

# **Petroleum User Group Steering Committee 2019 Update**

***ESRI Petroleum GIS Conference***

***May 9 - 10 2019***

# Professional Discipline 2018 Survey Results

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Co-Chairs: Susan Horvath & Nathan Marx

# PUG Professional Discipline Update Agenda

- I. Recap of Last year's discussion
- II. Current Industry Market Trends
- III. Survey Comparison
- IV. PUG Survey Highlights & Challenges
- V. New Survey Platform

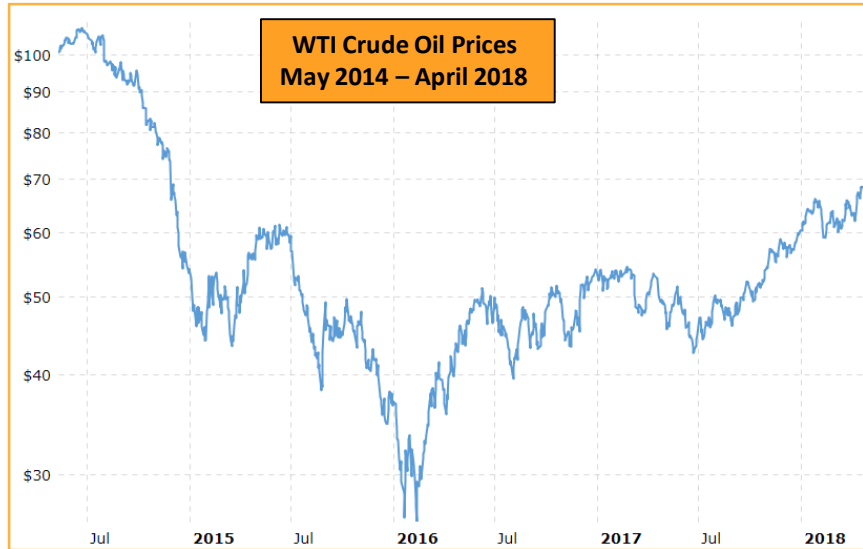
# PUG Professional Discipline

## **PUG Professional Discipline Mission:**

*Raise awareness of GIS as a Profession and provide materials that will enable petroleum industry companies the ability to create a job family for GIS/Geospatial professionals.*

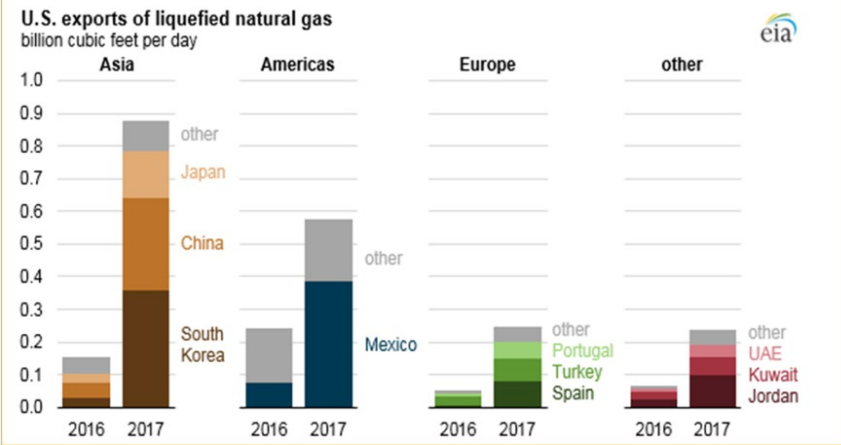
The goal of this survey is to illustrate the demographics and sectors of GIS professionals, create a benchmark for and identify the trends in compensation, determine areas of under-representation, and provide a comprehensive tool for managers, recruiters and HR professionals.

# Summary - 2018 PUG Professional Discipline & Salary Survey



- At the start of the survey, WTI was holding fairly steady in the upper \$60-\$70/bbl price.
- US activity seen increasing in the areas of LNG exports, midstream and refineries.
- Internationally, new discoveries and activity in offshore oil fields in Ghana and Equatorial Guinea are ramping up.

