMI037	105	Shale
AMI037	120	Sandstone
AMI037	210	Shale
AMI037	235	Sandstone
AMI037	260	Shale
AMI037	275	Sandstone
AMI037	505	Shale
AMI037	530	Sandstone
AMI037	550	Shale
AMI037	570	Sandstone
AMI037	670	Shale
AMI037	705	Sandstone
AMI037	765	Shale
AMI043	0	Gravel
AMI043	35	Gravel
AMI043	80	Sandstone
AMI043	95	Shale
AMI043	165	Sandstone
AMI043	290	Shale
AMI043	320	Sandstone
AMI043	375	Shale
AMI043	425	Sandstone
AMI043	490	Shale
AMI047	0	Unconsolidated
AMI047	58	Unconsolidated
AMI047	85	Sandstone
AMI047	90	Shale
AMI054	0	Unconsolidated
AMI054	77	Unconsolidated
AMI054	80	Shale
AMI064	0	Shale
AMI064	168	Shale
AMI064	208	Sandstone
AMI064	210	Shale
AMI065	0	Unconsolidated
AMI065	3	Unconsolidated
AMI065	36	Shale
AMI065	42	Sandstone
AMI065	118	Shale
AMI065	120	Sandstone
AMI065	147	Shale
AMI065	149	Sandstone
AMI071	0	Unconsolidated
AMI071	51	Unconsolidated
AMI071	71	Shale
AMI071	72	Sandstone
AMI071	106	Shale
AMI071	117	Sandstone
AMI071	118	Shale
AMI078	0	Shale
AMI078	215	Shale
AMI111	940	Shale
AMI113	0	Sandstone
AMI113	115	Sandstone
AMI113	160	Shale
AMI113	200	Sandstone
AMI113	360	Shale
AMI113	400	Sandstone
AMI113	570	Shale
AMI113	590	Sandstone

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI078	592	Sandstone
AMI078	610	Shale
AMI079	0	Unconsolidated
AMI079	23	Unconsolidated
AMI079	55	Shale
AMI079	60	Sandstone
AMI079	87	Shale
AMI079	102	Sandstone
AMI079	185	Shale
AMI079	201	Sandstone
AMI079	368	Shale
AMI079	386	Sandstone
AMI079	410	Shale
AMI081	0	Gravel
AMI081	36	Gravel
AMI081	55	Shale
AMI081	80	Sandstone
AMI081	155	Shale
AMI081	185	Sandstone
AMI081	425	Shale
AMI081	445	Sandstone
AMI081	460	Shale
AMI081	470	Sandstone
AMI081	500	Shale
AMI081	515	Sandstone
AMI081	580	Shale
AMI081	610	Sandstone
AMI081	645	Shale
AMI089	0	Shale
AMI089	15	Shale
AMI089	45	Sandstone
AMI089	210	Shale
AMI089	217	Sandstone
AMI089	342	Shale
AMI089	367	Sandstone
AMI089	485	Shale
AMI089	492	Sandstone
AMI089	510	Shale
AMI089	532	Sandstone
AMI089	585	Shale
AMI089	610	Sandstone
AMI089	630	Shale
AMI090	0	Shale
AMI090	120	Shale
AMI090	255	Sandstone
AMI090	285	Shale
AMI090	375	Sandstone
AMI090	405	Shale
AMI090	495	Sandstone
AMI090	660	Shale
AMI117	552	Shale
AMI117	585	Sandstone
AMI117	610	Shale
AMI117	633	Sandstone
AMI117	675	Shale
AMI117	741	Sandstone
AMI117	750	Siltstone
AMI118	0	Gravel
AMI118	30	Gravel
AMI118	125	Shale
AMI118	178	Siltstone
AMI118	257	Shale
AMI118	324	Siltstone
AMI118	510	Shale
AMI118	528	Siltstone
AMI118	557	Sandstone
AMI118	592	Shale
AMI118	603	Sandstone
AMI118	652	Siltstone
AMI118	678	Sandstone
AMI118	743	Siltstone
AMI118	756	Sandstone
AMI118	823	Shale
AMI118	855	Sandstone
AMI118	900	Shale
AMI119	0	Gravel
AMI119	20	Gravel
AMI119	160	Shale
AMI119	235	Sandstone
AMI119	325	Shale
AMI119	420	Sandstone
AMI119	680	Shale
AMI119	805	Sandstone

Well ID	Depth	Lithology
AMI099	60	Sandstone
AMI099	97	Shale
AMI099	132	Sandstone
AMI099	167	Shale
AMI099	182	Sandstone
AMI099	223	Shale
AMI099	290	Sandstone
AMI107	0	Unconsolidated
AMI107	35	Unconsolidated
AMI107	65	Shale
AMI107	78	Sandstone
AMI107	126	Shale
AMI107	149	Sandstone
AMI107	191	Shale
AMI107	246	Sandstone
AMI107	268	Shale
AMI107	274	Sandstone
AMI107	310	Shale
AMI108	0	Unconsolidated
AMI108	65	Unconsolidated
AMI108	120	Shale
AMI108	130	Sandstone
AMI108	180	Shale
AMI108	200	Sandstone
AMI108	240	Shale
AMI108	245	Sandstone
AMI108	290	Shale
AMI108	300	Sandstone
AMI108	350	Shale
AMI108	450	Sandstone
AMI108	475	Shale
AMI108	480	Sandstone
AMI108	510	Shale
AMI108	520	Sandstone
AMI108	600	Shale
AMI111	0	Unconsolidated
AMI111	4	Unconsolidated
AMI111	75	Shale
AMI111	97	Sandstone
AMI111	201	Shale
AMI111	212	Sandstone
AMI111	322	Shale
AMI111	338	Sandstone
AMI111	640	Shale
AMI111	656	Sandstone
AMI111	692	Shale
AMI111	735	Sandstone
AMI111	810	Shale
AMI111	860	Sandstone
AMI111	872	Shale
AMI111	922	Sandstone
AMI121	831	Shale
AMI121	843	Sandstone
AMI121	921	Shale
AMI121	932	Sandstone
AMI121	951	Shale
AMI121	972	Sandstone
AMI121	990	Shale
AMI122	0	Unconsolidated
AMI122	21	Unconsolidated
AMI122	51	Shale
AMI122	98	Sandstone
AMI122	154	Shale
AMI122	179	Sandstone
AMI122	197	Shale
AMI122	210	Sandstone
AMI122	223	Shale
AMI122	231	Sandstone
AMI122	398	Shale
AMI122	415	Sandstone
AMI122	451	Shale
AMI122	469	Sandstone
AMI122	491	Shale
AMI122	517	Sandstone
AMI122	531	Shale
AMI122	543	Sandstone
AMI122	561	Shale
AMI122	570	Sandstone
AMI123	0	Unconsolidated
AMI123	35	Unconsolidated
AMI123	48	Sandstone
AMI123	67	Shale
AMI123	75	Sandstone

Well ID	Depth	Lithology
AMI113	635	Shale
AMI113	655	Sandstone
AMI113	695	Shale
AMI113	720	Sandstone
AMI113	785	Shale
AMI113	920	Sandstone
AMI114	0	Gravel
AMI114	20	Gravel
AMI114	200	Shale
AMI114	225	Sandstone
AMI114	300	Shale
AMI114	420	Sandstone
AMI114	540	Shale
AMI114	620	Sandstone
AMI114	860	Shale
AMI114	980	Sandstone
AMI114	1000	Shale
AMI115	0	Unconsolidated
AMI115	25	Unconsolidated
AMI115	215	Shale
AMI115	230	Sandstone
AMI115	300	Shale
AMI115	430	Sandstone
AMI115	540	Shale
AMI115	640	Sandstone
AMI115	840	Shale
AMI115	940	Sandstone
AMI115	1000	Shale
AMI116	0	Gravel
AMI116	15	Gravel
AMI116	75	Shale
AMI116	178	Siltstone
AMI116	190	Sandstone
AMI116	275	Shale
AMI116	385	Siltstone
AMI116	400	Sandstone
AMI116	520	Shale
AMI116	545	Sandstone
AMI116	630	Shale
AMI116	650	Sandstone
AMI116	825	Shale
AMI116	860	Sandstone
AMI116	882	Shale
AMI116	902	Sandstone
AMI116	930	Shale
AMI117	0	Gravel
AMI117	15	Gravel
AMI117	212	Shale
AMI117	255	Sandstone
AMI117	454	Shale
AMI117	527	Siltstone
AMI127	185	Shale
AMI127	193	Sandstone
AMI127	260	Shale
AMI127	282	Sandstone
AMI127	312	Shale
AMI127	405	Siltstone
AMI127	425	Sandstone
AMI127	447	Shale
AMI127	482	Sandstone
AMI127	491	Shale
AMI127	503	Sandstone
AMI127	510	Shale
AMI128	0	Gravel
AMI128	6	Gravel
AMI128	55	Shale
AMI128	65	Sandstone
AMI128	112	Siltstone
AMI128	126	Sandstone
AMI128	153	Shale
AMI128	167	Sandstone
AMI128	248	Shale
AMI128	265	Sandstone
AMI128	372	Shale
AMI128	390	Sandstone
AMI128	410	Siltstone
AMI130	0	Unconsolidated
AMI130	23	Unconsolidated
AMI130	65	Shale
AMI130	71	Sandstone
AMI130	107	Shale
AMI130	118	Sandstone
AMI130	172	Shale

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI119	840	Shale
AMI119	1000	Sandstone
AMI120	0	Gravel
AMI120	16	Gravel
AMI120	225	Shale
AMI120	267	Siltstone
AMI120	289	Shale
AMI120	314	Sandstone
AMI120	463	Shale
AMI120	538	Siltstone
AMI120	582	Shale
AMI120	610	Sandstone
AMI120	630	Shale
AMI120	672	Sandstone
AMI120	703	Shale
AMI120	728	Sandstone
AMI120	789	Siltstone
AMI120	876	Sandstone
AMI120	900	Shale
AMI120	914	Sandstone
AMI120	950	Siltstone
AMI121	0	Unconsolidated
AMI121	15	Unconsolidated
AMI121	647	Shale
AMI121	661	Sandstone
AMI121	781	Shale
AMI121	796	Sandstone
AMI133	70	Shale
AMI133	76	Sandstone
AMI133	105	Shale
AMI133	130	Sandstone
AMI133	170	Shale
AMI133	185	Sandstone
AMI133	215	Shale
AMI133	230	Sandstone
AMI133	320	Shale
AMI133	330	Sandstone
AMI133	370	Shale
AMI133	390	Sandstone
AMI133	450	Shale
AMI133	470	Sandstone
AMI133	500	Shale
AMI133	510	Sandstone
AMI133	560	Shale
AMI133	650	Sandstone
AMI133	700	Shale
AMI135	0	Shale
AMI135	72	Shale
AMI135	80	Sandstone
AMI135	94	Shale
AMI135	111	Sandstone
AMI135	225	Siltstone
AMI135	240	Sandstone
AMI135	312	Shale
AMI135	325	Sandstone
AMI135	375	Shale
AMI135	426	Sandstone
AMI135	470	Siltstone
AMI137	0	Unconsolidated
AMI137	6	Unconsolidated
AMI137	82	Shale
AMI137	96	Sandstone
AMI137	120	Shale
AMI137	138	Sandstone
AMI137	315	Shale
AMI137	342	Sandstone
AMI137	408	Siltstone
AMI137	421	Sandstone
AMI137	445	Siltstone
AMI137	475	Sandstone
AMI137	530	Shale
AMI137	555	Sandstone
AMI137	570	Shale
AMI139	0	Shale
AMI139	102	Shale
AMI139	191	Sandstone
AMI139	315	Shale
AMI139	321	Sandstone
AMI139	547	Shale
AMI139	562	Sandstone
AMI139	720	Shale
AMI139	738	Sandstone
AMI139	792	Shale

