



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS MANAGEMENT

DEP USE ONLY	
Auth No. 1564370	APS No.# 1128610
Site No. 789933	PF No. 880727
Client No. 141142	SF No. 1436285

RECEIVED
3/31/2026

ALT SITE ID: WLPAD - BIRD RUN

APPLICATION FOR INACTIVE WELL STATUS

Well Operator RangeResources-Appalachia, LLC		DEP Client ID No. 141142	Well Permit or Registration No. 37-125-29189	
Address 3000 Town Center Blvd.			Well Farm Name Bird Run 10938	Well No. 5H
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality Chartiers Twp
Telephone No. 724/743-6700	Fax No. 724/743-6790	Bond Instrument No. 6855	Is this an application for annual extension of inactive status? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Check here if this application is being submitted for conditional inactive status in association with longwall mining: <input type="checkbox"/>				

Condition of the Well	Describe in detail how the condition of the well satisfies the criteria for approval of inactive status. See 25 Pa. Code §§ 78/78a.102(i), (2)(i) or (ii) and (3). Use additional sheets if necessary. If available, attach well records, driller's logs, and other information describing well casing, cement, equipment, and any other pertinent information. Note that if this application is being submitted in conformance with DEP Technical Guidance Document 800-0810-004 <i>Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells</i> , the Well Record/Completion Report may be referenced for all well construction information, and all tubing and annular pressures should be at 0 prior to adjacent longwall mining encroaching within 1,500 feet of the well location. Finally, all annuli should be open to the atmosphere and the inactivation procedure may be referenced under the section titled "Other information about the well's condition."
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Well Type: Gas Oil Combination Oil & Gas Injection Storage Disposal

Casing Diameters: 18.625"	Casing Lengths: 202'	Type and amount of cement (sacks) used for surface casing: Class L, 460 (sacks)
13.375"	282'	Tubing or Production Casing Pressure (current): 0 (psi)
9.625"	1657'	Annulus Pressure (current - between tubing or production casing and surface casing): 0 (psi)
Tubing or production casing diameter: 5.5"	Tubing or production casing length: 2189'	Are all annuli open to atmosphere? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Other information about the well's condition:
N/A

Future Use of the Well	Describe a viable plan in accordance with 25 Pa. Code §78/78a.102(4) explaining the intended use of the well within a reasonable time. Provide the information requested below and any other information necessary for DEP to make a determination on inactive status for this well. Note that if this application is being submitted in conformance with DEP Technical Guidance Document 800-0810-004 <i>Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells</i> , the following text may be entered under the section regarding the future plan for the well: "Return well to production subsequent to final panel extraction when mining is at least 1,500 feet beyond well in chain pillar, as per re-entry procedure and TGD."
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Provide certification that one of the following applies (check one):
 Significant reserves remain in place and I plan to return the well to production.

Provide estimate of reserves: **MMcf:** _____ **Bbls:** _____

The well will be used for: Disposal Storage Observation Injection - Recovery Other (describe)

This well will be returned to use in: Month: August Year: 2026

State your plan for future use of the well.
Range Resources-Appalachia, LLC certifies this well is of future utility. The well is drilled to TD and is awaiting completions operations currently scheduled for June 2026.

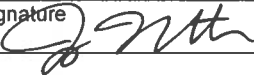
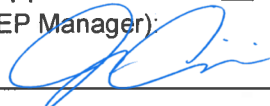
Conditional Inactive Status Checklist	For unconventional wells drilled in anticipated chain pillar locations that are being temporarily inactivated to accommodate planned, adjacent longwall mining, please provide the items included in the checklist below in addition to this application. More specific information about these items is detailed in DEP Technical Guidance Document 800-0810-004 <i>Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells</i> .
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Please include the following items with the inactive status application:

- Temporary Well Inactivation Procedure
 Temporary Inactivation Well Schematic
 General Specifications for Cements/Gels
 Current Well Record and Completion Report
 Well Location Plat
 Electrical/Mechanical Well Logs
 Graphical Production History Summary
 Well Re-entry Procedure
 Post-mining Well Long-term Monitoring Procedure

Provide additional details, if necessary.

N/A

Signature of Applicant (Well Operator)		DEP USE ONLY	
Signature  Date <u>3-31-2026</u>	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied by (DEP Manager): 	Date	<u>5/5/2026</u>
Print or type signer's name and title: <u>JEREMY MATINKO VP-ENV. COMP.</u>			

Form



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS MANAGEMENT

DEP USE ONLY	
Site ID	Client Id
Primary Facility Id	Sub Facility Id

Well Record
(Unconventional Operators Only)

WELL INFORMATION

Well Operator Range Resources - Appalachia, LLC		DEP ID# 141142	US Well No. (API No.) 37-125-29189-00-00		Farm Name BIRD RUN 10938	Well # 5H
Address 3000 Town Center Blvd			Latitude (DD) 40.243482	NAD 83	Project Number	Serial #
			Longitude (DD) -80.235097			
City Canonsburg	State PA	Zip 15317-5839	Municipality Chartiers		County Washington	
Phone 724-743-6700	email jhinson@rangeresources.com		Borrow Pit		USGS 7.5 min. quadrangle map Washington East	Section 1

Check the appropriate Submission: Original Well Record Amended Well Record

Well Type <input checked="" type="checkbox"/> Gas	Wellbore Conditioning: See Attached			
Well Orientation <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Deviated from Vertical (Top & Side views & Deviation Survey must be attached)				
Drill Method(s) <input checked="" type="checkbox"/> Rotary - Air 6511' <input checked="" type="checkbox"/> Rotary - Mud 21912' <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other				
Drilling Started 02/07/2025	Surface Elev. 1261 ft	GW Depth - None observed		
Drilling Complete 05/06/2025	True Vertical Depth 6709 ft	Depth of DFGW - None observed		
Date Well Completed 05/13/2025	Total Measured Depth 21912 ft.	DFGW decided by: 6		