## U.S. liquefied natural gas exports quadrupled in 2017



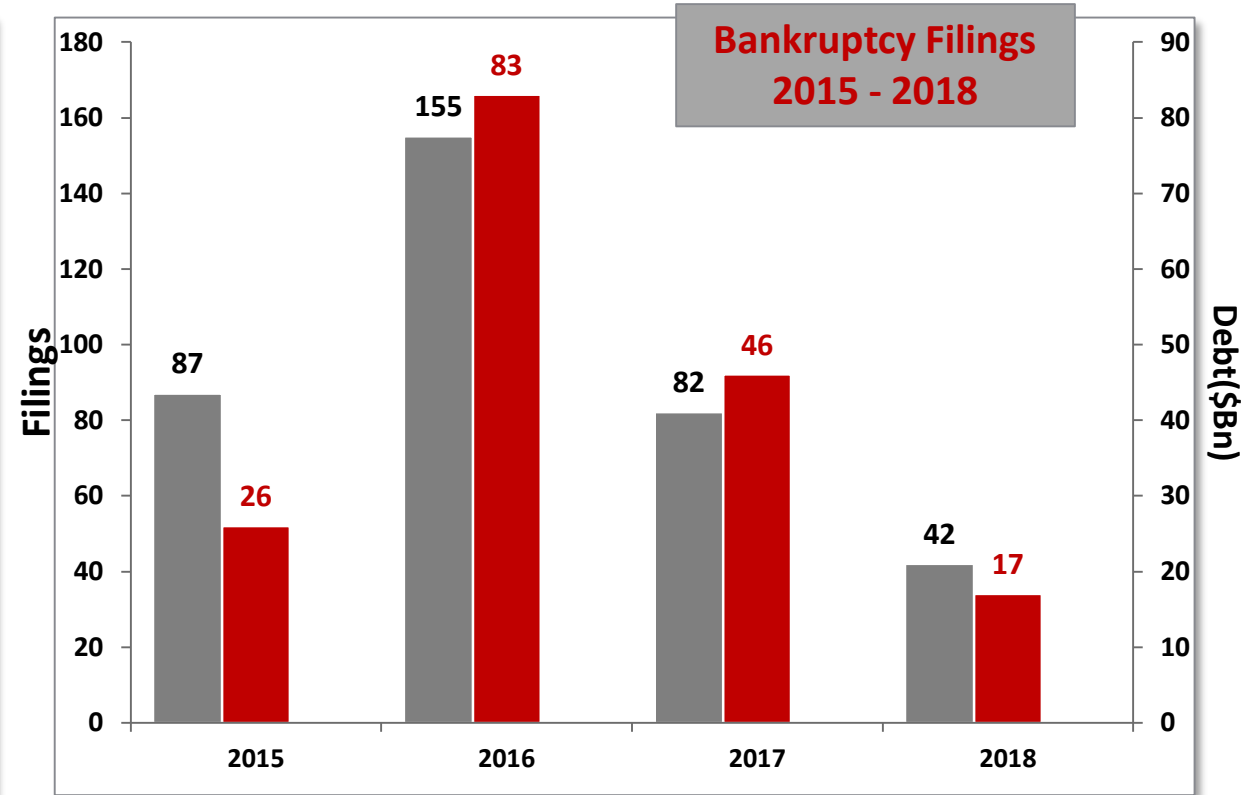
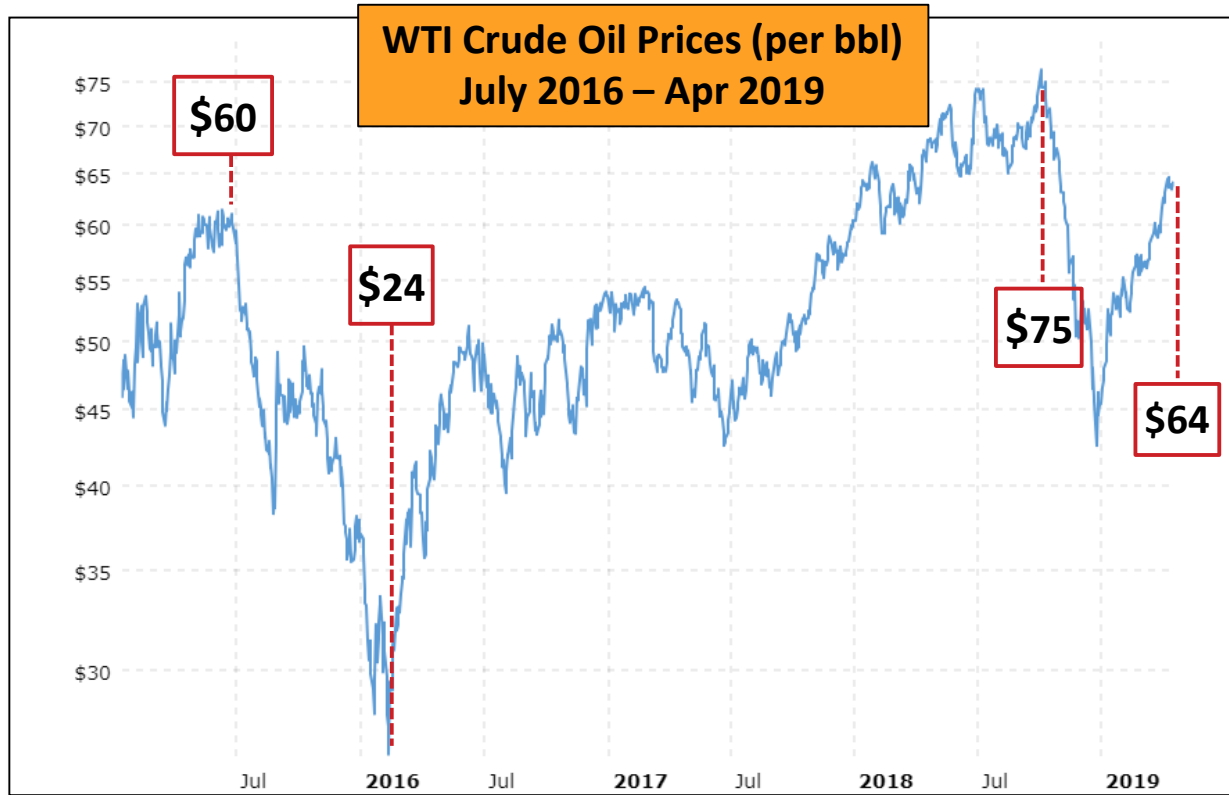
Sources: EIA, IEA, Haynes and Boone, MacroTrends, Richardson Barr, URISA as of 04/2018

Organization	Salary Data	Petroleum - Focused	Frequency	Remarks
	✓	✓	Annual	Survey Since 1981
	✓	✓	Annual	Subdivided by Region
	✓	✓	Irregular (3-5, 8 Years)	Subdivided by Licenses Type
	✗	✓	Annual - Depending on Sector	Environment and Safety Reports
	✓	✗	Every 3 Years	Distributed to Members Only
	✓	✗	5-6 Year Gap	60% of Responses employed in Government

