



Company: IKAV Energy
Project: La Plata County, CO NAD83
Site: Hott Pad
Well: Hott 30-02 03
Wellbore: Lateral 1 ST1
Design: Plan #2

PROJECT DETAILS: La Plata County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone
System Datum: Mean Sea Level
Local North: Grid



WELL DETAILS: Hott 30-02 03

GL 6470' & RKB 17' @ 6487.00usft (Aztec 1099)
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 1154154.88 2402602.62 37.0720425 -107.5476835

Plan: Plan #2 (Hott 30-02 03/Lateral 1 ST1)

Created By: Janie Collins Date: 12:13, June 22 2022

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Hott Lat 1 ST1 IP	2928.00	-2974.14	3563.84	1151180.74	2406166.46	37.0640902	-107.5352496
Hott Lat 1 ST1 BHL	2950.00	-5997.46	6068.71	1148157.42	2408671.33	37.0559385	-107.5264426

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
4209.00	90.21	148.271	2917.82	-1776.74	1060.61	0.00	0.00	2003.28
4720.90	89.77	115.000	2917.90	-2112.08	1437.85	6.50	-90.74	2507.32
4979.00	89.77	115.000	2918.94	-2221.16	1671.76	0.00	0.00	2750.36
5279.00	89.77	103.000	2920.15	-2318.65	1954.89	4.00	-90.02	3020.28
6029.00	89.77	103.000	2923.16	-2487.36	2685.67	0.00	0.00	3658.65
6958.05	89.70	132.451	2927.54	-2914.84	3499.02	3.17	90.20	4537.64
7045.91	89.70	132.451	2928.00	-2974.14	3563.84	0.00	0.00	4625.43
7318.94	89.68	140.642	2929.48	-3172.17	3751.46	3.00	90.18	4898.08
10973.03	89.68	140.642	2950.00	-5997.46	6068.71	0.00	0.00	8532.23