CEMENT

Cement returned on surface casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, provide depth to top of cement and method used to determine:
Cement returned on coal protective casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, provide depth to top of cement and method used to determine: <input type="checkbox"/> NA
Cement returned on intermediate casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, provide depth to top of cement and method used to determine: <input type="checkbox"/> NA

Casing String	Type/Class of Cement (Lead/Tail)	Slurry Temp F°	Amount of Cement (sacks) (Lead/Tail/Total)	WOC hrs	Wt ppg	Yield #ft ³ /sacks	Gas Migration Controls Used
Conductor	Portland	-	108 / 0 / 108	24			What controls were used if any (additives/ hardware. Specify type and depth applicable). See Attached - page 6
Surface	Class L	64°	460 / 0 / 460	8	15.6	1.15	
Coal Protective	Class L	75°	295 / 0 / 295	8	15.7	1.24	
Intermediate	Class L	62°	605 / 0 / 605	8	15.7	1.23	
Production	Class A	75°	0 / 3887 / 3887	8	15.0	1.29	
If additional strings attach form(s)			Total: 5355				

CASING AND TUBING

Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type	Thread / Weld - New/Used	Amount in Well (ft.)	CO	R	Hardware - Baskets / Packer / Centralizers (Total/String)			Date Run
								Type	Size	Depth	
32"	26"	85.68#	Line Pipe	W/N	41	US	Y				02/07/2025
24"	18.625"	87.5#	J-55	T (BTC) - N	202	UK	Y	See Attached			03/18/2025
17.5"	13.375"	54.5#	J-55	T (BTC) - N	282	TW	Y	See Attached			03/19/2025
12.25"	9.625"	40.0#	J-55	T (LTC) - N	1657	CA	Y	See Attached			03/21/2025
8.75" & 8.625" & 8.5"	5.5"	20.0#	HP P-110	T (GBCD) - N	21896	US	Y	See Attached			05/09/2025

PLUG-BACK/WELLBORE ALTERATION

Fill Material & Plugs	Depth		Date	Casing & Tubing		
	From	To		Size	Pulled	Left

LOG OF FORMATIONS

US Well No. (API No.): 37-125-29189-00-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)

Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Fill	0	49				Mudlog
Silt/Lime/Sand	49	89				Mudlog
Silt/Sand	89	234				Mudlog
Pittsburgh Coal (open mine)	234	241				Mudlog
Siltstone/Shale	241	449				Mudlog
Murphy Sand	449	529				Mudlog
Red Rock	529	530				Mudlog
Siltstone/Shale	530	602				Mudlog
Bakerstown	602	768				Mudlog
Big Dunkard	768	809				Mudlog
Siltstone/Shale	809	832				Mudlog
Upper Freeport	832	833				Mudlog
Silt/Sand	833	873				Mudlog
Lower Freeport	873	874				Mudlog
Silt/Sand	874	906				Mudlog
1st Gas Sand	906	936	906			Mudlog
Silt/Sand	936	984				Mudlog
Middle Kittanning	984	985				Mudlog
Silt/Sand	985	1031				Mudlog
Lower Kittanning	1031	1032				Mudlog
Silt/Sand	1032	1037				Mudlog
1st Salt Sand	1037	1067				Mudlog
Silt/Sand	1067	1099				Mudlog
Clarion	1099	1100				Mudlog
Silt/Sand	1100	1176				Mudlog
2nd Salt Sand	1176	1206				Mudlog
Silt/Sand/Lime	1206	1319				Mudlog


Continued on next page

If no show of oil, gas or water, explain why: No show of water on Mudlog or MWD log

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
See Attachment	Name See Attachment	See Attachment	See Attachment
	Address		
	City - State - Zip		
	Phone		

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78a and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78a.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller		Well Operator's Signature		DEP USE ONLY	
Name See Attachment	Rig	 Printed Name/Title: Jon Hinson / Sr. Drilling Engineer		Reviewed by:	
Address				Date: 06/03/2025	
City - State - Zip				Comments:	
Phone					

LOG OF FORMATIONS

US Well No. (API No.): 37-125-29189-00-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)


Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Big Lime	1319	1373				Mudlog
Big Injun	1373	1529				Mudlog
Silt	1529	1599				Mudlog
Squaw Sand	1599	1634				Mudlog
Silt/Sand	1634	1913				Mudlog
Murrysville	1913	1964				Mudlog
Silt/Sand	1964	2001				Mudlog
Gantz	2001	2047				Mudlog
100 Ft Sand	2047	2077				Mudlog
Sand/Silt	2077	2183				Mudlog
Nineveh	2183	2227				Mudlog
Gordon Stray	2227	2251				Mudlog
Gordon	2251	2284				Mudlog
Upper Fifth Sand	2284	2309				Mudlog
Silt/Sand	2309	2339				Mudlog
Lower Fifth Sand	2339	2405				Mudlog
Bayard	2405	2415				Mudlog
Silt/Sand	2415	2425				Mudlog
Bayard Stray	2425	2439				Mudlog
Silt/Sand	2439	2867				Mudlog
Lower Warren	2867	2943				Mudlog
Siltstone/Shale	2943	3133				Mudlog
Upper Speechley	3133	3211				Mudlog
Silt/Shale	3211	4429				Mudlog
5th Elk	4429	4434				Mudlog
Silt/Sand/Shale	4434	4719				Mudlog
Lower Huron	4719	5039				Mudlog

If no show of oil, gas or water, explain why: No show of water on Mudlog or MWD log