Well ID	Depth	Lithology
AMI123	200	Shale
AMI123	215	Sandstone
AMI123	233	Shale
AMI123	244	Sandstone
AMI123	263	Shale
AMI123	275	Sandstone
AMI123	310	Shale
AMI124	0	Unconsolidated
AMI124	16	Unconsolidated
AMI124	70	Shale
AMI124	80	Sandstone
AMI124	145	Shale
AMI124	155	Sandstone
AMI124	220	Shale
AMI124	230	Sandstone
AMI124	300	Shale
AMI124	325	Sandstone
AMI124	410	Shale
AMI124	430	Sandstone
AMI124	455	Shale
AMI124	470	Sandstone
AMI124	520	Shale
AMI127	0	Gravel
AMI127	5	Gravel
AMI127	21	Shale
AMI127	85	Sandstone
AMI127	132	Shale
AMI127	137	Sandstone
AMI139	972	Sandstone
AMI139	1000	Shale
AMI140	0	Gravel
AMI140	18	Gravel
AMI140	45	Sandstone
AMI140	180	Shale
AMI140	190	Sandstone
AMI140	345	Shale
AMI140	360	Sandstone
AMI140	470	Shale
AMI140	490	Sandstone
AMI140	560	Shale
AMI140	570	Sandstone
AMI140	685	Shale
AMI140	710	Sandstone
AMI140	795	Shale
AMI140	820	Sandstone
AMI140	830	Shale
AMI140	850	Sandstone
AMI140	950	Shale
AMI140	970	Sandstone
AMI140	1040	Shale
AMI145	0	Shale
AMI145	6	Shale
AMI145	12	Sandstone
AMI145	35	Shale
AMI145	40	Sandstone
AMI145	75	Shale
AMI145	85	Sandstone
AMI145	150	Shale
AMI145	160	Sandstone
AMI145	360	Shale
AMI145	375	Sandstone
AMI145	390	Shale
AMI145	405	Sandstone
AMI145	440	Shale
AMI145	480	Sandstone
AMI145	515	Shale
AMI145	535	Sandstone
AMI145	620	Shale
AMI145	635	Sandstone
AMI145	715	Shale
AMI145	730	Sandstone
AMI145	765	Shale
AMI145	785	Sandstone
AMI145	820	Shale
AMI146	0	Shale
AMI146	5	Shale
AMI146	12	Sandstone
AMI146	22	Shale
AMI146	35	Sandstone
AMI146	85	Shale
AMI146	95	Sandstone
AMI146	170	Shale
AMI146	180	Sandstone

Well ID	Depth	Lithology
AMI130	185	Siltstone
AMI130	285	Shale
AMI130	300	Sandstone
AMI130	325	Shale
AMI130	337	Sandstone
AMI130	350	Shale
AMI132	0	Unconsolidated
AMI132	40	Unconsolidated
AMI132	62	Shale
AMI132	97	Sandstone
AMI132	148	Shale
AMI132	182	Sandstone
AMI132	201	Shale
AMI132	245	Sandstone
AMI132	261	Siltstone
AMI132	268	Sandstone
AMI132	277	Shale
AMI132	285	Sandstone
AMI132	327	Shale
AMI132	339	Sandstone
AMI132	352	Shale
AMI132	363	Sandstone
AMI132	387	Shale
AMI132	394	Sandstone
AMI132	410	Shale
AMI133	0	Unconsolidated
AMI133	12	Unconsolidated
AMI133	25	Sandstone
AMI146	640	Sandstone
AMI146	680	Shale
AMI147	0	Unconsolidated
AMI147	25	Unconsolidated
AMI147	167	Shale
AMI147	182	Sandstone
AMI147	320	Shale
AMI147	337	Sandstone
AMI147	492	Shale
AMI147	515	Sandstone
AMI147	542	Shale
AMI147	597	Sandstone
AMI147	618	Shale
AMI147	624	Sandstone
AMI147	650	Shale
AMI148	0	Shale
AMI148	10	Shale
AMI148	17	Sandstone
AMI148	85	Shale
AMI148	95	Sandstone
AMI148	150	Shale
AMI148	170	Sandstone
AMI148	205	Shale
AMI148	220	Sandstone
AMI148	290	Shale
AMI148	315	Sandstone
AMI148	530	Shale
AMI148	540	Sandstone
AMI148	570	Shale
AMI148	600	Sandstone
AMI148	630	Shale
AMI148	645	Sandstone
AMI148	655	Shale
AMI148	675	Sandstone
AMI148	690	Shale
AMI148	700	Sandstone
AMI148	740	Shale
AMI148	755	Sandstone
AMI148	765	Shale
AMI148	775	Sandstone
AMI148	835	Shale
AMI148	850	Sandstone
AMI148	863	Shale
AMI149	0	Unconsolidated
AMI149	20	Unconsolidated
AMI149	101	Siltstone
AMI149	108	Sandstone
AMI149	147	Shale
AMI149	212	Siltstone
AMI149	361	Shale
AMI149	426	Siltstone
AMI149	437	Sandstone
AMI149	531	Siltstone
AMI149	550	Shale
AMI149	640	Siltstone

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI139	813	Sandstone
AMI139	865	Shale
AMI139	881	Sandstone
AMI139	956	Shale
AMI150	93	Siltstone
AMI150	225	Shale
AMI150	248	Sandstone
AMI150	381	Shale
AMI150	403	Sandstone
AMI150	496	Shale
AMI150	510	Sandstone
AMI150	625	Shale
AMI150	637	Sandstone
AMI150	728	Shale
AMI150	741	Sandstone
AMI150	863	Shale
AMI150	871	Sandstone
AMI150	903	Shale
AMI150	920	Sandstone
AMI150	951	Shale
AMI150	963	Sandstone
AMI150	980	Shale
AMI151	0	Shale
AMI151	75	Shale
AMI151	87	Sandstone
AMI151	123	Shale
AMI151	137	Sandstone
AMI151	187	Shale
AMI151	212	Sandstone
AMI151	263	Shale
AMI151	287	Sandstone
AMI151	342	Shale
AMI151	361	Sandstone
AMI151	390	Shale
AMI154	0	Shale
AMI154	45	Shale
AMI154	60	Sandstone
AMI154	220	Shale
AMI154	224	Sandstone
AMI154	447	Shale
AMI154	456	Sandstone
AMI154	567	Shale
AMI154	572	Sandstone
AMI154	761	Shale
AMI154	782	Sandstone
AMI154	805	Shale
AMI154	848	Sandstone
AMI154	910	Shale
AMI156	0	Shale
AMI156	5	Shale
AMI156	10	Sandstone
AMI156	25	Shale
AMI156	40	Sandstone
AMI156	95	Shale
AMI156	100	Sandstone
AMI156	175	Shale
AMI156	185	Sandstone
AMI156	310	Shale
AMI156	325	Sandstone
AMI156	440	Shale
AMI156	455	Sandstone
AMI156	510	Shale
AMI156	540	Sandstone
AMI156	595	Shale
AMI168	22	Gravel
AMI168	125	Shale
AMI168	140	Sandstone
AMI168	200	Shale
AMI168	210	Sandstone
AMI168	320	Shale
AMI168	330	Sandstone
AMI168	580	Shale
AMI168	610	Sandstone
AMI168	630	Shale
AMI168	650	Sandstone
AMI168	780	Shale
AMI168	800	Sandstone
AMI168	830	Shale
AMI168	870	Sandstone
AMI168	940	Shale
AMI182	0	Unconsolidated
AMI182	2	Unconsolidated
AMI182	233	Shale

Well ID	Depth	Lithology
AMI146	450	Shale
AMI146	470	Sandstone
AMI146	550	Shale
AMI146	580	Sandstone
AMI146	625	Shale
AMI156	615	Sandstone
AMI156	660	Shale
AMI156	675	Sandstone
AMI156	700	Shale
AMI159	0	Gravel
AMI159	17	Gravel
AMI159	85	Shale
AMI159	98	Sandstone
AMI159	210	Shale
AMI159	220	Sandstone
AMI159	350	Shale
AMI159	365	Sandstone
AMI159	590	Shale
AMI159	620	Sandstone
AMI159	690	Shale
AMI159	710	Sandstone
AMI159	750	Shale
AMI159	760	Sandstone
AMI159	800	Shale
AMI159	840	Sandstone
AMI159	867	Shale
AMI159	875	Sandstone
AMI159	892	Shale
AMI159	905	Sandstone
AMI160	0	Gravel
AMI160	16	Gravel
AMI160	35	Shale
AMI160	80	Sandstone
AMI160	230	Shale
AMI160	240	Sandstone
AMI160	560	Shale
AMI160	575	Sandstone
AMI160	655	Shale
AMI160	670	Sandstone
AMI160	720	Shale
AMI160	730	Sandstone
AMI160	750	Shale
AMI160	795	Sandstone
AMI160	910	Shale
AMI160	945	Sandstone
AMI160	960	Shale
AMI160	980	Sandstone
AMI160	1020	Shale
AMI161	0	Gravel
AMI161	10	Gravel
AMI161	22	Sandstone
AMI161	73	Shale
AMI161	104	Sandstone
AMI161	415	Shale
AMI161	442	Sandstone
AMI161	460	Shale
AMI161	488	Sandstone
AMI161	963	Shale
AMI161	998	Sandstone
AMI161	1098	Shale
AMI161	1123	Sandstone
AMI164	0	Gravel
AMI164	18	Gravel
AMI164	98	Sandstone
AMI164	137	Shale
AMI190	165	Siltstone
AMI190	189	Sandstone
AMI190	245	Shale
AMI190	258	Sandstone
AMI190	312	Shale
AMI190	325	Sandstone
AMI190	347	Shale
AMI190	358	Sandstone
AMI190	416	Shale
AMI190	457	Siltstone
AMI190	475	Sandstone
AMI190	510	Shale
AMI191	0	Unconsolidated
AMI191	15	Unconsolidated
AMI191	35	Shale
AMI191	40	Sandstone
AMI191	90	Shale
AMI191	105	Sandstone

Well ID	Depth	Lithology
AMI149	673	Sandstone
AMI149	710	Siltstone
AMI150	0	Shale
AMI150	75	Shale
AMI150	87	Sandstone
AMI164	161	Sandstone
AMI164	310	Shale
AMI164	325	Sandstone
AMI164	408	Shale
AMI164	417	Sandstone
AMI164	435	Shale
AMI164	451	Sandstone
AMI164	545	Shale
AMI164	577	Sandstone
AMI164	590	Shale
AMI165	0	Gravel
AMI165	25	Gravel
AMI165	160	Shale
AMI165	210	Sandstone
AMI165	235	Shale
AMI165	330	Sandstone
AMI165	400	Shale
AMI165	570	Sandstone
AMI165	610	Shale
AMI165	690	Sandstone
AMI165	915	Shale
AMI165	950	Sandstone
AMI165	985	Shale
AMI165	1043	Sandstone
AMI166	0	Sandstone
AMI166	7	Sandstone
AMI166	80	Shale
AMI166	99	Sandstone
AMI166	165	Shale
AMI166	173	Sandstone
AMI166	216	Siltstone
AMI166	385	Shale
AMI166	484	Sandstone
AMI166	530	Shale
AMI166	601	Sandstone
AMI166	645	Shale
AMI166	670	Sandstone
AMI166	705	Shale
AMI166	728	Sandstone
AMI166	757	Shale
AMI166	785	Sandstone
AMI166	790	Shale
AMI167	0	Gravel
AMI167	16	Gravel
AMI167	35	Shale
AMI167	80	Sandstone
AMI167	230	Shale
AMI167	240	Sandstone
AMI167	560	Shale
AMI167	575	Sandstone
AMI167	655	Shale
AMI167	670	Sandstone
AMI167	720	Shale
AMI167	730	Sandstone
AMI167	850	Shale
AMI167	890	Sandstone
AMI167	950	Shale
AMI167	975	Sandstone
AMI167	1000	Shale
AMI168	0	Gravel
AMI193	443	Siltstone
AMI193	458	Sandstone
AMI193	500	Shale
AMI193	505	Sandstone
AMI193	510	Shale
AMI194	0	Gravel
AMI194	20	Gravel
AMI194	65	Shale
AMI194	82	Sandstone
AMI194	93	Shale
AMI194	102	Sandstone
AMI194	127	Shale
AMI194	152	Sandstone
AMI194	189	Siltstone
AMI194	225	Sandstone
AMI194	296	Shale
AMI194	310	Sandstone
AMI194	356	Shale

