



**Earth Science Agency**

**G & D Hanks V-27-28HN**

Well Site Geology

End of Well Summary

May 7, 2018

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**Prepared for:**

Bayswater Exploration & Production, LLC

730 17<sup>th</sup> Street, Suite 500

Denver, CO 80202

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## Plan

G & D Hanks V-27-28HN is a horizontal well that was designed to target a 38' thick window of the B Chalk. The well is in the Wattenberg Field of the Denver-Julesburg (DJ) Basin located in Weld, CO. The well plan called for a kick off point of 6896' MD. The curve was to be built using build rates of 10° per 100' landing at 7796' MD and 7206' TVD. The lateral was to be 10377' MD in length (LP to TD) with a vertical section azimuth of 265.32° and an average inclination of 90°. TD was to be 18173' MD and 7206' TVD.

## Actual

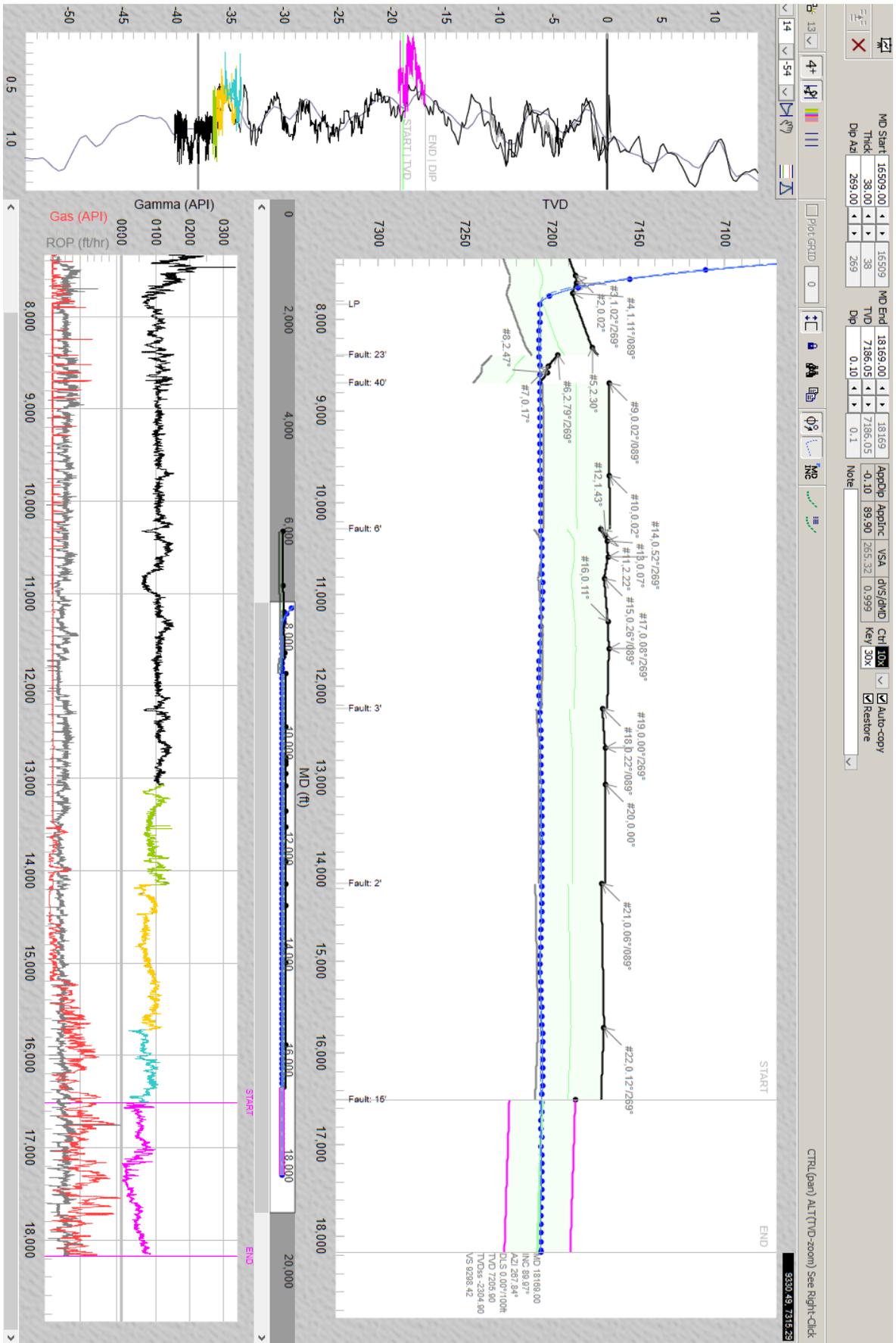
The well spud at 1564' MD at 1255 hrs on 5/2/2018, kicked off at 6731' MD, 6468' TVD at 1025 hrs on 5/3/2018, and landed at 7841' MD, 7206' TVD at 1750 hrs on 5/3/2018 with an 90.03° INC, placing the wellbore 17' above the base of the B Chalk payzone. Horizontal TD was reached at 18169' MD, 7206' TVD at 0330 hrs on 5/6/2018, placing the wellbore 17' below the top of the B Chalk payzone. The lateral length of the well is 10328' MD (49' shorter than plan; LP to TD).