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	City - State - Zip		
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Driller		Well Operator's Signature		DEP USE ONLY	
Name See Attachment	Rig	 Printed Name / Title: Jon Hinson / Sr. Drilling Engineer		Reviewed by:	
Address				Comments:	
City - State - Zip		Date: 06/03/2025			
Phone					

LOG OF FORMATIONS

US Well No. (API No.): 37-125-29189-00-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)


Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Silt/Shale	5039	6069	5039			Mudlog
Rhinestreet	6069	6263	6069			Mudlog
Cashaqua	6263	6386				MWD
Middlesex	6386	6447	6386			MWD
Genesee	6447	6509				MWD
Burket	6509	6529	6509			MWD
Tully	6529	6611				MWD
Mahantango	6611	6734	6611			MWD
Marcellus	6734	21912	6734			MWD
Driller's TD		21912				Driller's Log

If no show of oil, gas or water, explain why: No show of water on Mudlog or MWD log

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

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See Attachment	Name See Attachment	See Attachment	See Attachment
	Address		
	City - State - Zip		
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Driller		Well Operator's Signature		DEP USE ONLY		
Name See Attachment	Rig	 Printed Name / Title: Jon Hinson / Sr. Drilling Engineer		Reviewed by:		
Address				Comments:		
City - State - Zip						Date: 06/03/2025
Phone						



API# 37-125-29189-00-00

Well Service Companies

CASING SOURCE:

B&L Pipeco
20465 State Highway 249, Suite 200
Houston, TX 77070
1-800-927-4732
Surface, Coal Protective, Intermediate, and Production

CEMENTING COMPANY:

NexTier Completion Solutions
3990 Rogerdale Road
Houston, TX 77042
713-325-6000
Surface, Coal Protective, Intermediate

Schlumberger Technology Corporation
PO Box 732149
Dallas, TX 75373-2149
NAMremittance@slb.com
Production

DRILLER:

Falcon Drilling – Falcon Rig 26
102 Broadway Street Suite 300
Carnegie, PA 15106
740-349-8131
From 0' to 6,511'

Patterson UTI Drilling Co. LLC - 876
10713 W. Sam Houston Parkway N, Suite 800
Houston, Texas 77064
Fax: 281-766-7176
From 6,511' to 21,912'

LOGGING COMPANY:

Schlumberger Technology Corporation
PO Box 732149
Dallas, TX 75373-2149
NAMremittance@slb.com

Total Directional Services, LLC
PO Box 831
Windsor, CO 80550
970-686-8893

Baker Hughes
PO Box 30105
Dallas, TX 75303-1057
724-743-9212

Computerized Mudlogging Service, LLC
324 Deer Creek Drive
Struthers, OH 44471
330-397-5710

Edge Finance, LLC
33502 TX-249
Pinehurst, TX 77362
713-504-1094



API# 37-125-29189-00-00

Hardware Supplier Company List

CENTRALIZERS:

Summit Casing Equipment
6575 Corporation Parkway
Fort Worth, TX 76126
(877) 860-0969
www.summitcasing.com
Surface, Coal Protective, Intermediate, Production

CENTRALIZER TYPES:

18-5/8" x 22" - Welded Steel Bow Spring
13-3/8" x 17 1/2" - Welded Steel Bow Spring
9-5/8" x 12 1/4" - Welded Steel Bow Spring
5 1/2" x 8.0" - Solid Body Composite

TOE SLEEVES:

RSI CT HPHT Toe/Frac Sleeve
Halliburton
1000 Noble Energy Drive, Suite 400
Canonsburg, PA 15317-5817
724-743-8188
halliburton.com

FLOAT SHOE/LANDING COLLAR:

Hybrid Double Valve Float Shoe & Landing Collar
Innovex Downhole Solutions
1848 Old Route 33
Weston, WV 26452
304-841-0821
www.InnovexDownhole.com

FLOTATION DEVICE:

NCS AirLock Flotation Sub
NCS Multistage
19450 State Highway 249 Suite 200
Houston, TX 77070
281-453-2222



API# 37-125-29189-00-00

DFGW decided by: 6 – Geologist's determination – none observed

Wellbore Conditioning Attachment

Surface:

Pump 90 bbl of fresh water, 25 bbl gel.

Coal Protective:

Pump 85 bbl of fresh water, 25 bbl of Gel Spacer with 40# Baroseal.

Intermediate:

140 bbl of fresh water, 25 bbl Gel (500#) bentonite with Baroseal.

Production:

Circulate 2 bottoms up at 8.0 bpm. *Spacer details in Cement and Gas Migration Controls Attachment below.*

Cement and Gas Migration Controls Attachment

Surface:

Mix and pump 94 bbl (460 sacks) of Class L cement. Displaced cement with 50 bbl of fresh water. Circulated 15 bbl of cement to surface. Floats held, 1 bbl flow back to truck, casing left open. Water temperature 54°, slurry temperature 64°.

Coal Protective:

Mix and pump 65 bbl (295 sacks) Class L + 3% NAC-110 + 0.25 PPS NLM - 600 + 10% BWOW NAC-111 cement. Displace with 38 bbl of fresh water. Circulated 18 bbl of cement to surface. Mix water temperature 59°F, slurry temperature 75°F, pH 7.

Intermediate:

Mix and pump 135 bbl (605 sacks) 15.7 Class L gas block cement. Drop plug and displace with 122 bbl of fresh water. Plug landed at 960 psi, bumped to 1525 psi. Released pressure, floats held with 1 bbl back to truck. 30 bbl of cement returned to surface. Mix water temperature 34°F, slurry temperature 62°F.