Azimuths to Grid North
True North: 1.26°
Magnetic North: 10.04°

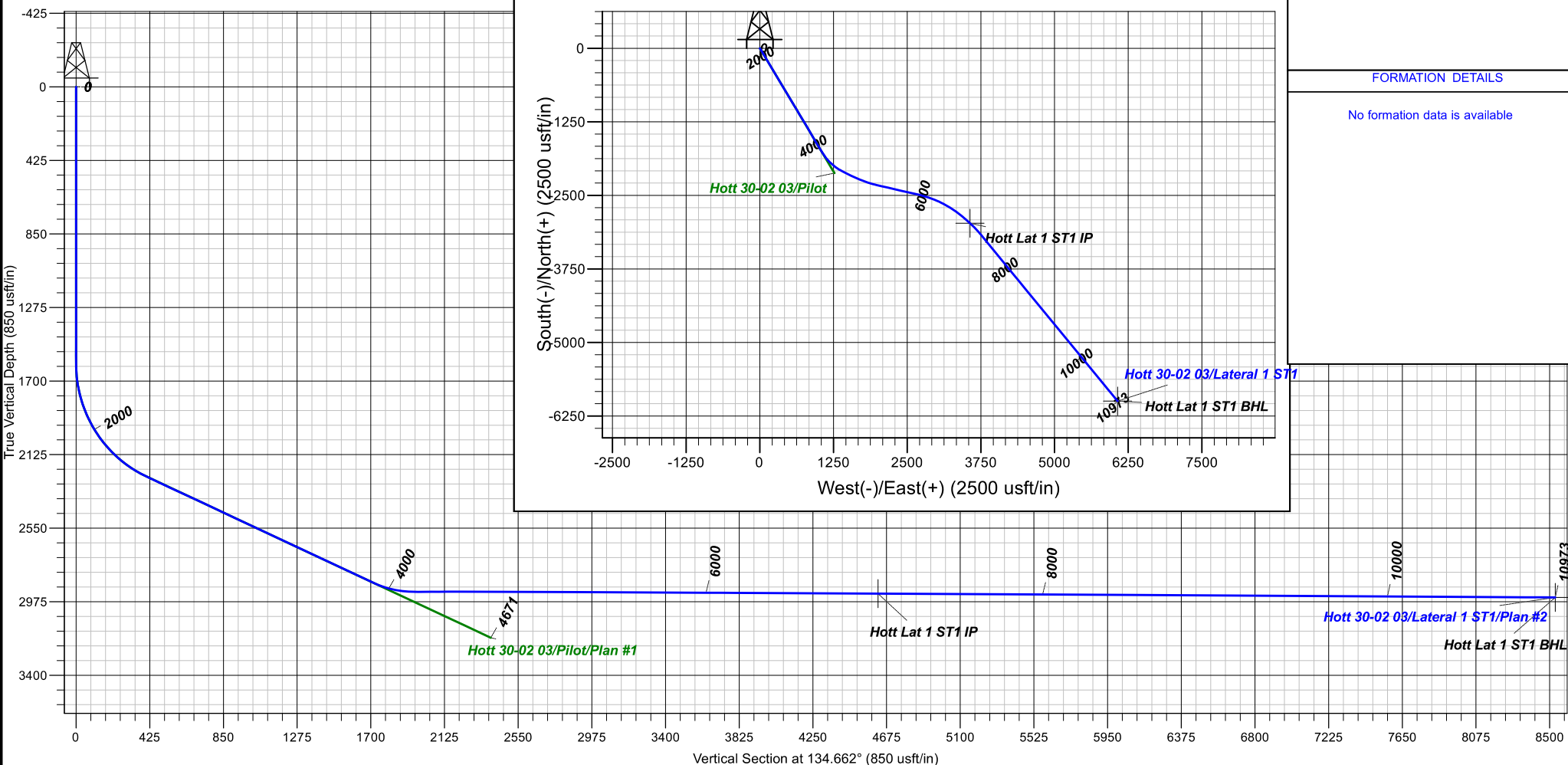
Magnetic Field
Strength: 49632.1nT
Dip Angle: 63.45°
Date: 6/7/2022
Model: HDGM2022

CASING DETAILS

No casing data is available

FORMATION DETAILS

No formation data is available





IKAV Energy

La Plata County, CO NAD83

Hott Pad

Hott 30-02 03

Lateral 1 ST1

Plan: Plan #2

Standard Planning Report

22 June, 2022



Database:	Grand Junction	Local Co-ordinate Reference:	Well Hott 30-02 03
Company:	IKAV Energy	TVD Reference:	GL 6470' & RKB 17' @ 6487.00usft (Aztec 1099)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6470' & RKB 17' @ 6487.00usft (Aztec 1099)
Site:	Hott Pad	North Reference:	Grid
Well:	Hott 30-02 03	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #2		

Project	La Plata County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		

Site		Hott Pad			
Site Position:		Northing:	1,154,154.89 usft	Latitude:	37.0720425
From:	Lat/Long	Easting:	2,402,602.62 usft	Longitude:	-107.5476835
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.26 °

Well	Hott 30-02 03					
Well Position	+N/-S	-0.01 usft	Northing:	1,154,154.88 usft	Latitude:	37.0720424
	+E/-W	0.00 usft	Easting:	2,402,602.62 usft	Longitude:	-107.5476835
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,470.00 usft

Wellbore	Lateral 1 ST1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2022	6/7/2022	8.78	63.45	49,632.10000000

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	4,209.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	134.662