## PUG SURVEY GOALS

- 1 Establish Baseline
- 2 Education
- 3 Marketing & Communication

# State of the Petroleum Market Today



- Over the last 3 years, 2018 had the fewest number of industry bankruptcies on record
- More companies are working to stay within Free Cash Flow projections, while increasing production output
- Look for more consolidation, streamlining efforts and increasing Architect / Analytics roles (doing more with less)

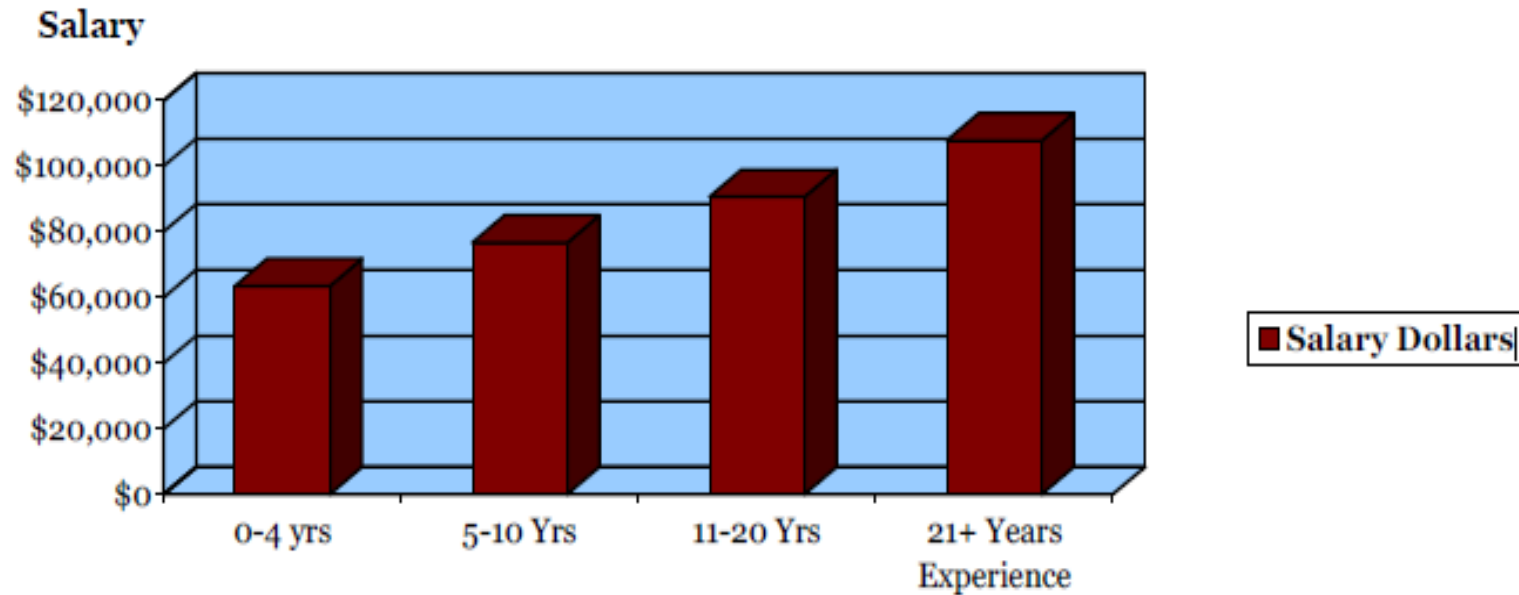
Sources: EIA, Haynes and Boone, MacroTrends, as of 04/2019

# CSI Recruiting Domestic US E&P – 2018 Salary Report

## Report Conclusions

- Grouped all **Geoscience Technicians** with **GIS Analysts**
- Saw marginal salary increases
- Demand average
- Years of experience declined

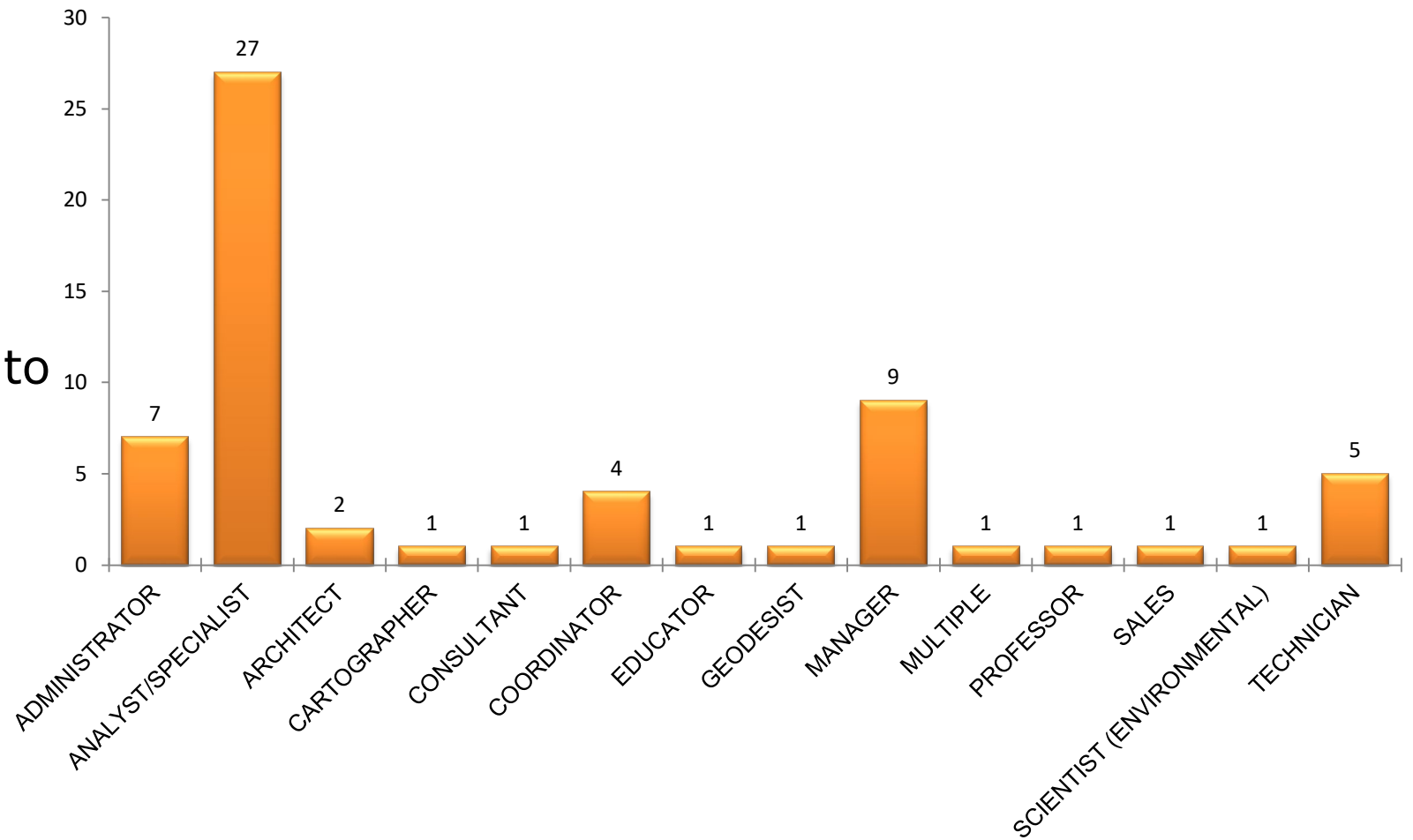
AVERAGE BASE SALARY BY RANGE OF EXPERIENCE