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI182	241	Sandstone
AMI182	491	Shale
AMI182	502	Sandstone
AMI182	572	Shale
AMI182	594	Sandstone
AMI182	610	Shale
AMI186	0	Unknown
AMI186	530	Unknown
AMI186	565	Shale
AMI186	585	Sandstone
AMI186	610	Shale
AMI186	625	Sandstone
AMI186	645	Shale
AMI186	680	Sandstone
AMI186	690	Shale
AMI186	715	Sandstone
AMI186	740	Shale
AMI188	0	Shale
AMI188	10	Shale
AMI188	18	Sandstone
AMI188	140	Shale
AMI188	160	Sandstone
AMI188	230	Shale
AMI188	240	Sandstone
AMI188	350	Shale
AMI188	370	Sandstone
AMI188	530	Shale
AMI188	545	Sandstone
AMI188	665	Shale
AMI188	680	Sandstone
AMI188	690	Shale
AMI188	710	Sandstone
AMI188	740	Shale
AMI188	760	Sandstone
AMI188	800	Shale
AMI190	0	Unconsolidated
AMI190	17	Unconsolidated
AMI190	35	Shale
AMI190	41	Sandstone
AMI190	75	Shale
AMI190	84	Sandstone
AMI201	28	Shale
AMI201	29	Sandstone
AMI201	68	Shale
AMI201	75	Sandstone
AMI201	149	Shale
AMI201	163	Sandstone
AMI201	215	Shale
AMI201	231	Sandstone
AMI201	256	Shale
AMI201	273	Sandstone
AMI201	335	Shale
AMI201	356	Sandstone
AMI201	392	Shale
AMI201	410	Sandstone
AMI201	437	Shale
AMI201	441	Sandstone
AMI201	450	Shale
AMI202	0	Unconsolidated
AMI202	12	Unconsolidated
AMI202	184	Shale
AMI202	347	Siltstone
AMI202	382	Shale
AMI202	394	Sandstone
AMI202	473	Siltstone
AMI202	481	Sandstone
AMI202	564	Shale
AMI202	579	Sandstone
AMI202	632	Siltstone
AMI202	651	Sandstone
AMI202	698	Siltstone
AMI202	712	Sandstone
AMI202	768	Siltstone
AMI202	791	Sandstone
AMI202	885	Siltstone
AMI202	897	Sandstone
AMI202	910	Shale
AMI204	0	Shale
AMI204	15	Shale
AMI204	22	Sandstone
AMI204	65	Shale
AMI204	71	Sandstone
AMI204	228	Shale

Well ID	Depth	Lithology
AMI191	120	Shale
AMI191	130	Sandstone
AMI191	290	Shale
AMI191	320	Sandstone
AMI191	355	Shale
AMI191	370	Sandstone
AMI191	425	Shale
AMI191	440	Sandstone
AMI191	460	Shale
AMI192	0	Shale
AMI192	62	Shale
AMI192	109	Sandstone
AMI192	118	Shale
AMI192	156	Siltstone
AMI192	237	Shale
AMI192	325	Siltstone
AMI192	360	Sandstone
AMI192	419	Shale
AMI192	441	Sandstone
AMI192	452	Shale
AMI192	469	Sandstone
AMI192	481	Shale
AMI192	492	Sandstone
AMI192	551	Shale
AMI192	559	Sandstone
AMI192	635	Shale
AMI192	647	Sandstone
AMI192	650	Shale
AMI192	698	Sandstone
AMI193	0	Unconsolidated
AMI193	15	Unconsolidated
AMI193	85	Shale
AMI193	97	Sandstone
AMI193	132	Siltstone
AMI193	157	Shale
AMI193	173	Siltstone
AMI193	238	Shale
AMI193	310	Siltstone
AMI193	352	Shale
AMI193	363	Sandstone
AMI193	377	Shale
AMI193	405	Sandstone
AMI209	195	Shale
AMI209	205	Sandstone
AMI209	300	Shale
AMI209	315	Sandstone
AMI209	450	Shale
AMI209	455	Sandstone
AMI209	610	Shale
AMI209	640	Sandstone
AMI209	720	Shale
AMI209	750	Sandstone
AMI209	760	Shale
AMI209	775	Sandstone
AMI209	800	Shale
AMI210	0	Shale
AMI210	67	Shale
AMI210	75	Sandstone
AMI210	123	Siltstone
AMI210	203	Shale
AMI210	212	Sandstone
AMI210	251	Shale
AMI210	297	Siltstone
AMI210	308	Shale
AMI210	327	Sandstone
AMI210	471	Shale
AMI210	493	Sandstone
AMI210	502	Shale
AMI210	517	Sandstone
AMI210	572	Shale
AMI210	585	Sandstone
AMI210	592	Shale
AMI210	608	Sandstone
AMI210	666	Shale
AMI210	682	Sandstone
AMI210	710	Shale
AMI212	0	Shale
AMI212	8	Shale
AMI212	32	Sandstone
AMI212	293	Shale
AMI212	337	Siltstone
AMI212	421	Shale
AMI212	436	Sandstone

Well ID	Depth	Lithology
AMI194	369	Sandstone
AMI194	423	Shale
AMI194	437	Sandstone
AMI194	528	Shale
AMI194	547	Sandstone
AMI194	555	Shale
AMI194	567	Sandstone
AMI194	581	Shale
AMI194	603	Sandstone
AMI194	638	Shale
AMI194	653	Sandstone
AMI194	675	Shale
AMI194	689	Sandstone
AMI194	710	Shale
AMI197	0	Shale
AMI197	46	Shale
AMI197	80	Sandstone
AMI197	581	Shale
AMI197	596	Sandstone
AMI197	631	Shale
AMI197	652	Sandstone
AMI197	683	Shale
AMI197	698	Sandstone
AMI197	710	Shale
AMI198	0	Unconsolidated
AMI198	12	Unconsolidated
AMI198	23	Shale
AMI198	32	Sandstone
AMI198	83	Shale
AMI198	92	Sandstone
AMI198	158	Siltstone
AMI198	245	Shale
AMI198	265	Sandstone
AMI198	273	Shale
AMI198	291	Sandstone
AMI198	321	Shale
AMI198	341	Sandstone
AMI198	372	Shale
AMI198	380	Sandstone
AMI198	390	Shale
AMI201	0	Unconsolidated
AMI201	7	Unconsolidated
AMI213	191	Shale
AMI213	206	Sandstone
AMI213	314	Shale
AMI213	321	Sandstone
AMI213	389	Shale
AMI213	412	Sandstone
AMI213	493	Shale
AMI213	506	Sandstone
AMI213	511	Shale
AMI213	523	Sandstone
AMI213	575	Shale
AMI213	589	Sandstone
AMI213	638	Shale
AMI213	649	Sandstone
AMI213	661	Shale
AMI213	673	Sandstone
AMI213	698	Shale
AMI213	712	Sandstone
AMI213	730	Shale
AMI214	0	Shale
AMI214	90	Shale
AMI214	105	Sandstone
AMI214	395	Shale
AMI214	405	Sandstone
AMI214	410	Shale
AMI214	460	Sandstone
AMI214	580	Shale
AMI214	640	Sandstone
AMI214	670	Shale
AMI214	690	Sandstone
AMI214	740	Shale
AMI231	0	Unconsolidated
AMI231	14	Unconsolidated
AMI231	26	Sandstone
AMI231	48	Siltstone
AMI231	79	Shale
AMI231	181	Siltstone
AMI231	197	Sandstone
AMI231	256	Shale
AMI231	272	Sandstone
AMI231	348	Shale

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI204	297	Siltstone
AMI204	431	Shale
AMI204	447	Sandstone
AMI204	531	Shale
AMI204	569	Sandstone
AMI204	584	Shale
AMI204	603	Sandstone
AMI204	641	Shale
AMI204	663	Sandstone
AMI204	685	Shale
AMI204	702	Sandstone
AMI204	710	Shale
AMI209	0	Sandstone
AMI209	18	Sandstone
AMI209	55	Shale
AMI209	58	Sandstone
AMI209	125	Shale
AMI209	130	Sandstone
AMI232	146	Siltstone
AMI232	245	Shale
AMI232	260	Siltstone
AMI232	272	Sandstone
AMI232	327	Shale
AMI232	396	Siltstone
AMI232	460	Shale
AMI232	476	Sandstone
AMI232	503	Shale
AMI232	518	Sandstone
AMI232	563	Shale
AMI232	581	Sandstone
AMI232	611	Shale
AMI232	623	Sandstone
AMI232	657	Shale
AMI232	671	Sandstone
AMI232	692	Shale
AMI232	703	Sandstone
AMI232	710	Shale
AMI233	0	Shale
AMI233	31	Shale
AMI233	75	Sandstone
AMI233	81	Shale
AMI233	132	Siltstone
AMI233	141	Sandstone
AMI233	203	Shale
AMI233	214	Sandstone
AMI233	252	Shale
AMI233	264	Sandstone
AMI233	332	Shale
AMI233	357	Sandstone
AMI233	391	Shale
AMI233	403	Sandstone
AMI233	410	Shale
AMI234	0	Shale
AMI234	6	Shale
AMI234	16	Sandstone
AMI234	45	Shale
AMI234	76	Sandstone
AMI234	81	Shale
AMI234	90	Sandstone
AMI234	135	Siltstone
AMI234	142	Sandstone
AMI234	156	Shale
AMI234	265	Siltstone
AMI234	288	Sandstone
AMI234	311	Shale
AMI234	326	Sandstone
AMI234	372	Shale
AMI234	382	Sandstone
AMI234	393	Shale
AMI234	405	Sandstone
AMI234	427	Shale
AMI234	438	Sandstone
AMI234	450	Shale
AMI235	0	Sandstone
AMI235	56	Sandstone
AMI235	240	Shale
AMI235	253	Sandstone
AMI235	275	Siltstone
AMI249	646	Sandstone
AMI249	738	Shale
AMI249	750	Sandstone
AMI249	783	Shale
AMI249	798	Sandstone

Well ID	Depth	Lithology
AMI212	485	Shale
AMI212	512	Siltstone
AMI212	547	Shale
AMI212	579	Sandstone
AMI212	593	Shale
AMI212	607	Sandstone
AMI212	614	Shale
AMI212	628	Sandstone
AMI212	653	Shale
AMI212	672	Sandstone
AMI212	698	Shale
AMI212	710	Sandstone
AMI212	730	Shale
AMI213	0	Unconsolidated
AMI213	27	Unconsolidated
AMI213	95	Shale
AMI213	99	Sandstone
AMI213	142	Shale
AMI213	149	Sandstone
AMI235	297	Sandstone
AMI235	303	Shale
AMI235	315	Sandstone
AMI235	380	Shale
AMI235	395	Sandstone
AMI235	410	Shale
AMI237	0	Unconsolidated
AMI237	17	Unconsolidated
AMI237	48	Shale
AMI237	82	Sandstone
AMI237	356	Shale
AMI237	371	Sandstone
AMI237	412	Siltstone
AMI237	438	Sandstone
AMI237	503	Shale
AMI237	518	Sandstone
AMI237	556	Shale
AMI237	571	Sandstone
AMI237	598	Shale
AMI237	612	Sandstone
AMI237	627	Shale
AMI237	638	Sandstone
AMI237	649	Shale
AMI237	660	Sandstone
AMI237	693	Shale
AMI237	709	Sandstone
AMI237	732	Shale
AMI237	741	Sandstone
AMI237	750	Shale
AMI238	0	Shale
AMI238	600	Shale
AMI238	615	Sandstone
AMI238	700	Shale
AMI238	720	Sandstone
AMI238	900	Shale
AMI238	925	Sandstone
AMI238	995	Shale
AMI239	0	Shale
AMI239	460	Shale
AMI239	500	Sandstone
AMI239	660	Shale
AMI239	700	Sandstone
AMI239	760	Shale
AMI239	800	Sandstone
AMI239	840	Shale
AMI239	850	Sandstone
AMI239	930	Shale
AMI239	970	Sandstone
AMI239	990	Shale
AMI239	1030	Sandstone
AMI239	1120	Shale
AMI242	0	Shale
AMI242	9	Shale
AMI242	16	Sandstone
AMI242	78	Shale
AMI242	125	Siltstone
AMI242	137	Sandstone
AMI242	223	Siltstone
AMI242	226	Shale
AMI242	279	Sandstone
AMI252	265	Sandstone
AMI252	328	Shale
AMI252	346	Sandstone
AMI252	371	Shale