Production:

Schlumberger pumped 100 bbl of 13.5 ppg MudPush Express with Surfactant, 153 bbl of 13.5 ppg MudPush Express without surfactant, and 893 bbl 15.0 ppg Tail Cement, the last 500 bbl with CemNet. 3,887 sacks. Displaced plug with 487 bbl of fresh water. Landed plug at 4bpm and 3,129 psi, bumped pressure to 3,612 psi. Held pressure for 5 minutes, checked floats, released pressure, 6 bbl returned to surface. Floats held. Maintained circulation throughout job, 172 bbl spacer returned to surface. Mix water temperature 66°F, slurry temperature 75°F.



API# 37-125-29189-00-00

Casing and Tubing Attachment: Hardware

Surface:

Run 5 joints of 18 5/8" 87.5# J-55 BTC casing set at 202'. Top of float shoe set at 199'. Ran 5 bow spring centralizers every joint from 158' to 26'.

Coal Protective:

Run 7 full joints 13 3/8" 54.5# J-55 BTC casing set at 282'. Top of float shoe set at 279'. Cement baskets set at 230' and 225'. Ran 6 bow spring centralizers every joint from 237' to 27'.

Intermediate:

Run 39 joints of 9 5/8" 40.0# J-55 LTC casing set at 1,657'. Top of float shoe set at 1,655'. Float collar set at 1,568'. Ran 20 bow spring centralizers every other joint from 1,571 to 28'.

Production:

Run 498 joints of 5 1/2" 20.0# HP P-110 GBCD casing set at 21,896'. Top of float shoe set at 21,892'. (2) centralized pup joints set at 21,860 and 21,825'. Toe sleeves set at 21,856' and 21,821'. Marker joints set at 19,876', and 6,506'. Floatation device set at 7,221'. Ran 392 - 8.0" Solid Body Composite centralizer every full-length joint from 21,776' to 4,639'. Ran a total of 394 centralizers.

RANGE RESOURCES APPALACHIA, LLC

Location: Washington County, PA
 Field: Washington
 Facility: BIRD RUN 10938 5H
 Slot: Slot #05
 Well: BIRD RUN 10938 5H
 Wellbore: BIRD RUN 10938 5H PWB