# PUG Professional Discipline Survey – 2018 Results

## Challenge #1

- No Naming Standardization
  - Title not necessarily tied to function

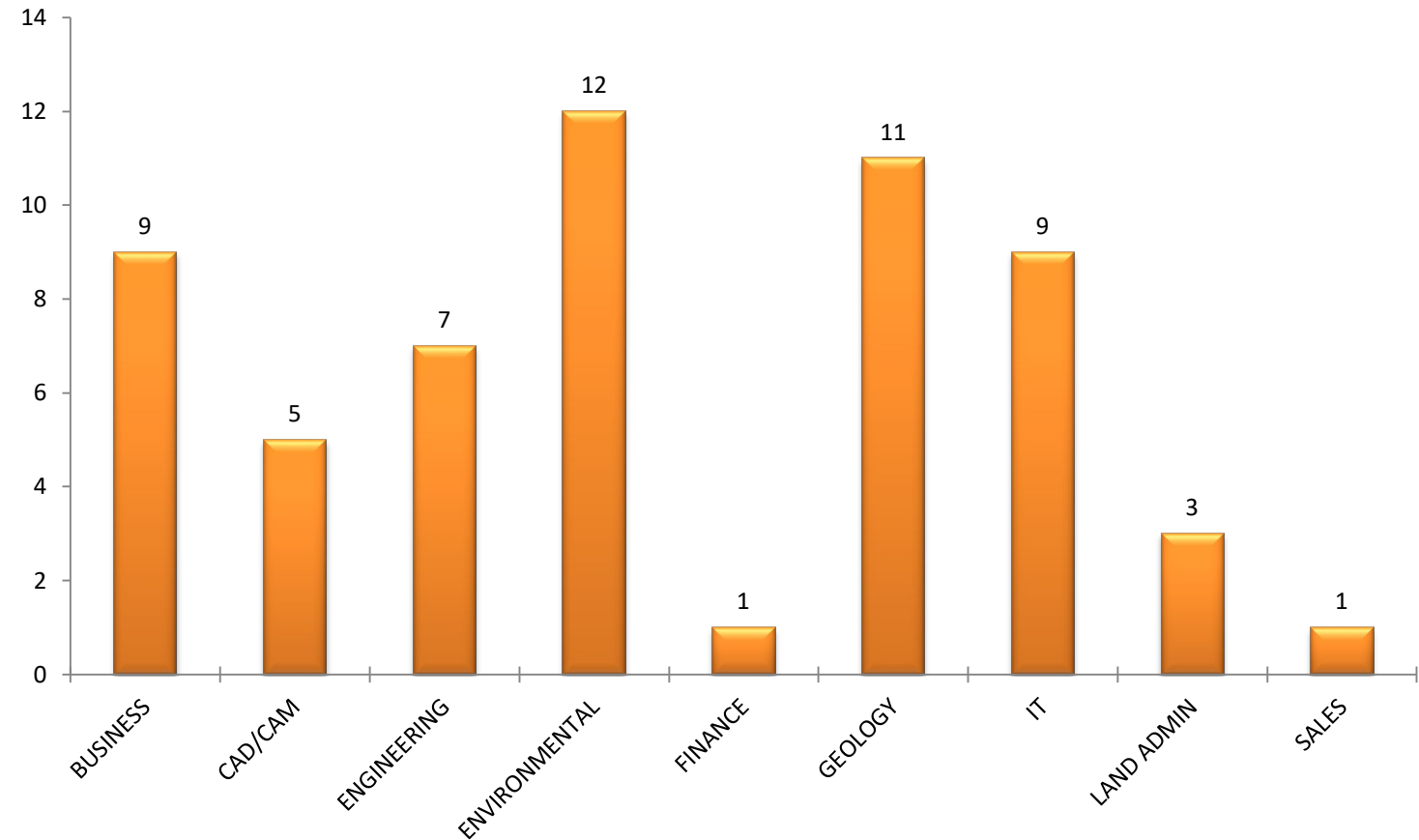




# PUG Professional Discipline Survey – 2018 Results

## Challenge #2

- Diverse Educational Backgrounds
  - Not all Geology-focused
  - Responses included several inter-disciplinary backgrounds