Well ID	Depth	Lithology
AMI231	362	Sandstone
AMI231	418	Shale
AMI231	427	Sandstone
AMI231	473	Shale
AMI231	492	Sandstone
AMI231	593	Shale
AMI231	598	Sandstone
AMI231	637	Shale
AMI231	651	Sandstone
AMI231	687	Shale
AMI231	700	Sandstone
AMI231	710	Shale
AMI232	0	Unconsolidated
AMI232	12	Unconsolidated
AMI232	27	Shale
AMI232	32	Sandstone
AMI232	63	Shale
AMI232	92	Sandstone
AMI232	123	Shale
AMI242	321	Siltstone
AMI242	374	Shale
AMI242	412	Siltstone
AMI242	428	Sandstone
AMI242	433	Shale
AMI242	452	Sandstone
AMI242	473	Shale
AMI242	488	Siltstone
AMI242	498	Shale
AMI242	505	Sandstone
AMI242	575	Shale
AMI242	601	Sandstone
AMI242	645	Shale
AMI242	658	Sandstone
AMI242	670	Shale
AMI247	0	Unconsolidated
AMI247	35	Unconsolidated
AMI247	81	Shale
AMI247	97	Sandstone
AMI247	158	Siltstone
AMI247	221	Shale
AMI247	238	Sandstone
AMI247	269	Shale
AMI247	281	Sandstone
AMI247	338	Shale
AMI247	361	Sandstone
AMI247	403	Shale
AMI247	422	Sandstone
AMI247	456	Shale
AMI247	471	Sandstone
AMI247	496	Shale
AMI247	518	Sandstone
AMI247	530	Shale
AMI248	0	Shale
AMI248	47	Shale
AMI248	55	Sandstone
AMI248	72	Shale
AMI248	148	Sandstone
AMI248	236	Siltstone
AMI248	247	Sandstone
AMI248	288	Shale
AMI248	302	Sandstone
AMI248	331	Shale
AMI248	346	Sandstone
AMI248	365	Shale
AMI248	381	Sandstone
AMI248	405	Shale
AMI248	418	Sandstone
AMI248	431	Shale
AMI248	447	Sandstone
AMI248	450	Shale
AMI249	0	Shale
AMI249	83	Shale
AMI249	198	Siltstone
AMI249	212	Sandstone
AMI249	295	Siltstone
AMI249	369	Shale
AMI249	571	Siltstone
AMI249	585	Sandstone
AMI249	612	Shale
AMI257	370	Shale
AMI257	380	Sandstone
AMI257	400	Shale
AMI257	440	Sandstone

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI249	816	Shale
AMI249	825	Sandstone
AMI249	858	Shale
AMI249	872	Sandstone
AMI249	910	Shale
AMI249	928	Sandstone
AMI249	950	Shale
AMI250	0	Shale
AMI250	95	Shale
AMI250	110	Sandstone
AMI250	240	Shale
AMI250	260	Sandstone
AMI250	320	Shale
AMI250	360	Sandstone
AMI250	400	Shale
AMI250	500	Sandstone
AMI250	520	Shale
AMI250	540	Sandstone
AMI250	660	Shale
AMI250	700	Sandstone
AMI250	770	Shale
AMI251	0	Shale
AMI251	32	Shale
AMI251	218	Siltstone
AMI251	338	Shale
AMI251	385	Siltstone
AMI251	401	Sandstone
AMI251	435	Siltstone
AMI251	450	Sandstone
AMI251	487	Shale
AMI251	554	Siltstone
AMI251	612	Shale
AMI251	628	Sandstone
AMI251	654	Shale
AMI251	671	Sandstone
AMI251	725	Shale
AMI251	741	Sandstone
AMI251	782	Shale
AMI251	797	Sandstone
AMI251	839	Shale
AMI251	853	Sandstone
AMI251	881	Shale
AMI251	895	Sandstone
AMI251	922	Shale
AMI251	937	Sandstone
AMI251	950	Shale
AMI252	0	Unconsolidated
AMI252	15	Unconsolidated
AMI252	61	Shale
AMI252	72	Siltstone
AMI252	79	Sandstone
AMI252	124	Shale
AMI252	151	Siltstone
AMI252	156	Sandstone
AMI252	250	Siltstone
AMI262	0	Shale
AMI262	69	Shale
AMI262	73	Sandstone
AMI262	162	Shale
AMI262	173	Sandstone
AMI262	201	Shale
AMI262	218	Sandstone
AMI262	271	Shale
AMI262	285	Sandstone
AMI262	343	Shale
AMI262	351	Sandstone
AMI262	387	Shale
AMI262	398	Sandstone
AMI262	410	Shale
AMI263	0	Sandstone
AMI263	12	Sandstone
AMI263	23	Shale
AMI263	46	Sandstone
AMI263	162	Shale
AMI263	231	Siltstone
AMI263	247	Sandstone
AMI263	253	Shale
AMI263	400	Siltstone
AMI263	402	Sandstone
AMI263	440	Siltstone
AMI263	450	Sandstone
AMI263	460	Siltstone
AMI263	475	Shale

Well ID	Depth	Lithology
AMI252	379	Sandstone
AMI252	395	Shale
AMI252	408	Sandstone
AMI252	450	Shale
AMI253	0	Shale
AMI253	100	Shale
AMI253	109	Sandstone
AMI253	175	Shale
AMI253	185	Sandstone
AMI253	235	Shale
AMI253	248	Sandstone
AMI253	308	Shale
AMI253	322	Sandstone
AMI253	429	Shale
AMI253	438	Sandstone
AMI253	456	Shale
AMI253	471	Sandstone
AMI253	477	Shale
AMI253	486	Sandstone
AMI253	488	Shale
AMI253	496	Sandstone
AMI253	510	Shale
AMI254	0	Sandstone
AMI254	18	Sandstone
AMI254	85	Shale
AMI254	95	Sandstone
AMI254	345	Shale
AMI254	350	Sandstone
AMI254	590	Shale
AMI254	610	Sandstone
AMI254	640	Shale
AMI255	0	Sandstone
AMI255	83	Sandstone
AMI255	161	Siltstone
AMI255	238	Shale
AMI255	258	Sandstone
AMI255	310	Shale
AMI255	325	Siltstone
AMI255	375	Shale
AMI255	392	Sandstone
AMI255	438	Shale
AMI255	451	Sandstone
AMI255	487	Shale
AMI255	503	Sandstone
AMI255	575	Shale
AMI255	591	Sandstone
AMI255	600	Shale
AMI257	0	Shale
AMI257	230	Shale
AMI257	250	Sandstone
AMI257	270	Shale
AMI257	280	Sandstone
AMI257	300	Shale
AMI257	310	Sandstone
AMI257	320	Shale
AMI257	340	Sandstone
AMI266	10	Unconsolidated
AMI266	185	Shale
AMI266	198	Sandstone
AMI266	206	Shale
AMI266	212	Sandstone
AMI266	257	Shale
AMI266	281	Sandstone
AMI266	362	Shale
AMI266	371	Sandstone
AMI266	390	Shale
AMI267	0	Shale
AMI267	460	Shale
AMI267	490	Sandstone
AMI267	510	Shale
AMI267	530	Sandstone
AMI267	560	Shale
AMI267	620	Sandstone
AMI267	760	Shale
AMI267	810	Sandstone
AMI267	840	Shale
AMI267	910	Sandstone
AMI269	0	Unconsolidated
AMI269	28	Unconsolidated
AMI269	63	Sandstone
AMI269	238	Siltstone
AMI269	303	Shale
AMI269	317	Sandstone

Well ID	Depth	Lithology
AMI257	460	Shale
AMI257	500	Sandstone
AMI257	550	Shale
AMI257	620	Sandstone
AMI257	680	Shale
AMI258	0	Sandstone
AMI258	25	Sandstone
AMI258	130	Shale
AMI258	140	Sandstone
AMI258	275	Shale
AMI258	290	Sandstone
AMI258	350	Shale
AMI258	365	Sandstone
AMI258	425	Shale
AMI258	435	Sandstone
AMI258	460	Shale
AMI258	485	Sandstone
AMI258	700	Shale
AMI258	760	Sandstone
AMI259	0	Shale
AMI259	35	Shale
AMI259	45	Sandstone
AMI259	130	Shale
AMI259	140	Sandstone
AMI259	330	Shale
AMI259	345	Sandstone
AMI259	370	Shale
AMI259	390	Sandstone
AMI259	480	Shale
AMI259	495	Sandstone
AMI259	630	Shale
AMI259	650	Sandstone
AMI259	670	Shale
AMI261	0	Unconsolidated
AMI261	35	Unconsolidated
AMI261	48	Shale
AMI261	71	Sandstone
AMI261	95	Shale
AMI261	105	Sandstone
AMI261	137	Shale
AMI261	142	Sandstone
AMI261	200	Shale
AMI261	212	Sandstone
AMI261	225	Shale
AMI261	240	Sandstone
AMI261	279	Shale
AMI261	351	Sandstone
AMI261	379	Shale
AMI261	381	Sandstone
AMI261	422	Shale
AMI261	429	Sandstone
AMI261	451	Shale
AMI261	458	Sandstone
AMI261	472	Shale
AMI261	495	Sandstone
AMI261	510	Shale
AMI274	645	Sandstone
AMI274	720	Shale
AMI274	735	Sandstone
AMI274	775	Shale
AMI274	780	Sandstone
AMI274	800	Shale
AMI275	0	Shale
AMI275	79	Shale
AMI275	83	Sandstone
AMI275	167	Shale
AMI275	173	Sandstone
AMI275	285	Shale
AMI275	291	Sandstone
AMI275	345	Shale
AMI275	371	Sandstone
AMI275	411	Shale
AMI275	435	Sandstone
AMI275	450	Shale
AMI276	0	Unconsolidated
AMI276	14	Unconsolidated
AMI276	96	Shale
AMI276	110	Sandstone
AMI276	131	Shale
AMI276	148	Sandstone
AMI276	215	Shale
AMI276	228	Sandstone
AMI276	275	Shale