## Summary

Gamma correlation with the G & D Hanks 15-27 type log was good. Bed dips in the lateral section ranged from 2.79° down to 2.3° up, and averaged 90.0°. Six faults were encountered during the lateral ranging from 23' down-throw to 40' up-throw. Approximately 7712' (74.7%) of the wellbore is in the B Chalk payzone and approximately 2616' (25.3%) is below zone in the B Marl. Total gas in the lateral peaked at 587 u.

Well Info					
<b>Operator:</b>		Bayswater E&P, LLC			
<b>Well:</b>		G & D Hanks V-27-28HN			
<b>API:</b>		05-123-46035			
<b>AFE:</b>		46035			
<b>Rig:</b>		True 38			
<b>Spud Date:</b>		5/2/2018			
<b>TD Date:</b>		5/6/2018			
<b>County/State:</b>		Weld, CO			
<b>Basin/Field:</b>		DJ Basin, Wattenberg			
<b>Surface Location:</b>		SWSE Sec 27, T7N, R66W			
<b>Surface Hole:</b>		1168' FSL, 1575' FEL			
<b>Bottom Location:</b>		Sec 28, T7N, R66W			
<b>Bottom Hole:</b>		510' FSL, 5' FWL			
<b>GR/KB Elev:</b>		4876' / 4901'			
<b>Lat/Long:</b>		40.541925, -104.759854			
<b>Directional Company:</b>		Baker RSS			
<b>Bayswater Geologist:</b>		Kevin Smith			
Onsite Personnel					
<b>ESA Geologists:</b>		Curtis Magnino (d) Kyle Newman (n)			
<b>ESA Contact:</b>		775-450-5988 geology@earthscienceagency.com <b>Login to our website for archived reports:</b> <a href="http://www.earthscienceagency.com">http://www.earthscienceagency.com</a>			
<b>Depths Logged:</b>		6000' - 18169'			
<b>Dates Logged:</b>		5/3/2018 - 5/6/2018			
Well Data					
<b>Type Log:</b>		G&D HANKS 15-27		<b>Avg. Bed Dip:</b>	90.0
Plan/Target Changes					
Plan #	Depth Issued	Target			
D.0	Pre-Spud	LP	VS=-1052'	TVD=7206'	INC=°
		TD	VS=9299'	TVD=7206'	INC=°