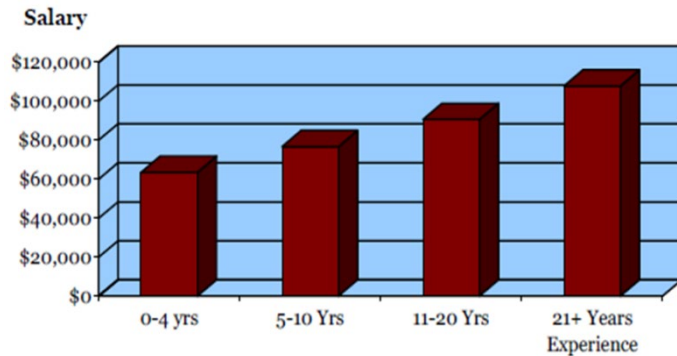


# PUG Professional Discipline Survey – 2018 Results

## Challenge #3

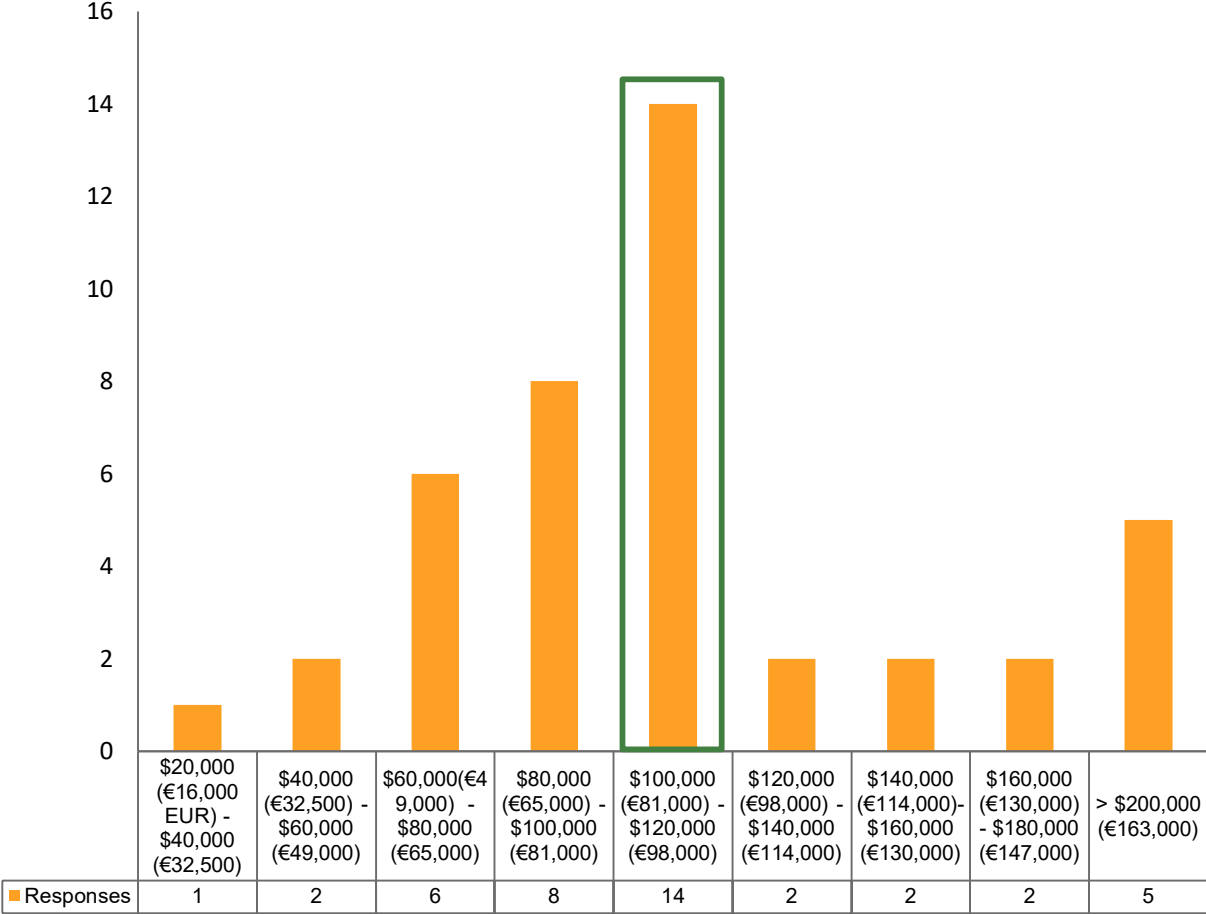
- Lack of salary transparency

AVERAGE BASE SALARY BY RANGE OF EXPERIENCE

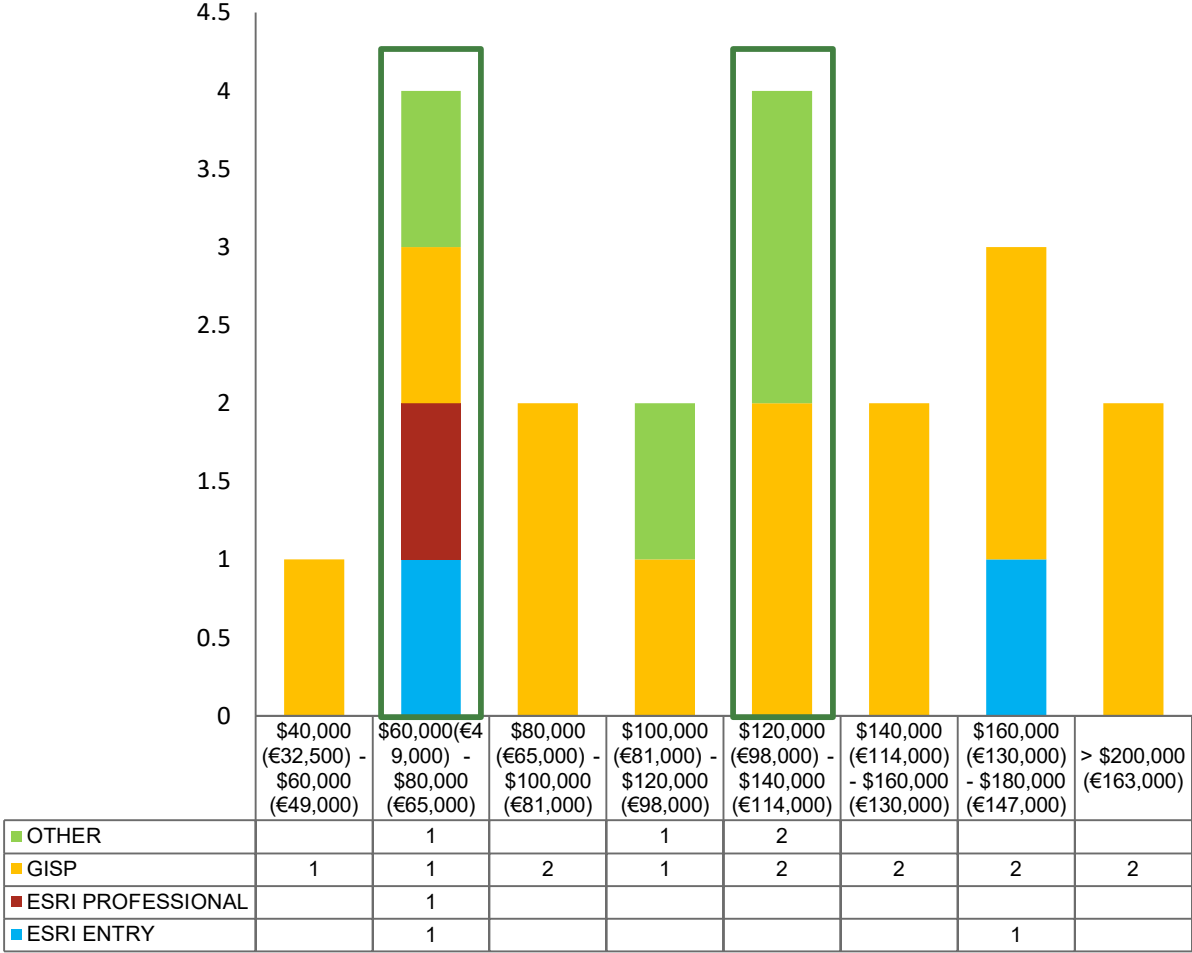


# Salary ranges by additional certification holders vs. non-certification holder:

## No Certificate or License



## Certificate or License



# Highlights of Survey Findings

- No clear distinction was observed between the respondents' roles (job titles) and salary ranges.
- Education and length of GIS experience appeared to be the most critical factors in determining salary ranges.
- Almost 89% of male survey participants reported having a higher education (Bachelor degree and above), while 93% of female survey participants reported having a higher education.
- Out of those who responded to questions regarding race, the category breakdown is as follows:

77.2	% Caucasian
12.3	% Hispanic
3.5	% Asian
3.5	% 2 or more
1.8	% Africa-American

# Feedback/Lessons Learned

- Use of Survey Planet platform had some drawbacks
  - Design limitations yielded survey which did not appear “PUG official”
  - Capabilities for analysis and visualization of results were not sufficient
  - Required manual scraping to get data back out
- Overall need to increase survey participation across entire PUG Community to yield more statistically significant results

2018 Geospatial Professional Discipline and Salary Survey



Thank you for participating in the 2018 Geospatial Professional Discipline and Salary Survey. This survey is intended to provide the Petroleum GIS Community with insight into compensation, as it relates to education, roles and responsibilities.  
All answers are anonymous.

Begin

Anonymous 

# Professional Discipline 2019 Survey

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Co-Chairs: Susan Horvath & Nathan Marx