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
4,209.00	90.21	148.271	2,917.82	-1,776.74	1,060.61	0.00	0.00	0.00	0.00	
4,720.90	89.77	115.000	2,917.90	-2,112.08	1,437.85	6.50	-0.09	-6.50	-90.74	
4,979.00	89.77	115.000	2,918.94	-2,221.16	1,671.76	0.00	0.00	0.00	0.00	
5,279.00	89.77	103.000	2,920.15	-2,318.65	1,954.89	4.00	0.00	-4.00	-90.02	
6,029.00	89.77	103.000	2,923.16	-2,487.36	2,685.67	0.00	0.00	0.00	0.00	
6,958.05	89.70	132.451	2,927.54	-2,914.84	3,499.02	3.17	-0.01	3.17	90.20	
7,045.91	89.70	132.451	2,928.00	-2,974.14	3,563.84	0.00	0.00	0.00	0.00	Hott Lat 1 ST1 IP
7,318.94	89.68	140.642	2,929.48	-3,172.17	3,751.46	3.00	-0.01	3.00	90.18	
10,973.03	89.68	140.642	2,950.00	-5,997.46	6,068.71	0.00	0.00	0.00	0.00	Hott Lat 1 ST1 BHL

Database:	Grand Junction	Local Co-ordinate Reference:	Well Hott 30-02 03
Company:	IKAV Energy	TVD Reference:	GL 6470' & RKB 17' @ 6487.00usft (Aztec 1099)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6470' & RKB 17' @ 6487.00usft (Aztec 1099)
Site:	Hott Pad	North Reference:	Grid
Well:	Hott 30-02 03	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,209.00	90.21	148.271	2,917.82	-1,776.74	1,060.61	2,003.28	0.00	0.00	0.00
4,300.00	90.13	142.356	2,917.54	-1,851.53	1,112.37	2,092.67	6.50	-0.09	-6.50
4,400.00	90.05	135.857	2,917.38	-1,927.08	1,177.80	2,192.32	6.50	-0.09	-6.50
4,500.00	89.96	129.358	2,917.38	-1,994.74	1,251.37	2,292.20	6.50	-0.09	-6.50
4,600.00	89.87	122.858	2,917.52	-2,053.64	1,332.11	2,391.04	6.50	-0.09	-6.50
4,700.00	89.79	116.359	2,917.82	-2,103.02	1,419.01	2,487.55	6.50	-0.09	-6.50
4,720.90	89.77	115.000	2,917.90	-2,112.08	1,437.85	2,507.32	6.50	-0.08	-6.50
4,800.00	89.77	115.000	2,918.22	-2,145.51	1,509.53	2,581.80	0.00	0.00	0.00
4,900.00	89.77	115.000	2,918.62	-2,187.77	1,600.16	2,675.97	0.00	0.00	0.00
4,979.00	89.77	115.000	2,918.94	-2,221.16	1,671.76	2,750.36	0.00	0.00	0.00
5,000.00	89.77	114.160	2,919.02	-2,229.89	1,690.86	2,770.09	4.00	0.00	-4.00
5,100.00	89.77	110.160	2,919.42	-2,267.60	1,783.45	2,862.45	4.00	0.00	-4.00
5,200.00	89.77	106.160	2,919.83	-2,298.76	1,878.45	2,951.93	4.00	0.00	-4.00
5,279.00	89.77	103.000	2,920.15	-2,318.65	1,954.89	3,020.28	4.00	0.00	-4.00
5,300.00	89.77	103.000	2,920.23	-2,323.37	1,975.36	3,038.15	0.00	0.00	0.00
5,400.00	89.77	103.000	2,920.63	-2,345.86	2,072.79	3,123.27	0.00	0.00	0.00
5,500.00	89.77	103.000	2,921.03	-2,368.36	2,170.23	3,208.38	0.00	0.00	0.00
5,600.00	89.77	103.000	2,921.43	-2,390.85	2,267.67	3,293.50	0.00	0.00	0.00
5,700.00	89.77	103.000	2,921.84	-2,413.35	2,365.10	3,378.62	0.00	0.00	0.00