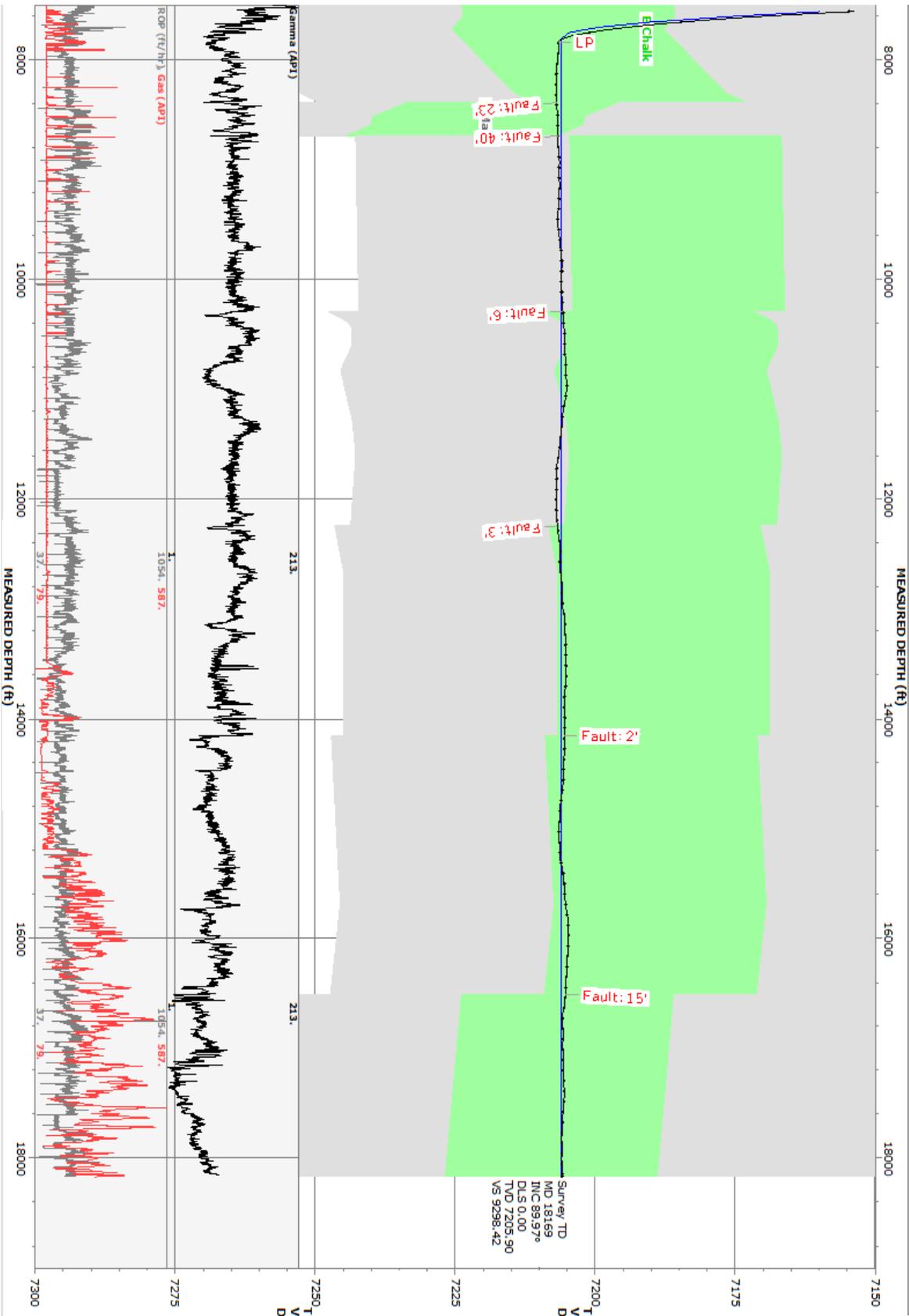
<b>Zone Summary</b>					
Zone	Length (MD)		Percent		
In:	7712		74.7%		
Out Top:	0		0.0%		
Out Base:	2616		25.3%		
<b>Lateral Summary</b>					
		MD	VS	TVD	
	Actual LP:	7,841	-1,000	7,207	
	Actual TD:	18,169	9,298	7,206	
	Actual Lateral Length:	10,328	10,298	-	
	Plan Lateral Length:	10,377	10,351	-	
	Net Gain/-Loss of Lateral Length:	-49	-53	-	
<b>Out of Payzone</b>					
Out Top/Base	MD Out	TVD Out	MD In	TVD In	Length Out
Base: faulted into B Marl	8,693	7,207	10,288	7,206	1,595
Base: drilled into B Marl	11,220	7,206	12,241	7,207	1,021
					0
					0
					0
					0
<b>Faults</b>					
MD	Throw				
8386	Fault: 23' down-throw; stayed in B Chalk				
8693	Fault: 40' up-throw; went from B Chalk to B Marl				
10288	Fault: 6' down-throw; went from B Marl to B Chalk				
12241	Fault: 3' down-throw; went from B Marl to B Chalk				
14155	Fault: 2' down-throw; stayed in B Chalk				
16509	Fault: 15' down-throw; stayed in B Chalk				
<b>Stratigraphic Position</b>					
Payzone	at TD		at LP		
	TVD	Wellbore (H/-L)	TVD	Wellbore (H/-L)	
Top:	7,189	-17	7,185	-21	
Target:	7,208	2	7,204	-2	
Base:	7,227	21	7,223	17	
<b>Formation Tops</b>					
Formations	MD	TVD	VS	Thickness	
Sharon Springs:	7,339	7,032	-1,454	18	
Niobrara:	7,364	7,051	-1,437	17	
A Chalk:	7,391	7,067	-1,416	20	
A Marl:	7,425	7,088	-1,389	99	
Payzone - B Chalk:	7,665	7,187	-1,174		