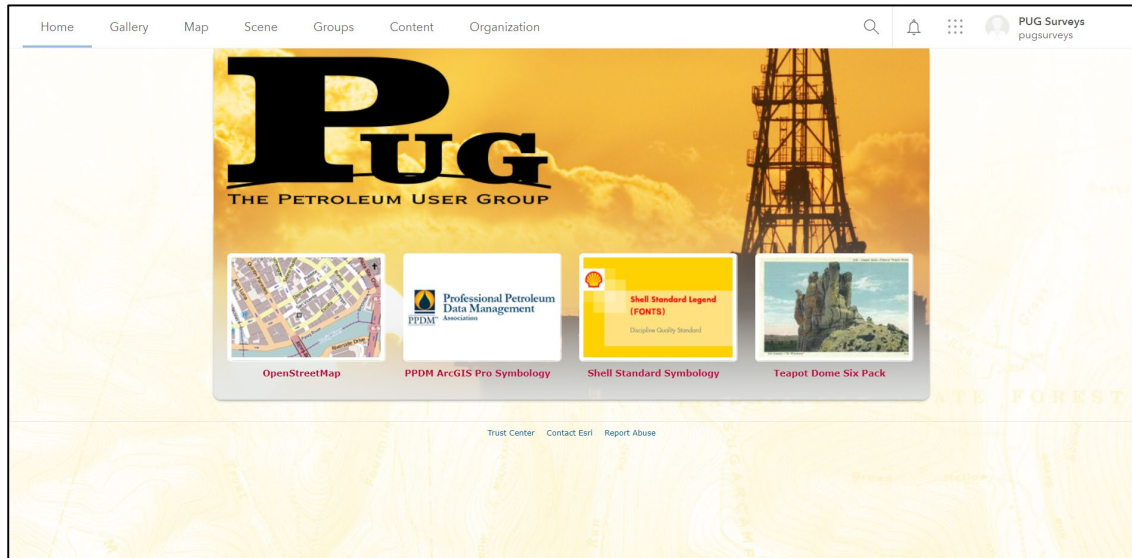
# 2019 Survey Updates

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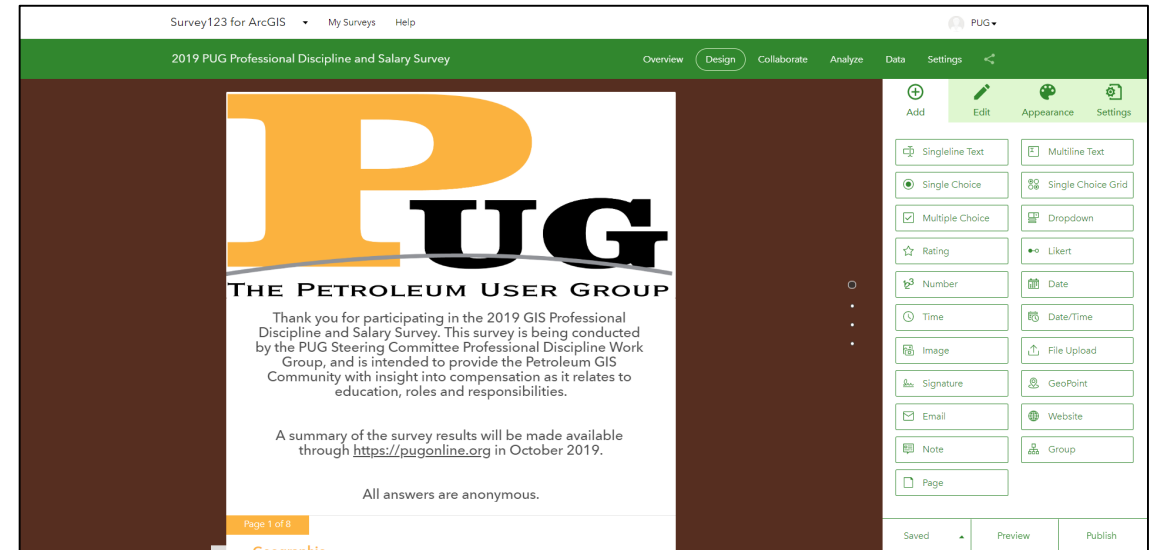
- Decision to conduct Survey annually to track changes and trends over time
- Decision to host Survey and data on PUG ArcGIS Online to address:
  - Ownership - data now resides on a PUG owned platform
  - Security - ensure anonymous access to survey, secure access to data
  - Sustainability – eliminate manual data manipulation, automate reporting

# 2019 Survey Updates

## REHOSTED SURVEY ON PUG ARCGIS ONLINE



## REDESIGNED SURVEY FORM USING SURVEY123 WEB DESIGNER. EASY TO APPLY PUG LOGOS AND COLOR BRANDING





# 2019 Survey Updates

SURVEY123 PROVIDES ACCESS TO DATA, REMAINS ANONYMOUS

The screenshot shows the Survey123 interface for the "2019 PUG Professional Discipline and Salary Survey". The top navigation bar includes "Overview", "Design", "Collaborate", "Analyze", "Data", and "Settings". The "Data" tab is active, displaying a table of survey responses. The table has 9 columns and 3 rows of data. The first row is highlighted in blue.

In which country do you reside?	Other - In which country do you reside?	If you reside in the US, please indicate the state or territory.	Please select your age group:	Please select your gender:	Other - Please select your gender:	How do you identify yourself?	Other - How do you identify yourself?	Please select option that ref the highest lev education you completed:
USA		Texas	35-44 years old	Male		Caucasian_(White__no n-Hispanic)		Bachelor's Degri
NOR			35-44 years old	Male		I__prefer__not__to__answe		High school deg GED
USA		Texas	55-64 years old	Male		Caucasian_(White__no n-Hispanic)		Bachelor's Degri