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AMI263	502	Siltstone
AMI263	510	Sandstone
AMI263	515	Siltstone
AMI263	525	Sandstone
AMI263	575	Siltstone
AMI263	589	Sandstone
AMI263	607	Shale
AMI263	638	Siltstone
AMI263	657	Sandstone
AMI263	692	Siltstone
AMI263	711	Sandstone
AMI263	728	Siltstone
AMI263	742	Sandstone
AMI263	750	Shale
AMI265	0	Unconsolidated
AMI265	14	Unconsolidated
AMI265	336	Shale
AMI265	343	Sandstone
AMI265	447	Shale
AMI265	463	Sandstone
AMI265	528	Shale
AMI265	541	Sandstone
AMI265	571	Shale
AMI265	582	Sandstone
AMI265	618	Shale
AMI265	631	Sandstone
AMI265	652	Shale
AMI265	675	Sandstone
AMI265	731	Shale
AMI265	763	Sandstone
AMI265	790	Shale
AMI266	0	Unconsolidated
AMI285	440	Sandstone
AMI285	500	Shale
AMI285	520	Sandstone
AMI285	580	Shale
AMI285	600	Sandstone
AMI285	660	Shale
AMI285	680	Sandstone
AMI285	700	Shale
AMI291	0	Unconsolidated
AMI291	4	Unconsolidated
AMI291	18	Shale
AMI291	21	Sandstone
AMI291	198	Shale
AMI291	221	Sandstone
AMI291	232	Shale
AMI291	285	Siltstone
AMI291	291	Sandstone
AMI291	327	Shale
AMI291	341	Siltstone
AMI291	362	Sandstone
AMI291	378	Shale
AMI291	410	Sandstone
AMI291	440	Shale
AMI291	462	Sandstone
AMI291	491	Shale
AMI291	503	Sandstone
AMI291	532	Shale
AMI291	548	Sandstone
AMI291	557	Shale
AMI291	571	Sandstone
AMI291	600	Shale
AMI301	0	Unconsolidated
AMI301	40	Unconsolidated
AMI301	250	Shale
AMI301	310	Sandstone
AMI301	570	Shale
AMI301	600	Sandstone
AMI301	660	Shale
AMI301	690	Sandstone
AMI301	750	Shale
AMI301	800	Sandstone
AMI304	0	Unconsolidated
AMI304	15	Unconsolidated
AMI304	85	Shale
AMI304	98	Sandstone
AMI304	200	Shale
AMI304	240	Sandstone
AMI304	260	Shale
AS001	0	Sandstone
AS001	5	Sandstone
AS001	35	Shale

Well ID	Depth	Lithology
AMI269	415	Shale
AMI269	438	Sandstone
AMI269	456	Shale
AMI269	471	Sandstone
AMI269	510	Siltstone
AMI272	0	Shale
AMI272	220	Shale
AMI272	290	Sandstone
AMI272	340	Shale
AMI272	360	Sandstone
AMI272	430	Shale
AMI272	480	Sandstone
AMI272	540	Shale
AMI272	560	Sandstone
AMI272	600	Shale
AMI272	620	Sandstone
AMI272	730	Shale
AMI272	750	Sandstone
AMI272	790	Shale
AMI272	810	Sandstone
AMI272	835	Shale
AMI274	0	Unconsolidated
AMI274	50	Unconsolidated
AMI274	80	Sandstone
AMI274	305	Shale
AMI274	315	Sandstone
AMI274	340	Shale
AMI274	350	Sandstone
AMI274	535	Shale
AMI274	545	Sandstone
AMI274	565	Shale
AMI274	575	Sandstone
AMI274	630	Shale
AS001	570	Shale
AS001	600	Sandstone
AS007	0	Unconsolidated
AS007	3	Unconsolidated
AS007	117	Shale
AS007	204	Sandstone
AS007	300	Shale
AS007	343	Sandstone
AS010	0	Unconsolidated
AS010	5	Unconsolidated
AS010	106	Shale
AS010	107	Sandstone
AS010	130	Shale
AS010	198	Sandstone
AS010	200	Shale
AS011	0	Unconsolidated
AS011	16	Unconsolidated
AS011	70	Sandstone
AS011	80	Shale
AS011	90	Sandstone
AS011	102	Shale
AS013	0	Gravel
AS013	18	Gravel
AS013	72	Shale
AS013	75	Sandstone
AS013	138	Shale
AS013	151	Sandstone
AS013	172	Shale
AS013	260	Sandstone
AS013	313	Shale
AS013	319	Sandstone
AS013	323	Shale
AS013	361	Sandstone
AS013	417	Shale
AS013	436	Sandstone
AS013	447	Shale
AS013	468	Sandstone
AS013	490	Shale
AS014	0	Sandstone
AS014	2	Sandstone
AS014	201	Shale
AS014	216	Sandstone
AS015	0	Shale
AS015	3	Shale
AS015	20	Sandstone
AS015	85	Shale
AS015	100	Sandstone
AS015	135	Shale
AS015	145	Sandstone
AS015	175	Shale

Well ID	Depth	Lithology
AMI276	298	Sandstone
AMI276	331	Shale
AMI276	343	Sandstone
AMI276	373	Shale
AMI276	384	Sandstone
AMI276	400	Shale
AMI280	0	Sandstone
AMI280	12	Sandstone
AMI280	25	Shale
AMI280	40	Sandstone
AMI280	110	Shale
AMI280	120	Sandstone
AMI280	250	Shale
AMI280	280	Sandstone
AMI280	380	Shale
AMI280	390	Sandstone
AMI280	490	Shale
AMI280	500	Sandstone
AMI280	515	Shale
AMI280	530	Sandstone
AMI280	545	Shale
AMI280	565	Sandstone
AMI280	620	Shale
AMI280	620	Sandstone
AMI280	700	Shale
AMI285	0	Shale
AMI285	120	Shale
AMI285	140	Sandstone
AMI285	220	Shale
AMI285	240	Sandstone
AMI285	300	Shale
AMI285	340	Sandstone
AMI285	400	Shale
AS034	0	Unconsolidated
AS034	10	Unconsolidated
AS034	15	Shale
AS034	21	Sandstone
AS034	26	Shale
AS034	32	Sandstone
AS034	97	Shale
AS034	121	Sandstone
AS034	131	Shale
AS036	0	Gravel
AS036	35	Gravel
AS036	410	Shale
AS047	0	Unconsolidated
AS047	50	Unconsolidated
AS054	0	Unconsolidated
AS054	48	Unconsolidated
AS054	55	Shale
AS054	95	Sandstone
AS054	100	Shale
AS063	0	Unconsolidated
AS063	56	Unconsolidated
AS063	64	Shale
AS063	77	Sandstone
AS063	82	Shale
AS063	94	Sandstone
AS063	95	Shale
AS063	100	Sandstone
SHB-11-29W	0	Shale
SHB-11-29W	10	Shale
SHB-11-29W	15	Sandstone
SHB-11-29W	95	Shale
SHB-11-29W	105	Sandstone
SHB-11-29W	130	Shale
SHB-11-29W	142	Sandstone
SHB-11-29W	215	Shale
SHB-11-29W	230	Sandstone
SHB-11-29W	360	Shale
SHB-11-29W	370	Sandstone
SHB-11-29W	480	Shale
SHB-11-29W	550	Sandstone
SHB-11-29W	615	Shale
SHB-4-36W	0	Shale
SHB-4-36W	260	Shale
SHB-4-36W	290	Sandstone
SHB-4-36W	460	Shale
SHB-4-36W	490	Sandstone
SHB-4-36W	545	Shale
SHB-4-36W	560	Sandstone
SHB-4-36W	620	Shale
SHB-4-36W	650	Sandstone

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
AS001	65	Sandstone
AS001	155	Shale
AS001	191	Sandstone
AS001	280	Shale
AS001	368	Sandstone
AS001	470	Shale
AS001	480	Sandstone
AS001	500	Shale
AS001	540	Sandstone
T-1-RW	140	Sandstone
T-1-RW	145	Shale
T-1-RW	151	Sandstone
T-1-RW	178	Shale
T-1-RW	182	Sandstone
T-1-RW	204	Shale
T-1-RW	207	Sandstone
T-1-RW	225	Shale
T-1-RW	230	Sandstone
T-1-RW	245	Shale
T-1-RW	255	Sandstone
T-1-RW	295	Shale
T-1-RW	312	Sandstone
T-1-RW	338	Shale
T-1-RW	356	Sandstone
T-1-RW	359	Shale
T-1-RW	363	Sandstone
T-1-RW	387	Shale
T-1-RW	393	Sandstone
T-1-RW	454	Shale
T-1-RW	477	Sandstone
T-1-RW	540	Shale
T-1-RW	550	Sandstone
T-1-RW	579	Shale
T-1-RW	621	Siltstone
T-1-RW	625	Shale
T-1-RW	648	Sandstone
T-1-RW	680	Siltstone
T-1-RW	687	Sandstone
T-1-SW	0	Unconsolidated
T-1-SW	15	Unconsolidated
T-1-SW	39	Shale
T-1-SW	85	Sandstone
T-1-SW	98	Shale
T-1-SW	107	Sandstone
T-1-SW	127	Shale
T-1-SW	144	Sandstone
T-1-SW	152	Shale
T-1-SW	160	Sandstone
T-2a-G	0	Gravel
T-2a-G	16	Gravel
T-2a-G	18	Shale
T-2b-G	0	Gravel
T-2b-G	14	Gravel
T-2b-G	20	Shale
T-2-RW	0	Unconsolidated
T-2-RW	17	Unconsolidated
T-2-RW	65	Siltstone
T-2-RW	135	Shale
T-2-RW	268	Siltstone
T-2-RW	317	Shale
T-2-RW	350	Sandstone
T-2-RW	370	Siltstone
T-2-RW	500	Sandstone
T-2-RW	505	Siltstone
T-2-RW	530	Sandstone
T-2-RW	618	Shale
T-2-RW	641	Sandstone
T-2-RW	678	Siltstone
T-2-RW	691	Sandstone
T-4-SW	112	Sandstone
T-4-SW	119	Shale
T-4-SW	126	Sandstone
T-4-SW	150	Shale
T-4-SW	166	Sandstone
T-4-SW	172	Shale
T-4-SW	190	Sandstone
T-4-SW	200	Shale
T-5-RW	0	Unconsolidated
T-5-RW	12	Unconsolidated
T-5-RW	25	Sandstone
T-5-RW	42	Siltstone
T-5-RW	80	Sandstone
T-5-RW	148	Siltstone

Well ID	Depth	Lithology
AS015	185	Sandstone
AS015	190	Shale
AS016	0	Unconsolidated
AS016	33	Unconsolidated
AS016	35	Shale
AS019	0	Shale
AS019	40	Sandstone
AS019	125	Shale
AS019	140	Sandstone
AS019	280	Shale
T-2-RW	728	Siltstone
T-2-RW	772	Sandstone
T-2-RW	790	Siltstone
T-2-SW	0	Unconsolidated
T-2-SW	17	Unconsolidated
T-2-SW	68	Siltstone
T-2-SW	135	Shale
T-2-SW	155	Siltstone
T-2-SW	270	Sandstone
T-2-SW	308	Shale
T-2-SW	395	Sandstone
T-3-RW	0	Unconsolidated
T-3-RW	5	Unconsolidated
T-3-RW	12	Siltstone
T-3-RW	33	Sandstone
T-3-RW	37	Shale
T-3-RW	50	Sandstone
T-3-RW	55	Shale
T-3-RW	67	Sandstone
T-3-RW	74	Shale
T-3-RW	88	Sandstone
T-3-RW	296	Shale
T-3-RW	374	Sandstone
T-3-RW	377	Shale
T-3-RW	390	Sandstone
T-3-RW	400	Shale
T-3-RW	405	Sandstone
T-3-RW	418	Shale
T-3-RW	472	Sandstone
T-3-RW	485	Shale
T-3-RW	505	Sandstone
T-3-RW	515	Shale
T-3-RW	520	Sandstone
T-3-RW	542	Shale
T-3-RW	557	Sandstone
T-3-RW	605	Shale
T-3-RW	635	Sandstone
T-3-RW	640	Shale
T-3-RW	653	Sandstone
T-3-RW	668	Shale
T-3-RW	680	Sandstone
T-3-RW	700	Shale
T-3-RW	724	Sandstone
T-3-RW	727	Siltstone
T-3-RW	729	Sandstone
T-3-RW	731	Siltstone
T-3-RW	733	Sandstone
T-3-RW	741	Shale
T-3-RW	755	Sandstone
T-3-RW	770	Shale
T-3-SW	0	Unknown
T-3-SW	45	Unknown
T-3-SW	55	Shale
T-3-SW	65	Sandstone
T-3-SW	72	Siltstone
T-3-SW	82	Sandstone
T-3-SW	103	Siltstone
T-3-SW	118	Sandstone
T-3-SW	142	Siltstone
T-3-SW	154	Shale
T-7-RW	2	Unconsolidated
T-7-RW	116	Shale
T-7-RW	130	Sandstone
T-7-RW	160	Shale
T-7-RW	192	Siltstone
T-7-RW	230	Sandstone
T-7-RW	285	Shale
T-7-RW	300	Sandstone
T-7-RW	362	Shale
T-7-RW	364	Sandstone
T-7-RW	370	Shale
T-7-RW	400	Sandstone
T-7-RW	475	Shale