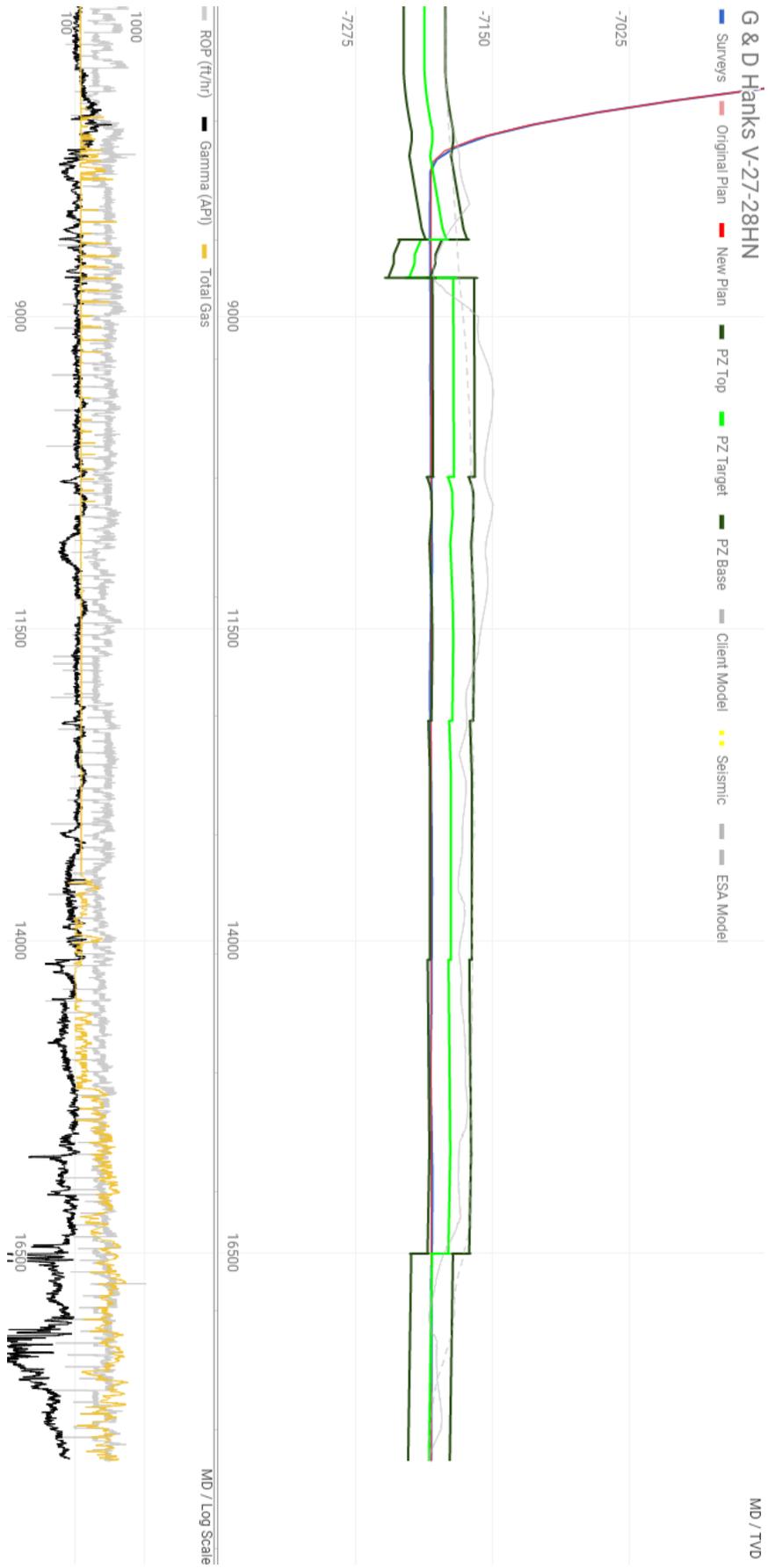
Operator Baywater  
Well Name G\_D Hanks V-27-28HN