5,800.00	89.77	103.000	2,922.24	-2,435.84	2,462.54	3,463.73	0.00	0.00	0.00
5,900.00	89.77	103.000	2,922.64	-2,458.34	2,559.97	3,548.85	0.00	0.00	0.00
6,000.00	89.77	103.000	2,923.04	-2,480.83	2,657.41	3,633.96	0.00	0.00	0.00
6,029.00	89.77	103.000	2,923.16	-2,487.36	2,685.67	3,658.65	0.00	0.00	0.00
6,100.00	89.76	105.251	2,923.45	-2,504.68	2,754.52	3,719.79	3.17	-0.01	3.17
6,200.00	89.75	108.421	2,923.87	-2,533.64	2,850.22	3,808.22	3.17	-0.01	3.17
6,300.00	89.74	111.591	2,924.31	-2,567.85	2,944.17	3,899.09	3.17	-0.01	3.17
6,400.00	89.73	114.761	2,924.77	-2,607.20	3,036.09	3,992.13	3.17	-0.01	3.17
6,500.00	89.73	117.931	2,925.24	-2,651.57	3,125.69	4,087.05	3.17	-0.01	3.17
6,600.00	89.72	121.101	2,925.72	-2,700.83	3,212.70	4,183.56	3.17	-0.01	3.17
6,700.00	89.71	124.271	2,926.22	-2,754.83	3,296.85	4,281.37	3.17	-0.01	3.17
6,800.00	89.71	127.441	2,926.73	-2,813.39	3,377.89	4,380.18	3.17	-0.01	3.17
6,900.00	89.70	130.611	2,927.24	-2,876.35	3,455.56	4,479.68	3.17	0.00	3.17
6,958.05	89.70	132.451	2,927.54	-2,914.84	3,499.02	4,537.64	3.17	0.00	3.17
7,000.00	89.70	132.451	2,927.76	-2,943.15	3,529.97	4,579.56	0.00	0.00	0.00
7,045.91	89.70	132.451	2,928.00	-2,974.14	3,563.84	4,625.43	0.00	0.00	0.00
7,100.00	89.70	134.074	2,928.28	-3,011.21	3,603.23	4,679.51	3.00	-0.01	3.00
7,200.00	89.69	137.074	2,928.82	-3,082.61	3,673.22	4,779.48	3.00	-0.01	3.00
7,300.00	89.68	140.074	2,929.38	-3,157.59	3,739.38	4,879.23	3.00	-0.01	3.00
7,318.94	89.68	140.642	2,929.48	-3,172.17	3,751.46	4,898.08	3.00	-0.01	3.00
7,400.00	89.68	140.642	2,929.94	-3,234.84	3,802.87	4,978.70	0.00	0.00	0.00
7,500.00	89.68	140.642	2,930.50	-3,312.16	3,866.28	5,078.15	0.00	0.00	0.00
7,600.00	89.68	140.642	2,931.06	-3,389.48	3,929.70	5,177.61	0.00	0.00	0.00
7,700.00	89.68	140.642	2,931.62	-3,466.80	3,993.11	5,277.06	0.00	0.00	0.00
7,800.00	89.68	140.642	2,932.18	-3,544.12	4,056.53	5,376.51	0.00	0.00	0.00
7,900.00	89.68	140.642	2,932.74	-3,621.44	4,119.94	5,475.97	0.00	0.00	0.00
8,000.00	89.68	140.642	2,933.31	-3,698.76	4,183.36	5,575.42	0.00	0.00	0.00
8,100.00	89.68	140.642	2,933.87	-3,776.08	4,246.77	5,674.88	0.00	0.00	0.00
8,200.00	89.68	140.642	2,934.43	-3,853.39	4,310.19	5,774.33	0.00	0.00	0.00
8,300.00	89.68	140.642	2,934.99	-3,930.71	4,373.60	5,873.79	0.00	0.00	0.00
8,400.00	89.68	140.642	2,935.55	-4,008.03	4,437.02	5,973.24	0.00	0.00	0.00
8,500.00	89.68	140.642	2,936.11	-4,085.35	4,500.43	6,072.69	0.00	0.00	0.00
8,600.00	89.68	140.642	2,936.67	-4,162.67	4,563.85	6,172.15	0.00	0.00	0.00