Well ID	Depth	Lithology
SHB-4-36W	740	Shale
SHB-4-36W	780	Sandstone
SHB-4-36W	860	Shale
SHB-4-36W	880	Sandstone
SHB-4-36W	960	Shale
T-1-RW	0	Unconsolidated
T-1-RW	19	Unconsolidated
T-1-RW	38	Shale
T-1-RW	119	Sandstone
T-1-RW	134	Shale
T-3-SW	165	Sandstone
T-3-SW	254	Siltstone
T-3-SW	260	Shale
T-3-SW	290	Siltstone
T-3-SW	294	Shale
T-3-SW	330	Sandstone
T-3-SW	334	Shale
T-3-SW	345	Sandstone
T-3-SW	355	Siltstone
T-3-SW	370	Sandstone
T-3-SW	375	Siltstone
T-3-SW	388	Sandstone
T-3-SW	420	Siltstone
T-3-SW	432	Sandstone
T-3-SW	444	Siltstone
T-3-SW	452	Sandstone
T-3-SW	465	Siltstone
T-4-RW-a	0	Unconsolidated
T-4-RW-a	40	Unconsolidated
T-4-RW-a	92	Siltstone
T-4-RW-a	112	Sandstone
T-4-RW-a	118	Shale
T-4-RW-a	125	Sandstone
T-4-RW-a	150	Shale
T-4-RW-a	166	Sandstone
T-4-RW-a	170	Shale
T-4-RW-a	190	Sandstone
T-4-RW-a	202	Shale
T-4-RW-a	236	Sandstone
T-4-RW-a	260	Shale
T-4-RW-a	285	Siltstone
T-4-RW-a	300	Shale
T-4-RW-a	430	Siltstone
T-4-RW-a	465	Shale
T-4-RW-a	475	Sandstone
T-4-RW-b	0	Unconsolidated
T-4-RW-b	90	Unconsolidated
T-4-RW-b	126	Sandstone
T-4-RW-b	200	Shale
T-4-RW-b	240	Sandstone
T-4-RW-b	469	Shale
T-4-RW-b	491	Sandstone
T-4-RW-b	499	Shale
T-4-RW-b	504	Sandstone
T-4-RW-b	513	Shale
T-4-RW-b	515	Sandstone
T-4-RW-b	546	Shale
T-4-RW-b	548	Sandstone
T-4-RW-b	576	Shale
T-4-RW-b	579	Sandstone
T-4-RW-b	587	Shale
T-4-RW-b	597	Sandstone
T-4-RW-b	637	Shale
T-4-RW-b	650	Sandstone
T-4-RW-b	653	Shale
T-4-RW-b	656	Sandstone
T-4-RW-b	675	Siltstone
T-4-SW	0	Sandstone
T-4-SW	40	Sandstone
T-4-SW	92	Shale
T-9-RW	340	Siltstone
T-9-RW	380	Sandstone
T-9-RW	390	Siltstone
T-9-RW	725	Sandstone
T-9-RW	740	Siltstone
T-9-RW	795	Sandstone
X-1-A	0	Unconsolidated
X-1-A	20	Unconsolidated
X-1-A	33	Sandstone
X-1-SW	0	Unconsolidated
X-1-SW	35	Unconsolidated
X-1-SW	55	Sandstone
X-1-SW	120	Siltstone

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
T-5-RW	175	Sandstone
T-5-RW	219	Siltstone
T-5-RW	345	Sandstone
T-5-RW	390	Siltstone
T-5-RW	615	Sandstone
T-6-RW	0	Unconsolidated
T-6-RW	18	Unconsolidated
T-6-RW	20	Shale
T-6-RW	29	Siltstone
T-6-RW	40	Sandstone
T-6-RW	53	Shale
T-6-RW	70	Sandstone
T-6-RW	115	Shale
T-6-RW	150	Sandstone
T-6-RW	155	Shale
T-6-RW	178	Sandstone
T-6-RW	190	Shale
T-6-RW	218	Siltstone
T-6-RW	315	Shale
T-6-RW	325	Siltstone
T-6-RW	348	Shale
T-6-RW	363	Siltstone
T-6-RW	375	Sandstone
T-6-RW	393	Shale
T-6-RW	404	Sandstone
T-6-RW	410	Shale
T-6-RW	415	Sandstone
T-6-RW	439	Shale
T-6-RW	469	Siltstone
T-6-RW	493	Shale
T-6-RW	497	Sandstone
T-6-RW	510	Shale
T-6-SW	0	Unconsolidated
T-6-SW	5	Unconsolidated
T-6-SW	17	Shale
T-6-SW	40	Sandstone
T-6-SW	65	Shale
T-6-SW	78	Sandstone
T-6-SW	92	Shale
T-6-SW	94	Sandstone
T-6-SW	160	Shale
T-6-SW	200	Siltstone
T-6-SW	220	Shale
T-6-SW	257	Sandstone
T-6-SW	260	Shale
T-7-RW	0	Unconsolidated
X-4-RW	190	Shale
X-4-RW	230	Sandstone
X-4-RW	245	Shale
X-4-RW	253	Sandstone
X-4-RW	285	Shale
X-4-RW	306	Sandstone
X-4-RW	370	Shale
X-4-RW	430	Sandstone
X-4-SW	0	Unconsolidated
X-4-SW	25	Unconsolidated
X-4-SW	40	Sandstone
X-4-SW	54	Shale
X-4-SW	60	Sandstone
X-4-SW	65	Shale
X-4-SW	75	Sandstone
X-4-SW	90	Shale
X-4-SW	100	Sandstone
X-4-SW	110	Shale
X-4-SW	115	Siltstone
X-4-SW	125	Shale
X-4-SW	135	Sandstone
X-4-SW	142	Shale
X-4-SW	170	Sandstone
X-4-SW	190	Shale
X-4-SW	220	Sandstone
X-5-A	0	Unconsolidated
X-5-A	16	Unconsolidated
X-5-A	22	Shale
X-5-SW	0	Unconsolidated
X-5-SW	16	Unconsolidated
X-5-SW	43	Siltstone
X-5-SW	46	Shale
X-5-SW	75	Siltstone
X-5-SW	97	Sandstone
X-5-SW	146	Shale
X-5-SW	161	Siltstone
X-5-SW	167	Sandstone

Well ID	Depth	Lithology
T-7-RW	476	Sandstone
T-7-RW	535	shale
T-7-SW	0	Unconsolidated
T-7-SW	2	Unconsolidated
T-7-SW	116	Shale
T-7-SW	130	Sandstone
T-7-SW	160	Shale
T-7-SW	192	Siltstone
T-7-SW	210	Sandstone
T-7-SW	220	Siltstone
T-8-A	0	Unconsolidated
T-8-A	14	Unconsolidated
T-8-A	15	Shale
T-8-SW	0	Unconsolidated
T-8-SW	14	Unconsolidated
T-8-SW	21	Shale
T-8-SW	22	Sandstone
T-8-SW	37	Shale
T-8-SW	49	Siltstone
T-8-SW	51	Shale
T-8-SW	52	Sandstone
T-8-SW	95	Shale
T-8-SW	113	Sandstone
T-8-SW	115	Shale
T-8-SW	121	Sandstone
T-8-SW	126	Shale
T-8-SW	136	Sandstone
T-8-SW	163	Shale
T-8-SW	192	Sandstone
T-8-SW	208	Shale
T-8-SW	226	Sandstone
T-8-SW	230	Siltstone
T-9-RW	0	Unconsolidated
T-9-RW	5	Unconsolidated
T-9-RW	55	Sandstone
T-9-RW	80	Shale
T-9-RW	95	Sandstone
T-9-RW	125	Siltstone
T-9-RW	130	Sandstone
T-9-RW	165	Siltstone
T-9-RW	170	Sandstone
T-9-RW	205	Siltstone
T-9-RW	215	Sandstone
T-9-RW	235	Siltstone
T-9-RW	270	Sandstone
T-9-RW	295	Siltstone
T-9-RW	315	Sandstone
YP-10-11W	795	Sandstone
YP-10-11W	800	Shale

Well ID	Depth	Lithology
X-1-SW	154.5	Sandstone
X-2-A	0	Unconsolidated
X-2-A	28	Unconsolidated
X-2-A	40	Sandstone
X-2-SW	0	Unconsolidated
X-2-SW	30	Unconsolidated
X-2-SW	50	Sandstone
X-2-SW	80	Siltstone
X-2-SW	150	Sandstone
X-3-A	0	Unconsolidated
X-3-A	37	Unconsolidated
X-3-A	38	Shale
X-3-SW	0	Unconsolidated
X-3-SW	35	Unconsolidated
X-3-SW	53	Shale
X-3-SW	66	Sandstone
X-3-SW	84	Shale
X-3-SW	89	Sandstone
X-3-SW	93	Shale
X-3-SW	100	Sandstone
X-3-SW	103	Shale
X-3-SW	112	Sandstone
X-3-SW	114	Shale
X-3-SW	133	Sandstone
X-3-SW	152	Shale
X-3-SW	173	Sandstone
X-3-SW	197	Shale
X-3-SW	208	Sandstone
X-3-SW	226	Shale
X-3-SW	246	Sandstone
X-3-SW	260	Shale
X-4a-A	0	Unconsolidated
X-4a-A	18	Unconsolidated
X-4a-A	20	Sandstone
X-4-RW	0	Unconsolidated
X-4-RW	25	Unconsolidated
X-4-RW	40	Sandstone
X-4-RW	54	Shale
X-4-RW	60	Sandstone
X-4-RW	65	Shale
X-4-RW	75	Sandstone
X-4-RW	90	Shale
X-4-RW	100	Sandstone
X-4-RW	125	Shale
X-4-RW	135	Sandstone
X-4-RW	142	Shale
X-4-RW	170	Sandstone

Table 2
Lithologic Data

Three Dimensional Geologic Model, Pinedale Anticline Project Area, Sublette County, Wyoming

Well ID	Depth	Lithology
X-5-SW	210	Siltstone
YP-10-11W	0	Shale
YP-10-11W	43	Shale
YP-10-11W	106	Sandstone
YP-10-11W	190	Shale
YP-10-11W	196	Sandstone
YP-10-11W	310	Shale
YP-10-11W	318	Sandstone
YP-10-11W	367	Shale
YP-10-11W	375	Sandstone
YP-10-11W	417	Shale
YP-10-11W	435	Sandstone
YP-10-11W	453	Shale
YP-10-11W	461	Sandstone
YP-10-11W	485	Shale
YP-10-11W	513	Sandstone
YP-10-11W	568	Shale
YP-10-11W	583	Sandstone
YP-10-11W	703	Shale
YP-10-11W	718	Sandstone
YP-10-11W	734	Shale
YP-10-11W	751	Sandstone
YP-10-11W	782	Shale