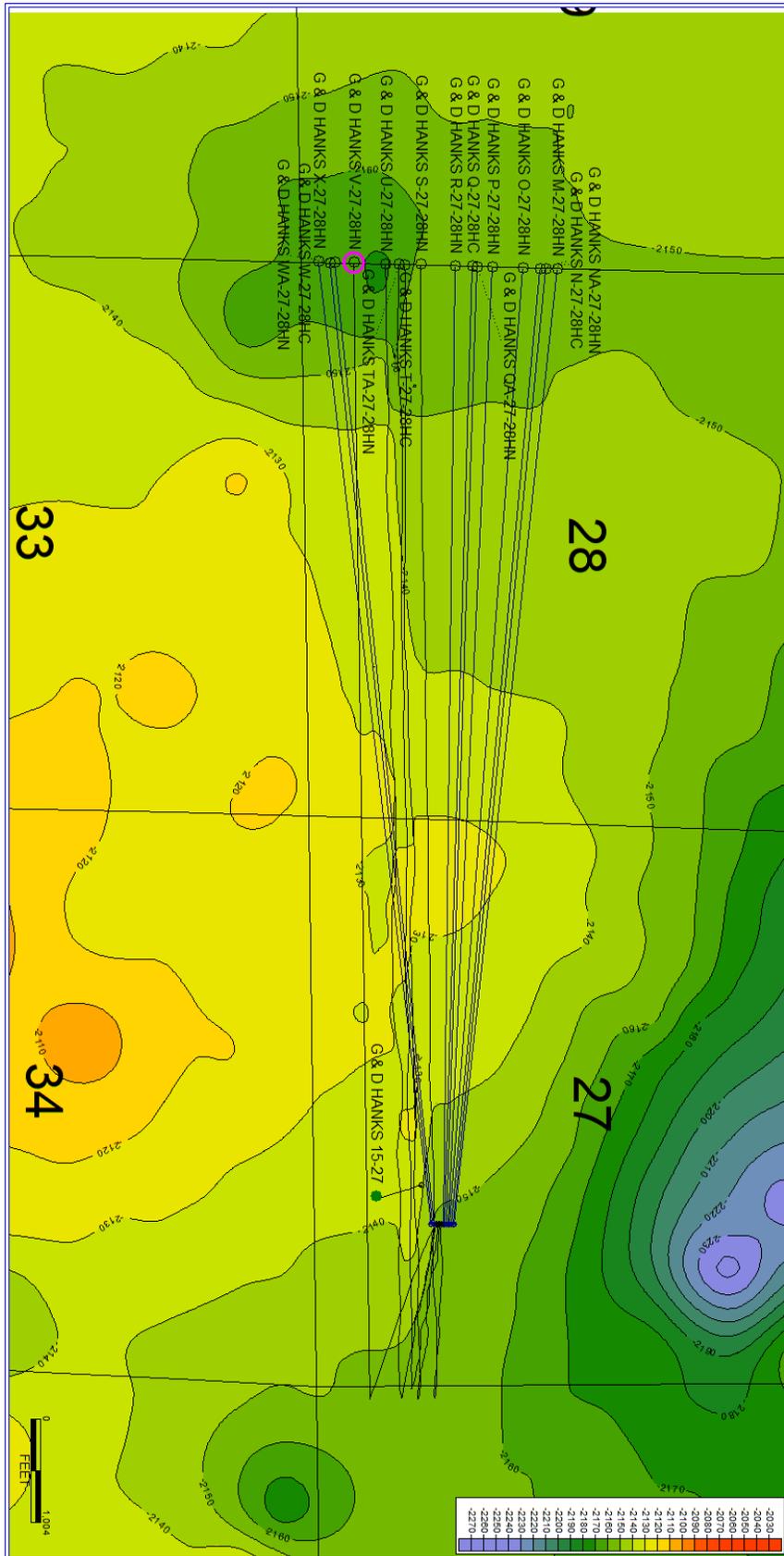
Analyst Blue Spikes  
Units Feet  
Well ID 05-123-46035

Survey Surveys  
Comment # 1



# G & D Hanks V-27-28HN





FMTOPS - NIOBRARA [ESA] - drilling top

Subsea contour map of the Niobrara top along with survey data for surrounding drilled laterals, and the planned lateral for the G & D Hanks V-27-28HN well (circled in red).