SURVEY123 OFFERS ONLY BASIC DATA ANALYSIS CAPABILITIES

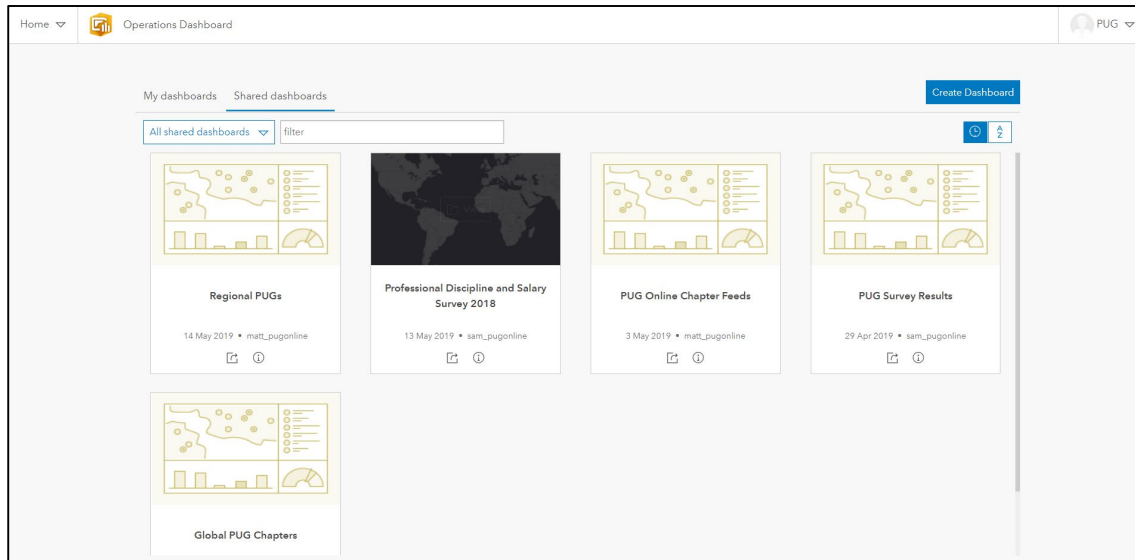
The screenshot shows the "Analyze" tab in Survey123. A bar chart displays the distribution of answers for the question "How long have you been using GIS Technology professionally?". The x-axis represents the number of years, and the y-axis represents the count. The chart shows that 2 respondents used GIS technology for 2-4 years, while all other categories have zero respondents.

Answers	Count	Percentage
0-2 years	0	0.00%
2-4 years	2	22.22%
4-6 years	0	0.00%
8-10 years	0	0.00%

# 2019 Survey Updates

REDESIGNED SURVEY RESULTS  
INFOGRAPHICS USING OPS DASHBOARD

UPDATES DYNAMICALLY, MAP ENABLED,  
SCROLLING PANELS



# 2019 Survey Launch and Demo

LAUNCH FROM PUG ONLINE HUB WEBSITE  
UNDER RESOURCES OR USE QR CODE

COMPLETE SURVEY IN 5 MINUTES  
USE DESKTOP OR MOBILE DEVICE



# PUG Online New Website (Coming Soon!)

## Key Features

New PUG Online website with a modern look and feel

Built on Esri Enterprise Sites and fully integrated with ArcGIS Online

Chapters can share content easily with the global community

Integrated one-stop for Petroleum GIS User Community News, Events & Info

Professional Discipline and Salary Survey and Results embedded

**When?**

Summer 2019

**Petroleum User Group**  
**Our Mission**  
The PUG strives to be recognized as the global professional organization for GIS & Geospatial Professionals and users across the petroleum industry. We aim to work collaboratively as volunteers to improve and enhance the use of GIS & Geospatial workflows and technologies.

Get Involved! Find a Chapter

News Feed

**Petroleum User Group**  
The 2019 PUG conference is being held...  
[Find more information here!](#)

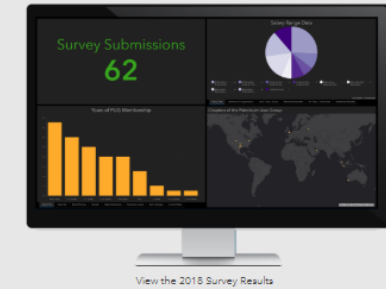
**View Professional Discipline and Salary Survey Results**  
The 2018 Professional Discipline and Salary Survey is now available in a dashboard. You can also find the 2018 Professional Discipline and Salary Survey...  
[View Professional Discipline and Salary Survey Results](#)

List of Upcoming Events

May 2019						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25

**Esri Petroleum User Group 2019**  
Wednesday, 12 AM - Thursday, 12 AM  
George R Brown Convention Center  
Houston, Texas, 77010

**GIS Professional Discipline and Salary Survey**



Many of us have been left wondering what the next trends in our profession are since the Big Oil Downturn on 2014. The push these days for Oil & Gas company executives is to not only increase shareholder returns, but to create new, streamlined ventures. Such marketing includes buzz words like: "Big Data", "Synergies", "Location Analytics", and "Machine-learning". The inclusions of these terms may come as gratifying to many of us, since they are the direct result of workflows we've helped develop and champion over the years. Unfortunately, in terms of compensation, it appears few of us have reaped the benefits of these contributions to the Petroleum Industry.

In the fall of 2017, the PUG Steering began outlining what is now the 2018 PUG Professional Discipline and Salary Survey. The survey launched in May 2018, during the ESRI PUG Houston Conference and remained open until August 2018. In that time we, we heard from 61 respondents from 4 countries and 5 US states. Not surprising to some, the roles and responsibilities played little part in determining job titles. What seemed to factor as more in terms of compensation was advanced education and length of experience. While only a small percentage of members participated in the inaugural survey, it does establish the standard for benchmarking future trends. The Professional Chair Subcommittee is already planning for next year's survey, and would like to hear from you! Please email your feedback to: [steering@pugonline.org](mailto:steering@pugonline.org). The survey results are available here in the form of a dashboard and also online in report format at the following URL: [2018 PUG Professional Discipline and Salary Survey](#)

**Fill out the 2019 Survey**

Thank you for participating in the 2019 GIS Professional Discipline and Salary Survey. This survey is being conducted by the PUG Steering Committee Professional Discipline Work Group, and is intended to provide the Petroleum GIS Community with insight into compensation as it relates to education, roles and responsibilities. It only takes 5 minutes to complete and all answers are anonymous. A summary of the survey results will be made available through [http://www.pugonline.hub.arcgis.com](#) in October 2019.