Facility Name
 BIRD RUN 10938 PWB

Grid East (US ft)
 1274801.031

Grid North (US ft)
 341298.783

Local N (ft)
 17.83

Local E (ft)
 -38.86

Local N (ft)
 1274802.070

Local E (ft)
 341314.710

Slot
 Slot #05

Paterson 576 (RK6) to Ground level (At Slot Slot #05)
 26ft

Mean Sea Level to Ground level (At Slot Slot #05)
 -126.1ft

Paterson 576 (RK6) to Mean Sea Level
 126.1ft

Location Information

Grid East (US ft)
 1274801.031

Grid North (US ft)
 341298.783

Local N (ft)
 17.83

Local E (ft)
 -38.86

Local N (ft)
 1274802.070

Local E (ft)
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Slot
 Slot #05

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 26ft

Mean Sea Level to Ground level (At Slot Slot #05)
 -126.1ft

Paterson 576 (RK6) to Mean Sea Level
 126.1ft

Well Data

Well
 BIRD RUN 10938 5H

Wellbore
 BIRD RUN 10938 5H AWB
 BIRD RUN 10938 5H PWB

Wellpath
 BIRD RUN 10938 5H AMP Proj: 21938
 BIRD RUN 10938 5H PWP Rev: 0

Well Profile Data

MD	ASL	TOG	Local E (ft)	Local N (ft)	Local U (ft)	Local D (ft)	Local S (ft)	Local W (ft)	Local E (ft)	Local N (ft)	Local U (ft)	Local D (ft)	Local S (ft)	Local W (ft)
6453.00	24.10	324.025	637.827	408.831	431.89	164.19	0.00	0.00	637.827	408.831	431.89	164.19	0.00	0.00
6453.00	28.00	333.200	643.276	413.34	418.62	152.38	0.00	0.00	643.276	413.34	418.62	152.38	0.00	0.00
6453.00	32.00	342.375	648.725	417.79	413.91	140.67	0.00	0.00	648.725	417.79	413.91	140.67	0.00	0.00
6453.00	36.00	351.550	654.174	422.24	409.14	129.02	0.00	0.00	654.174	422.24	409.14	129.02	0.00	0.00
6453.00	40.00	360.725	659.623	426.69	404.37	117.37	0.00	0.00	659.623	426.69	404.37	117.37	0.00	0.00
6453.00	44.00	370.000	665.072	431.14	400.60	105.72	0.00	0.00	665.072	431.14	400.60	105.72	0.00	0.00
6453.00	48.00	379.275	670.521	435.59	396.83	94.07	0.00	0.00	670.521	435.59	396.83	94.07	0.00	0.00
6453.00	52.00	388.550	675.970	440.04	393.06	82.42	0.00	0.00	675.970	440.04	393.06	82.42	0.00	0.00
6453.00	56.00	397.825	681.419	444.49	389.29	70.77	0.00	0.00	681.419	444.49	389.29	70.77	0.00	0.00
6453.00	60.00	407.100	686.868	448.94	385.52	59.12	0.00	0.00	686.868	448.94	385.52	59.12	0.00	0.00
6453.00	64.00	416.375	692.317	453.39	381.75	47.47	0.00	0.00	692.317	453.39	381.75	47.47	0.00	0.00
6453.00	68.00	425.650	697.766	457.84	377.98	35.82	0.00	0.00	697.766	457.84	377.98	35.82	0.00	0.00
6453.00	72.00	434.925	703.215	462.29	374.21	24.17	0.00	0.00	703.215	462.29	374.21	24.17	0.00	0.00
6453.00	76.00	444.200	708.664	466.74	370.44	12.52	0.00	0.00	708.664	466.74	370.44	12.52	0.00	0.00
6453.00	80.00	453.475	714.113	471.19	366.67	0.87	0.00	0.00	714.113	471.19	366.67	0.87	0.00	0.00
6453.00	84.00	462.750	719.562	475.64	362.90	-0.78	0.00	0.00	719.562	475.64	362.90	-0.78	0.00	0.00
6453.00	88.00	472.025	725.011	480.09	359.13	-2.43	0.00	0.00	725.011	480.09	359.13	-2.43	0.00	0.00
6453.00	92.00	481.300	730.460	484.54	355.36	-4.08	0.00	0.00	730.460	484.54	355.36	-4.08	0.00	0.00
6453.00	96.00	490.575	735.909	488.99	351.59	-5.73	0.00	0.00	735.909	488.99	351.59	-5.73	0.00	0.00
6453.00	100.00	499.850	741.358	493.44	347.82	-7.38	0.00	0.00	741.358	493.44	347.82	-7.38	0.00	0.00
6453.00	104.00	509.125	746.807	497.89	344.05	-9.03	0.00	0.00	746.807	497.89	344.05	-9.03	0.00	0.00
6453.00	108.00	518.400	752.256	502.34	340.28	-10.68	0.00	0.00	752.256	502.34	340.28	-10.68	0.00	0.00
6453.00	112.00	527.675	757.705	506.79	336.51	-12.33	0.00	0.00	757.705	506.79	336.51	-12.33	0.00	0.00
6453.00	116.00	536.950	763.154	511.24	332.74	-13.98	0.00	0.00	763.154	511.24	332.74	-13.98	0.00	0.00
6453.00	120.00	546.225	768.603	515.69	328.97	-15.63	0.00	0.00	768.603	515.69	328.97	-15.63	0.00	0.00
6453.00	124.00	555.500	774.052	520.14	325.20	-17.28	0.00	0.00	774.052	520.14	325.20	-17.28	0.00	0.00
6453.00	128.00	564.775	779.501	524.59	321.43	-18.93	0.00	0.00	779.501	524.59	321.43	-18.93	0.00	0.00
6453.00	132.00	574.050	784.950	529.04	317.66	-20.58	0.00	0.00	784.950	529.04	317.66	-20.58	0.00	0.00