Table 3
Summary Statistics for Geologic Model, PAPA, Sublette County, Wyoming

ID	Cross-section	Easting (UTM Zone 12 NAD83 Feet)	Northing (UTM Zone 12 NAD83 Feet)	Ground Surface Elevation (feet amsl)	Vertical Length (feet)	Percent				Mean Thickness (feet)				Median Thickness (feet)			
						Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated
AA1	A-A'	1,905,567	15,560,403	7,291	1,102	30.58%	69.42%	0.00%	0.00%	17.7	42.5	4.0	0.0	16.8	32.8	4.0	0.0
AA2	A-A'	1,920,276	15,538,597	7,131	908	32.31%	67.69%	0.00%	0.00%	19.6	41.0	0.0	0.0	16.9	30.6	0.0	0.0
AA3	A-A'	1,934,891	15,516,884	7,403	1,206	41.63%	58.04%	0.33%	0.00%	22.8	33.3	0.0	0.0	17.8	24.9	0.0	0.0
AA4	A-A'	1,949,646	15,494,844	6,957	761	43.16%	52.48%	0.00%	4.36%	21.9	28.5	0.0	33.2	16.6	25.3	0.0	33.2
AA5	A-A'	1,964,448	15,472,945	6,950	748	30.13%	69.87%	0.00%	0.00%	16.1	37.3	0.0	0.0	15.1	33.8	0.0	0.0
AA6	A-A'	1,979,017	15,451,279	7,196	1,038	45.40%	53.20%	0.00%	1.40%	26.2	32.5	0.0	14.5	25.2	29.7	0.0	14.5
AA7	A-A'	1,993,445	15,429,846	7,180	984	37.64%	59.88%	0.00%	2.48%	18.5	31.0	0.0	24.4	15.8	28.7	0.0	24.4
AA8	A-A'	2,007,827	15,408,460	7,000	777	34.85%	65.15%	0.00%	0.00%	18.1	33.8	0.0	0.0	15.0	30.8	0.0	0.0
BB1	B-B'	1,917,578	15,568,518	7,190	957	30.77%	69.23%	0.00%	0.00%	19.6	44.2	0.0	0.0	18.9	31.7	0.0	0.0
BB2	B-B'	1,932,286	15,546,712	7,652	1,438	38.19%	60.62%	1.19%	0.00%	22.0	34.9	17.1	0.0	19.1	36.5	17.1	0.0
BB3	B-B'	1,946,902	15,524,999	7,406	1,213	35.04%	64.96%	0.00%	0.00%	22.4	41.5	0.0	0.0	15.7	34.8	0.0	0.0
BB4	B-B'	1,961,657	15,502,960	6,895	695	64.20%	35.50%	0.00%	0.30%	27.9	16.4	0.0	2.1	17.9	14.2	0.0	2.1
BB5	B-B'	1,976,459	15,481,060	7,045	865	37.68%	60.85%	0.00%	1.47%	17.1	29.2	0.0	12.7	15.5	28.6	0.0	12.7
BB6	B-B'	1,991,027	15,459,394	7,410	1,181	36.86%	62.67%	0.00%	0.47%	22.9	38.9	0.0	5.5	20.9	30.4	0.0	5.5
BB7	B-B'	2,005,456	15,437,962	7,318	1,015	31.51%	65.94%	0.00%	2.55%	20.0	44.6	0.0	25.9	16.4	27.8	0.0	25.9
BB8	B-B'	2,019,838	15,416,576	7,052	822	23.60%	76.40%	0.00%	0.00%	13.9	44.9	0.0	0.0	10.6	43.0	0.0	0.0
CC1	C-C'	1,929,448	15,576,660	7,203	1,006	35.86%	63.36%	0.00%	0.79%	16.4	29.0	0.0	7.9	17.1	24.2	0.0	7.9
CC2	C-C'	1,944,157	15,554,854	7,180	975	44.30%	54.81%	0.00%	0.89%	20.6	26.7	0.0	8.7	13.9	20.4	0.0	8.7
CC3	C-C'	1,958,772	15,533,141	7,252	1,030	44.92%	55.08%	0.00%	0.00%	20.1	24.7	0.0	0.0	14.1	18.1	0.0	0.0
CC4	C-C'	1,973,527	15,511,102	6,967	745	38.73%	61.27%	0.00%	0.00%	19.2	30.4	0.0	0.0	22.1	24.7	0.0	0.0
CC5	C-C'	1,988,329	15,489,202	7,075	884	44.67%	55.33%	0.00%	0.00%	24.7	30.6	0.0	0.0	23.1	24.1	0.0	0.0
CC6	C-C'	2,002,898	15,467,536	7,321	1,157	29.57%	70.43%	0.00%	0.00%	18.0	45.3	0.0	0.0	16.3	29.7	0.0	0.0
CC7	C-C'	2,017,326	15,446,104	7,249	1,008	38.57%	61.43%	0.00%	0.00%	20.5	32.6	0.0	0.0	18.2	23.7	0.0	0.0
CC8	C-C'	2,031,708	15,424,718	7,068	886	25.41%	73.93%	0.00%	0.65%	11.3	34.5	0.0	5.8	9.2	31.4	0.0	5.8
DD1	D-D'	1,869,831	15,532,047	7,442	950	29.40%	70.60%	0.00%	0.00%	12.7	30.5	0.0	0.0	9.9	29.3	0.0	0.0
DD2	D-D'	1,892,481	15,547,271	7,141	947	24.92%	75.08%	0.00%	0.00%	13.9	44.4	0.0	0.0	12.1	39.4	0.0	0.0
DD3	D-D'	1,914,512	15,562,371	7,091	888	21.57%	78.43%	0.00%	0.00%	12.0	43.5	0.0	0.0	11.2	35.1	0.0	0.0
DD4	D-D'	1,936,667	15,577,594	7,196	997	34.98%	65.02%	0.00%	0.00%	18.4	34.1	0.0	0.0	13.6	34.7	0.0	0.0
DD5	D-D'	1,959,070	15,592,570	7,429	1,319	31.61%	47.01%	21.38%	0.00%	20.9	31.0	282.1	0.0	14.9	24.9	282.1	0.0
DD6	D-D'	1,981,472	15,607,794	8,538	1,314	24.66%	49.52%	25.83%	0.00%	14.7	29.6	339.3	0.0	10.4	28.9	339.3	0.0
EE1	E-E'	1,885,274	15,506,470	6,980	837	28.84%	71.16%	0.00%	0.00%	11.5	29.8	0.0	0.0	9.5	29.1	0.0	0.0
EE2	E-E'	1,907,924	15,521,694	6,993	1,037	24.52%	75.48%	0.00%	0.00%	15.0	48.9	0.0	0.0	12.7	35.7	0.0	0.0
EE3	E-E'	1,929,955	15,536,794	7,360	1,340	30.59%	67.37%	0.00%	2.04%	18.6	41.0	0.0	13.7	17.0	32.2	0.0	13.7
EE4	E-E'	1,952,110	15,552,017	7,078	941	38.37%	60.75%	0.00%	0.87%	20.1	31.8	0.0	8.2	19.1	22.5	0.0	8.2
EE5	E-E'	1,974,512	15,566,993	7,134	1,077	30.49%	55.10%	14.41%	0.00%	16.4	29.7	155.2	0.0	14.7	26.1	155.2	0.0
EE6	E-E'	1,996,915	15,582,217	8,210	1,342	22.70%	43.70%	33.60%	0.00%	14.5	27.9	450.9	0.0	13.9	24.1	450.9	0.0
FF1	F-F'	1,908,921	15,472,207	7,029	860	36.30%	52.52%	0.00%	11.18%	16.4	25.1	0.0	96.1	13.5	22.0	0.0	96.1
FF2	F-F'	1,931,571	15,487,430	7,282	1,055	27.29%	51.88%	20.83%	0.00%	16.9	34.2	219.8	0.0	11.9	31.7	219.8	0.0
FF3	F-F'	1,953,602	15,502,530	6,980	756	38.27%	61.73%	0.00%	0.00%	19.3	31.1	0.0	0.0	12.4	24.7	0.0	0.0
FF4	F-F'	1,975,756	15,517,754	7,016	786	34.70%	63.80%	0.00%	1.50%	17.0	31.3	0.0	11.8	17.3	24.8	0.0	11.8
FF5	F-F'	1,998,159	15,532,730	7,052	840	37.27%	53.55%	9.18%	0.00%	16.5	23.7	77.1	0.0	16.1	18.2	77.1	0.0
FF6	F-F'	2,020,561	15,547,954	7,423	1,224	29.64%	36.01%	34.35%	0.00%	21.3	27.5	420.4	0.0	18.1	24.1	420.4	0.0
GG1	G-G'	1,919,538	15,461,590	6,806	622	32.44%	67.56%	0.00%	0.00%	15.5	35.0	0.0	0.0	11.8	26.8	0.0	0.0
GG2	G-G'	1,942,187	15,476,813	6,914	712	27.43%	72.57%	0.00%	0.00%	15.0	39.7	0.0	0.0	10.3	28.4	0.0	0.0
GG3	G-G'	1,964,218	15,491,913	6,960	787	28.99%	69.70%	0.00%	1.31%	15.2	36.6	0.0	10.3	13.0	29.7	0.0	10.3
GG4	G-G'	1,986,373	15,507,137	6,990	842	31.92%	58.75%	9.33%	0.00%	15.8	29.1	78.6	0.0	17.3	24.9	78.6	0.0
GG5	G-G'	2,008,776	15,522,113	7,085	1,075	21.51%	50.67%	27.82%	0.00%	14.5	34.0	299.1	0.0	13.8	26.7	299.1	0.0

Table 3

Summary Statistics for Geologic Model, PAPA, Sublette County, Wyoming

ID	Cross-section	Easting (UTM Zone 12 NAD83 Feet)	Northing (UTM Zone 12 NAD83 Feet)	Ground Surface Elevation (feet amsl)	Vertical Length (feet)	Percent				Mean Thickness (feet)				Median Thickness (feet)			
						Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated
GG6	G-G'	2,031,178	15,537,337	8,348	1,353	28.20%	38.63%	33.17%	0.00%	14.7	20.9	448.7	0.0	12.7	14.1	448.7	0.0
HH1	H-H'	1,927,259	15,448,560	6,947	798	31.64%	53.82%	14.55%	0.00%	21.0	39.0	116.0	0.0	18.6	34.7	116.0	0.0
HH2	H-H'	1,949,909	15,463,784	6,990	756	27.93%	72.07%	0.00%	0.00%	11.7	32.1	0.0	0.0	10.5	26.0	0.0	0.0
HH3	H-H'	1,971,940	15,478,884	7,022	851	23.66%	75.39%	0.00%	0.95%	11.8	40.1	0.0	8.1	13.1	33.1	0.0	8.1
HH4	H-H'	1,994,095	15,494,107	7,164	1,003	28.65%	59.90%	11.44%	0.00%	16.9	35.3	114.8	0.0	16.1	30.3	114.8	0.0
HH5	H-H'	2,016,497	15,509,083	7,144	918	47.09%	51.05%	0.00%	1.86%	18.0	20.4	0.0	17.1	13.4	14.9	0.0	17.1
HH6	H-H'	2,038,899	15,524,307	7,764	1,358	32.04%	35.96%	32.00%	0.00%	17.4	19.5	434.5	0.0	14.5	15.7	434.5	0.0
II1	I-I'	1,948,010	15,417,675	7,134	910	33.55%	57.30%	0.00%	9.15%	15.3	27.4	0.0	83.2	13.0	19.0	0.0	83.2
II2	I-I'	1,970,660	15,432,898	7,131	1,010	37.69%	61.56%	0.00%	0.75%	22.4	36.6	0.0	7.6	21.8	37.4	0.0	7.6
II3	I-I'	1,992,691	15,447,998	7,255	1,095	29.28%	70.72%	0.00%	0.00%	16.0	40.7	0.0	0.0	12.7	36.0	0.0	0.0
II4	I-I'	2,014,846	15,463,222	7,341	1,126	53.97%	46.03%	0.00%	0.00%	30.4	25.9	0.0	0.0	26.8	15.0	0.0	0.0
II5	I-I'	2,037,248	15,478,198	7,190	988	57.00%	43.00%	0.00%	0.00%	33.1	26.6	0.0	0.0	22.3	18.9	0.0	0.0
II6	I-I'	2,059,650	15,493,422	7,485	1,330	38.15%	41.68%	20.18%	0.00%	21.1	24.1	268.3	0.0	19.6	20.0	268.3	0.0
JJ1	J-J'	1,967,313	15,393,063	7,049	858	36.47%	63.53%	0.00%	0.00%	16.5	28.7	0.0	0.0	16.9	26.8	0.0	0.0
JJ2	J-J'	1,989,963	15,408,287	7,095	901	34.25%	65.75%	0.00%	0.00%	22.0	42.3	0.0	0.0	15.0	35.1	0.0	0.0
JJ3	J-J'	2,011,994	15,423,386	7,190	1,014	21.29%	70.44%	0.00%	8.27%	12.7	42.0	0.0	83.9	10.2	30.0	0.0	83.9
JJ4	J-J'	2,034,149	15,438,610	7,134	954	39.70%	60.30%	0.00%	0.00%	18.9	30.3	0.0	0.0	15.2	21.3	0.0	0.0
JJ5	J-J'	2,056,551	15,453,586	7,236	999	52.45%	47.55%	0.00%	0.00%	26.2	25.0	0.0	0.0	23.1	22.0	0.0	0.0
JJ6	J-J'	2,078,954	15,468,810	7,259	1,041	45.88%	53.36%	0.00%	0.76%	19.9	24.2	0.0	7.9	18.5	18.0	0.0	7.9
Average					**988**	**34.59%**	**59.90%**	**4.69%**	**0.82%**	**18.4**	**33.0**	**56.5**	**7.4**	**15.7**	**27.1**	**56.5**	**7.4**