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Company:	IKAV Energy	TVD Reference:	GL 6470' & RKB 17' @ 6487.00usft (Aztec 1099)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6470' & RKB 17' @ 6487.00usft (Aztec 1099)
Site:	Hott Pad	North Reference:	Grid
Well:	Hott 30-02 03	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,700.00	89.68	140.642	2,937.24	-4,239.99	4,627.26	6,271.60	0.00	0.00	0.00
8,800.00	89.68	140.642	2,937.80	-4,317.31	4,690.68	6,371.06	0.00	0.00	0.00
8,900.00	89.68	140.642	2,938.36	-4,394.62	4,754.10	6,470.51	0.00	0.00	0.00
9,000.00	89.68	140.642	2,938.92	-4,471.94	4,817.51	6,569.96	0.00	0.00	0.00
9,100.00	89.68	140.642	2,939.48	-4,549.26	4,880.93	6,669.42	0.00	0.00	0.00
9,200.00	89.68	140.642	2,940.04	-4,626.58	4,944.34	6,768.87	0.00	0.00	0.00
9,300.00	89.68	140.642	2,940.61	-4,703.90	5,007.76	6,868.33	0.00	0.00	0.00
9,400.00	89.68	140.642	2,941.17	-4,781.22	5,071.17	6,967.78	0.00	0.00	0.00
9,500.00	89.68	140.642	2,941.73	-4,858.54	5,134.59	7,067.24	0.00	0.00	0.00
9,600.00	89.68	140.642	2,942.29	-4,935.86	5,198.00	7,166.69	0.00	0.00	0.00
9,700.00	89.68	140.642	2,942.85	-5,013.17	5,261.42	7,266.14	0.00	0.00	0.00
9,800.00	89.68	140.642	2,943.41	-5,090.49	5,324.83	7,365.60	0.00	0.00	0.00
9,900.00	89.68	140.642	2,943.97	-5,167.81	5,388.25	7,465.05	0.00	0.00	0.00
10,000.00	89.68	140.642	2,944.54	-5,245.13	5,451.66	7,564.51	0.00	0.00	0.00
10,100.00	89.68	140.642	2,945.10	-5,322.45	5,515.08	7,663.96	0.00	0.00	0.00
10,200.00	89.68	140.642	2,945.66	-5,399.77	5,578.50	7,763.42	0.00	0.00	0.00
10,300.00	89.68	140.642	2,946.22	-5,477.09	5,641.91	7,862.87	0.00	0.00	0.00
10,400.00	89.68	140.642	2,946.78	-5,554.40	5,705.33	7,962.32	0.00	0.00	0.00
10,500.00	89.68	140.642	2,947.34	-5,631.72	5,768.74	8,061.78	0.00	0.00	0.00
10,600.00	89.68	140.642	2,947.91	-5,709.04	5,832.16	8,161.23	0.00	0.00	0.00
10,700.00	89.68	140.642	2,948.47	-5,786.36	5,895.57	8,260.69	0.00	0.00	0.00
10,800.00	89.68	140.642	2,949.03	-5,863.68	5,958.99	8,360.14	0.00	0.00	0.00
10,900.00	89.68	140.642	2,949.59	-5,941.00	6,022.40	8,459.59	0.00	0.00	0.00
10,973.03	89.68	140.642	2,950.00	-5,997.46	6,068.71	8,532.23	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Hott Lat 1 ST1 IP	0.00	0.000	2,928.00	-2,974.14	3,563.84	1,151,180.74	2,406,166.47	37.0640902	-107.5352496
- plan hits target center									
- Point									
Hott Lat 1 ST1 BHL	0.00	0.000	2,950.00	-5,997.46	6,068.71	1,148,157.42	2,408,671.34	37.0559385	-107.5264426
- plan hits target center									
- Point									