6453.00	136.00	583.325	790.399	533.49	313.89	-22.23	0.00	0.00	790.399	533.49	313.89	-22.23	0.00	0.00
6453.00	140.00	592.600	795.848	537.94	310.12	-23.88	0.00	0.00	795.848	537.94	310.12	-23.88	0.00	0.00
6453.00	144.00	601.875	801.297	542.39	306.35	-25.53	0.00	0.00	801.297	542.39	306.35	-25.53	0.00	0.00
6453.00	148.00	611.150	806.746	546.84	302.58	-27.18	0.00	0.00	806.746	546.84	302.58	-27.18	0.00	0.00
6453.00	152.00	620.425	812.195	551.29	298.81	-28.83	0.00	0.00	812.195	551.29	298.81	-28.83	0.00	0.00
6453.00	156.00	629.700	817.644	555.74	295.04	-30.48	0.00	0.00	817.644	555.74	295.04	-30.48	0.00	0.00
6453.00	160.00	638.975	823.093	560.19	291.27	-32.13	0.00	0.00	823.093	560.19	291.27	-32.13	0.00	0.00
6453.00	164.00	648.250	828.542	564.64	287.50	-33.78	0.00	0.00	828.542	564.64	287.50	-33.78	0.00	0.00
6453.00	168.00	657.525	833.991	569.09	283.73	-35.43	0.00	0.00	833.991	569.09	283.73	-35.43	0.00	0.00
6453.00	172.00	666.800	839.440	573.54	279.96	-37.08	0.00	0.00	839.440	573.54	279.96	-37.08	0.00	0.00
6453.00	176.00	676.075	844.889	577.99	276.19	-38.73	0.00	0.00	844.889	577.99	276.19	-38.73	0.00	0.00
6453.00	180.00	685.350	850.338	582.44	272.42	-40.38	0.00	0.00	850.338	582.44	272.42	-40.38	0.00	0.00
6453.00	184.00	694.625	855.787	586.89	268.65	-42.03	0.00	0.00	855.787	586.89	268.65	-42.03	0.00	0.00
6453.00	188.00	703.900	861.236	591.34	264.88	-43.68	0.00	0.00	861.236	591.34	264.88	-43.68	0.00	0.00
6453.00	192.00	713.175	866.685	595.79	261.11	-45.33	0.00	0.00	866.685	595.79	261.11	-45.33	0.00	0.00
6453.00	196.00	722.450	872.134	600.24	257.34	-46.98	0.00	0.00	872.134	600.24	257.34	-46.98	0.00	0.00
6453.00	200.00	731.725	877.583	604.69	253.57	-48.63	0.00	0.00	877.583	604.69	253.57	-48.63	0.00	0.00
6453.00	204.00	741.000	883.032	609.14	249.80	-50.28	0.00	0.00	883.032	609.14	249.80	-50.28	0.00	0.00
6453.00	208.00	750.275	888.481	613.59	246.03	-51.93	0.00	0.00	888.481	613.59	246.03	-51.93	0.00	0.00
6453.00	212.00	759.550	893.930	618.04	242.26	-53.58	0.00	0.00	893.930	618.04	242.26	-53.58	0.00	0.00
6453.00	216.00	768.825	899.379	622.49	238.49	-55.23	0.00	0.00	899.379	622.49	238.49	-55.23	0.00	0.00
6453.00	220.00	778.100	904.828	626.94	234.72	-56.88	0.00	0.00	904.828	626.94	234.72	-56.88	0.00	0.00
6453.00	224.00	787.375	910.277	631.39	230.95	-58.53	0.00	0.00	910.277	631.39	230.95	-58.53	0.00	0.00
6453.00	228.00	796.650	915.726	635.84	227.18	-60.18	0.00	0.00	915.726	635.84	227.18	-60.18	0.00	0.00
6453.00	232.00	805.925	921.175	640.29	223.41	-61.83	0.00	0.00	921.175	640.29	223.41	-61.83	0.00	0.00
6453.00	236.00	815.200	926.624	644.74	219.64	-63.48	0.00	0.00	926.624	644.74	219.64	-63.48	0.00	0.00
6453.00	240.00	824.475	932.073	649.19	215.87	-65.13	0.00	0.00	932.073	649.19	215.87	-65.13	0.00	0.00
6453.00	244.00	833.750	937.522	653.64	212.10	-66.78	0.00	0.00	937.522	653.64	212.10	-66.78	0.00	0.00
6453.00	248.00	843.025	942.971	658.09	208.33	-68.43	0.00	0.00	942.971	658.09	208.33	-68.43	0.00	0.00
6453.00	252.00	852.300	948.420	662.54	204.56	-70.08	0.00	0.00	948.420	662.54	204.56	-70.08	0.00	0.00
6453.00	256.00	861.575	953.869	666.99	200.79	-71.73	0.00	0.00	953.869	666.99	200.79	-71.73	0.00	0.00
6453.00	260.00	870.850	959.318	671.44	197.02	-73.38	0.00	0.00	959.318	671.44	197.02	-73.38	0.00	0.00
6453.00	264.00	880.125	964.767	675.89	193.25	-75.03	0.00	0.00	964.767	675.89	193.25	-75.03	0.00	0.00
6453.00	268.00	889.400	970.216	680.34	189.48	-76.68	0.00	0.00	970.216	680.34	189.48	-76.68	0.00	0.00
6453.00	272.00	898.675	975.665	684.79	185.71	-78.33	0.00	0.00	975.665	684.79	185.71	-78.33	0.00	0.00
6453.00	276.00	907.950	981.114	689.24	181.94	-79.98	0.00	0.00	981.114	689.24	181.94	-79.98	0.00	0.00
6453.00	280.00	917.225	986.563	693.69	178.17	-81.63	0.00	0.00	986.563	693.69	178.17	-81.63	0.00	0.00
6453.00	284.00	926.500	992.012	698.14	174.40	-83.28	0.00	0.00	992.012	698.14	174.40	-83.28	0.00	0.00
6453.00	288.00	935.775	997.461	702.59	170.63	-84.93	0.00	0.						