Table 3 (continued)

Summary Statistics for Geologic Model, PAPA, Sublette County, Wyoming

		Standard Deviation (feet)				Minimum Thickness (feet)				Maximum Thickness (feet)			
ID	Cross-section	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated
AA1	A-A'	6.2	20.9	0.0	0.0	9.3	12.7	4.0	0.0	32.8	85.9	4.0	0.0
AA2	A-A'	9.3	29.7	0.0	0.0	9.5	11.3	0.0	0.0	45.6	103.6	0.0	0.0
AA3	A-A'	17.0	24.9	0.0	0.0	9.4	3.8	0.0	0.0	71.9	89.8	0.0	0.0
AA4	A-A'	11.2	21.5	0.0	0.0	11.5	2.7	0.0	33.2	46.3	67.2	0.0	33.2
AA5	A-A'	5.2	24.8	0.0	0.0	10.0	3.5	0.0	0.0	25.3	94.4	0.0	0.0
AA6	A-A'	15.2	24.9	0.0	0.0	2.4	4.5	0.0	14.5	66.8	84.6	0.0	14.5
AA7	A-A'	9.7	21.4	0.0	0.0	4.6	2.1	0.0	24.4	41.5	66.4	0.0	24.4
AA8	A-A'	8.9	23.0	0.0	0.0	8.0	5.4	0.0	0.0	40.4	89.3	0.0	0.0
BB1	B-B'	10.0	25.2	0.0	0.0	8.9	19.5	0.0	0.0	45.9	106.8	0.0	0.0
BB2	B-B'	16.1	21.9	0.0	0.0	2.4	5.9	17.1	0.0	81.9	83.3	17.1	0.0
BB3	B-B'	21.0	31.9	0.0	0.0	3.1	5.4	0.0	0.0	85.3	128.4	0.0	0.0
BB4	B-B'	22.7	12.1	0.0	0.0	10.1	3.1	0.0	2.1	75.3	47.9	0.0	2.1
BB5	B-B'	6.5	22.0	0.0	0.0	8.8	2.1	0.0	12.7	35.6	92.6	0.0	12.7
BB6	B-B'	13.4	28.1	0.0	0.0	5.9	9.9	0.0	5.5	47.4	113.7	0.0	5.5
BB7	B-B'	10.9	45.8	0.0	0.0	6.3	11.9	0.0	25.9	47.3	182.3	0.0	25.9
BB8	B-B'	10.1	26.3	0.0	0.0	2.7	11.6	0.0	0.0	40.3	111.2	0.0	0.0
CC1	C-C'	9.0	21.3	0.0	0.0	3.7	3.7	0.0	7.9	38.8	80.8	0.0	7.9
CC2	C-C'	19.1	21.1	0.0	0.0	4.4	5.6	0.0	8.7	85.9	96.2	0.0	8.7
CC3	C-C'	14.0	26.1	0.0	0.0	2.1	3.2	0.0	0.0	47.1	111.6	0.0	0.0
CC4	C-C'	8.1	27.1	0.0	0.0	3.0	2.6	0.0	0.0	27.0	100.0	0.0	0.0
CC5	C-C'	15.0	23.5	0.0	0.0	4.2	11.1	0.0	0.0	53.5	90.3	0.0	0.0
CC6	C-C'	11.4	31.8	0.0	0.0	4.6	9.8	0.0	0.0	47.6	112.1	0.0	0.0
CC7	C-C'	10.5	29.7	0.0	0.0	3.0	5.2	0.0	0.0	42.7	123.1	0.0	0.0
CC8	C-C'	7.8	19.4	0.0	0.0	3.1	10.2	0.0	5.8	36.3	81.4	0.0	5.8
DD1	D-D'	7.1	14.9	0.0	0.0	4.3	10.9	0.0	0.0	27.4	67.7	0.0	0.0
DD2	D-D'	6.5	22.1	0.0	0.0	4.3	4.8	0.0	0.0	27.6	88.7	0.0	0.0
DD3	D-D'	6.5	24.7	0.0	0.0	3.2	5.4	0.0	0.0	28.0	84.8	0.0	0.0
DD4	D-D'	21.6	20.3	0.0	0.0	5.4	2.2	0.0	0.0	104.2	86.3	0.0	0.0
DD5	D-D'	17.8	23.3	0.0	0.0	4.8	3.6	282.1	0.0	69.8	88.7	282.1	0.0
DD6	D-D'	10.1	16.3	0.0	0.0	6.3	8.1	339.3	0.0	44.2	83.0	339.3	0.0
EE1	E-E'	6.6	19.5	0.0	0.0	3.6	3.6	0.0	0.0	30.6	82.0	0.0	0.0
EE2	E-E'	7.8	30.5	0.0	0.0	4.8	10.3	0.0	0.0	38.1	111.9	0.0	0.0
EE3	E-E'	11.5	26.7	0.0	1.0	3.9	6.9	0.0	13.0	47.7	95.4	0.0	14.4
EE4	E-E'	10.6	25.7	0.0	0.0	5.1	6.3	0.0	8.2	42.1	103.9	0.0	8.2
EE5	E-E'	9.2	21.0	0.0	0.0	3.9	3.3	155.2	0.0	36.5	94.8	155.2	0.0
EE6	E-E'	6.7	18.7	0.0	0.0	3.6	6.5	450.9	0.0	28.8	76.1	450.9	0.0
FF1	F-F'	11.0	16.2	0.0	0.0	2.7	7.4	0.0	96.1	48.5	74.7	0.0	96.1
FF2	F-F'	13.8	16.7	0.0	0.0	3.1	10.7	219.8	0.0	47.7	75.5	219.8	0.0
FF3	F-F'	15.4	16.0	0.0	0.0	7.0	9.5	0.0	0.0	59.4	66.5	0.0	0.0
FF4	F-F'	9.4	27.9	0.0	0.0	3.2	7.2	0.0	11.8	38.3	119.1	0.0	11.8
FF5	F-F'	7.5	23.2	0.0	0.0	5.7	5.7	77.1	0.0	33.3	107.4	77.1	0.0
FF6	F-F'	12.3	23.2	0.0	0.0	5.3	3.8	420.4	0.0	48.9	95.8	420.4	0.0
GG1	G-G'	8.4	20.5	0.0	0.0	7.7	7.7	0.0	0.0	31.8	76.6	0.0	0.0
GG2	G-G'	10.1	33.6	0.0	0.0	4.9	6.2	0.0	0.0	35.8	122.6	0.0	0.0
GG3	G-G'	10.1	25.9	0.0	0.0	5.0	3.7	0.0	10.3	47.1	98.4	0.0	10.3
GG4	G-G'	8.6	24.3	0.0	0.0	4.1	4.6	78.6	0.0	32.0	95.8	78.6	0.0
GG5	G-G'	7.1	25.0	0.0	0.0	4.9	7.2	299.1	0.0	25.2	91.5	299.1	0.0

Table 3 (continued)

Summary Statistics for Geologic Model, PAPA, Sublette County, Wyoming

		Standard Deviation (feet)				Minimum Thickness (feet)				Maximum Thickness (feet)			
ID	Cross-section	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated	Sandstone	Siltstone/Shale	Gravel/Fill	Unconsolidated
GG6	G-G'	7.7	17.0	0.0	0.0	3.8	5.6	448.7	0.0	33.0	85.7	448.7	0.0
HH1	H-H'	14.8	20.9	0.0	0.0	3.5	9.1	116.0	0.0	54.4	80.0	116.0	0.0
HH2	H-H'	7.6	18.7	0.0	0.0	2.6	13.7	0.0	0.0	26.5	85.1	0.0	0.0
HH3	H-H'	4.9	33.4	0.0	0.0	2.9	4.7	0.0	8.1	18.0	126.8	0.0	8.1
HH4	H-H'	7.8	28.9	0.0	0.0	3.2	3.8	114.8	0.0	30.3	115.4	114.8	0.0
HH5	H-H'	13.9	18.4	0.0	0.0	4.1	4.1	0.0	17.1	57.2	92.7	0.0	17.1
HH6	H-H'	11.2	16.5	0.0	0.0	4.4	3.7	434.5	0.0	52.9	85.7	434.5	0.0
II1	I-I'	9.0	23.4	0.0	0.0	5.9	4.1	0.0	83.2	39.7	101.9	0.0	83.2
II2	I-I'	16.5	23.3	0.0	0.0	3.4	3.4	0.0	7.6	57.2	79.4	0.0	7.6
II3	I-I'	12.1	20.3	0.0	0.0	4.4	6.3	0.0	0.0	53.1	72.6	0.0	0.0
II4	I-I'	23.7	25.1	0.0	0.0	5.3	4.7	0.0	0.0	114.3	106.6	0.0	0.0
II5	I-I'	36.5	21.9	0.0	0.0	5.7	5.1	0.0	0.0	159.4	77.7	0.0	0.0
II6	I-I'	10.4	16.8	0.0	0.0	4.3	5.0	268.3	0.0	50.6	72.0	268.3	0.0
JJ1	J-J'	7.7	17.4	0.0	0.0	2.9	4.1	0.0	0.0	33.2	58.3	0.0	0.0
JJ2	J-J'	24.8	31.2	0.0	0.0	2.7	5.4	0.0	0.0	91.6	122.5	0.0	0.0
JJ3	J-J'	9.6	30.3	0.0	0.0	2.5	12.2	0.0	83.9	38.6	117.3	0.0	83.9
JJ4	J-J'	11.1	29.3	0.0	0.0	8.3	3.5	0.0	0.0	47.7	128.5	0.0	0.0
JJ5	J-J'	16.6	18.7	0.0	0.0	4.2	6.5	0.0	0.0	59.4	83.8	0.0	0.0
JJ6	J-J'	9.4	17.0	0.0	0.0	6.5	4.4	0.0	7.9	38.2	61.6	0.0	7.9
		11.8	**23.5**	**0.0**	**0.0**	**5.0**	**6.4**	**56.5**	**7.4**	**49.0**	**93.7**	**56.5**	**7.4**