REFERENCE WELLPATH IDENTIFICATION

Operator	IRANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

WELLPATH DATA (256 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	87.150	0.00	0.00	0.00	0.00	1274862.07	341314.71	40°14'36.5363"N	80°14'6.3487"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	87.150	26.00	0.00	0.00	0.00	1274862.07	341314.71	40°14'36.5363"N	80°14'6.3487"W	0.00	0.000	0.00	0.00	0.00
65.00	0.900	87.150	65.00	-0.18	0.02	0.31	1274862.38	341314.73	40°14'36.5365"N	80°14'6.3448"W	0.31	87.150	2.31	2.31	0.00
115.00	1.090	149.980	114.99	-0.87	-0.38	0.94	1274863.01	341314.33	40°14'36.5328"N	80°14'6.3365"W	1.01	111.939	2.10	0.38	125.66
165.00	1.610	159.300	164.98	-2.01	-1.45	1.42	1274863.49	341313.26	40°14'36.5224"N	80°14'6.3299"W	2.03	135.471	1.13	1.04	18.64
215.00	1.590	152.980	214.96	-3.37	-2.72	1.99	1274864.06	341311.99	40°14'36.5099"N	80°14'6.3222"W	3.37	143.878	0.36	-0.04	-12.64
234.00	1.480	149.600	233.95	-3.87	-3.17	2.23	1274864.30	341311.54	40°14'36.5056"N	80°14'6.3189"W	3.87	144.857	0.75	-0.58	-17.79
337.00	1.600	147.720	336.91	-6.82	-5.53	3.67	1274865.74	341309.18	40°14'36.4826"N	80°14'6.2994"W	6.64	146.426	0.13	0.12	-1.83
381.00	1.680	147.730	380.90	-7.87	-6.60	4.34	1274866.41	341308.12	40°14'36.4723"N	80°14'6.2904"W	7.90	146.634	0.18	0.18	0.02
425.00	1.680	151.100	424.88	-9.15	-7.71	5.00	1274867.07	341307.01	40°14'36.4615"N	80°14'6.2815"W	9.18	147.024	0.22	0.00	7.66
469.00	1.850	150.780	468.86	-10.49	-8.89	5.66	1274867.73	341305.82	40°14'36.4500"N	80°14'6.2726"W	10.54	147.526	0.39	0.39	-0.73
513.00	1.920	154.500	512.83	-11.91	-10.17	6.32	1274868.39	341304.54	40°14'36.4375"N	80°14'6.2636"W	11.98	148.147	0.32	0.16	8.45
557.00	2.070	155.660	556.81	-13.40	-11.56	6.97	1274869.04	341303.15	40°14'36.4240"N	80°14'6.2547"W	13.50	148.934	0.35	0.34	2.64
645.00	2.160	154.940	644.75	-16.56	-14.51	8.32	1274870.39	341300.20	40°14'36.3952"N	80°14'6.2362"W	16.73	150.166	0.11	0.10	-0.82
689.00	2.280	156.970	688.71	-18.22	-16.07	9.02	1274871.09	341298.64	40°14'36.3800"N	80°14'6.2267"W	18.43	150.703	0.33	0.27	4.61
773.00	2.320	157.500	732.68	-19.92	-17.70	9.70	1274871.77	341297.01	40°14'36.3641"N	80°14'6.2173"W	20.18	151.273	0.10	0.09	1.20
821.00	2.360	156.500	820.60	-23.37	-21.02	11.05	1274872.44	341295.36	40°14'36.3479"N	80°14'6.2081"W	21.96	151.829	0.12	0.02	2.84
865.00	2.290	156.170	864.57	-25.09	-22.65	11.77	1274873.84	341293.69	40°14'36.3317"N	80°14'6.1987"W	23.75	152.267	0.22	0.07	-5.11
909.00	2.310	152.210	908.53	-26.82	-24.24	12.53	1274874.60	341290.47	40°14'36.3003"N	80°14'6.1784"W	25.52	152.551	0.18	-0.18	-0.75
997.00	2.290	159.380	996.46	-30.24	-27.45	13.98	1274876.05	341287.26	40°14'36.2890"N	80°14'6.1586"W	30.81	153.013	0.33	-0.02	8.15
1041.00	2.290	152.470	1040.43	-31.94	-29.05	14.69	1274876.76	341285.66	40°14'36.2534"N	80°14'6.1488"W	32.56	153.170	0.63	0.00	-15.70
1085.00	2.300	160.850	1084.39	-33.64	-30.67	15.39	1274877.46	341284.04	40°14'36.2376"N	80°14'6.1392"W	34.31	153.349	0.76	0.02	19.05
1129.00	2.310	151.400	1128.36	-35.35	-32.28	16.10	1274878.17	341282.43	40°14'36.2219"N	80°14'6.1294"W	36.07	153.484	0.86	0.02	-21.48
1173.00	2.270	153.050	1172.32	-37.08	-33.83	16.92	1274878.99	341280.88	40°14'36.2067"N	80°14'6.1183"W	37.83	153.425	0.18	-0.08	3.75
1218.00	2.310	159.000	1217.29	-38.82	-35.48	17.65	1274879.72	341279.24	40°14'36.1907"N	80°14'6.1083"W	39.63	153.544	0.54	0.09	13.22
1262.00	2.270	150.990	1261.25	-40.53	-37.07	18.39	1274880.46	341277.65	40°14'36.1752"N	80°14'6.0982"W	41.38	153.607	0.73	-0.09	-18.20
1306.00	2.080	156.800	1305.22	-42.17	-38.56	19.13	1274881.20	341276.15	40°14'36.1607"N	80°14'6.0882"W	43.05	153.613	0.66	-0.43	13.20
1350.00	2.030	157.450	1349.19	-43.69	-40.02	19.74	1274881.81	341274.70	40°14'36.1465"N	80°14'6.0797"W	44.62	153.737	0.13	-0.11	1.48
1394.00	1.800	156.560	1393.17	-45.11	-41.37	20.32	1274882.39	341273.34	40°14'36.1333"N	80°14'6.0718"W	46.09	153.842	0.53	-0.52	-2.02



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Well
RANGE RESOURCES APPALACHIA, LLC	BIRD RUN 10938 5H
Field	API
Washington	37-125-29189-0000
Facility	Wellbore
BIRD RUN 10938 Pad	BIRD RUN 10938 5H AWB
Slot	Slot #05

WELLPATH DATA (256 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
1438.00	1.820	155.480	1437.14	-46.46	-42.64	20.88	1274882.95	341272.07	40°14'36.1209"N	80°14'16.0641"W	47.48	153.906	0.09	0.05	-2.45
1492.00	1.860	152.160	1481.12	-47.84	-43.91	21.51	1274883.58	341270.81	40°14'36.1085"N	80°14'16.0556"W	48.89	153.903	0.26	0.09	-7.55
1526.00	2.040	152.480	1525.10	-49.31	-45.23	22.20	1274884.27	341269.48	40°14'36.0956"N	80°14'16.0461"W	50.39	153.856	0.41	0.41	0.73
1570.00	2.070	157.390	1569.07	-50.85	-46.66	22.87	1274884.94	341268.05	40°14'36.0817"N	80°14'16.0370"W	51.96	153.890	0.41	0.07	11.16
1595.00	2.050	157.040	1594.05	-51.72	-47.49	23.22	1274885.29	341267.22	40°14'36.0736"N	80°14'16.0322"W	52.86	153.946	0.09	-0.08	-1.40
1721.00	2.060	158.580	1719.97	-56.06	-51.67	24.92	1274886.99	341263.04	40°14'36.0328"N	80°14'16.0087"W	57.37	154.250	0.04	0.01	1.22
1809.00	2.040	151.730	1807.91	-59.12	-54.52	26.24	1274888.31	341260.19	40°14'36.0050"N	80°14'15.9907"W	60.51	154.298	0.28	-0.02	-7.78
1897.00	1.300	72.640	1895.89	-61.02	-55.61	27.94	1274890.01	341259.11	40°14'35.9948"N	80°14'15.9684"W	62.23	153.324	2.50	-0.84	-89.87
1985.00	2.890	28.440	1984.83	-60.48	-53.33	29.97	1274892.04	341257.38	40°14'36.0178"N	80°14'15.9431"W	61.17	150.666	2.42	1.79	-49.66
2073.00	4.730	14.290	2071.63	-57.41	-47.93	31.90	1274893.97	341266.79	40°14'36.0717"N	80°14'15.9202"W	57.57	146.352	2.36	2.11	-16.26
2161.00	4.490	11.750	2159.35	-52.96	-41.04	33.50	1274895.57	341273.67	40°14'36.1402"N	80°14'15.9021"W	52.97	140.777	0.36	-0.27	-2.89
2250.00	4.470	8.270	2248.08	-48.31	-34.19	34.71	1274896.77	341280.52	40°14'36.2081"N	80°14'15.8890"W	48.72	134.575	0.31	-0.02	-3.91
2338.00	4.440	7.200	2335.81	-43.54	-27.42	35.63	1274897.69	341287.29	40°14'36.2753"N	80°14'15.8796"W	44.96	127.586	0.10	-0.03	-1.22
2426.00	4.370	6.690	2423.55	-38.76	-20.71	36.44	1274898.51	341294.00	40°14'36.3418"N	80°14'15.8715"W	41.92	119.612	0.09	-0.08	-0.58
2504.00	4.290	1.000	2501.33	-34.37	-14.84	36.94	1274898.91	341299.87	40°14'36.3999"N	80°14'15.8685"W	39.72	111.946	0.56	-0.10	-7.29
2593.00	4.010	1.680	2590.10	-29.39	-8.40	36.99	1274899.06	341306.31	40°14'36.4635"N	80°14'15.8689"W	37.93	102.802	0.32	-0.31	0.76
2681.00	5.130	20.600	2677.82	-24.97	-1.65	38.46	1274900.53	341313.06	40°14'36.5307"N	80°14'15.8523"W	38.50	92.450	2.12	1.27	21.50
2769.00	6.610	26.080	2765.36	-20.71	6.59	42.07	1274904.14	341321.30	40°14'36.6130"N	80°14'15.8088"W	42.59	81.103	1.80	1.68	6.23
2857.00	7.440	35.750	2852.70	-16.90	15.76	47.63	1274909.70	341330.47	40°14'36.7052"N	80°14'15.7405"W	50.17	71.692	1.64	0.94	10.99
2945.00	8.260	47.060	2939.88	-14.76	24.69	55.59	1274917.66	341339.40	40°14'36.7956"N	80°14'15.6412"W	60.82	66.050	1.88	0.93	12.85
3033.00	9.660	52.150	3026.80	-14.23	33.53	66.05	1274928.11	341348.24	40°14'36.8858"N	80°14'15.5096"W	74.07	63.085	1.83	1.59	5.78
3122.00	10.480	56.460	3114.43	-14.87	42.58	78.69	1274940.76	341357.29	40°14'36.9788"N	80°14'15.3499"W	89.47	61.580	1.25	0.92	4.84
3209.00	10.570	56.190	3199.97	-16.07	51.39	91.91	1274953.98	341366.10	40°14'37.0695"N	80°14'15.1826"W	105.31	60.788	0.12	0.10	-0.31
3298.00	11.380	64.170	3287.35	-18.52	59.76	106.60	1274968.67	341374.47	40°14'37.1562"N	80°14'14.9963"W	122.21	60.724	1.93	0.91	8.97
3385.00	11.460	61.240	3372.62	-21.71	67.66	121.90	1274983.97	341382.37	40°14'37.2365"N	80°14'14.8019"W	139.42	60.968	0.87	0.08	-3.37
3464.00	9.870	65.940	3450.26	-24.60	74.20	134.97	1274997.03	341388.91	40°14'37.3067"N	80°14'14.6359"W	154.02	61.200	2.29	-2.01	5.95
3552.00	9.810	62.880	3536.97	-27.83	80.69	148.53	1275010.59	341395.40	40°14'37.3746"N	80°14'14.4634"W	169.03	61.486	0.60	-0.07	-3.48
3640.00	9.770	60.570	3623.68	-30.35	87.78	161.70	1275023.77	341402.48	40°14'37.4483"N	80°14'14.2962"W	183.99	61.506	0.45	-0.05	-2.63
3728.00	9.970	63.790	3710.38	-33.02	94.81	175.04	1275037.10	341409.52	40°14'37.5214"N	80°14'14.1268"W	199.07	61.558	0.67	0.23	3.66
3816.00	9.750	60.720	3797.08	-35.70	101.82	189.37	1275050.44	341416.53	40°14'37.5944"N	80°14'13.9575"W	214.13	61.608	0.65	-0.25	-3.49



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938

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REFERENCE WELLPATH IDENTIFICATION

Operator	RANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

WELLPATH DATA (256 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
3904.00	8.920	65.780	3883.92	-38.46	108.26	201.10	1275063.16	341422.97	40°14'37.6616"N	80°14'37.7958"W	228.39	61.704	1.33	-0.94	5.75
3992.00	8.830	62.600	3970.87	-41.32	114.17	213.31	1275075.38	341428.88	40°14'37.7233"N	80°14'37.6404"W	241.94	61.844	0.57	-0.10	-3.61
4081.00	8.640	59.930	4058.83	-43.50	120.66	225.16	1275087.23	341435.37	40°14'37.7906"N	80°14'37.4901"W	255.46	61.814	0.50	-0.21	-3.00
4169.00	8.790	64.490	4145.82	-45.86	126.87	236.95	1275099.01	341441.58	40°14'37.8554"N	80°14'37.3403"W	268.78	61.834	0.80	0.17	5.18
4257.00	8.740	61.240	4232.79	-48.39	132.98	248.88	1275110.94	341447.69	40°14'37.9190"N	80°14'37.1888"W	282.18	61.883	0.57	-0.06	-3.69
4345.00	8.620	58.050	4319.78	-50.15	139.69	260.34	1275122.40	341454.39	40°14'37.9885"N	80°14'37.0435"W	295.45	61.783	0.56	-0.14	-3.63
4424.00	9.710	62.200	4397.77	-51.95	145.93	271.26	1275133.32	341460.63	40°14'38.0532"N	80°14'29.9051"W	308.02	61.721	1.61	1.38	5.25
4513.00	9.560	59.150	4485.52	-54.20	153.23	284.25	1275146.31	341467.93	40°14'38.1289"N	80°14'29.7402"W	322.92	61.673	0.59	-0.15	-3.43
4601.00	9.450	62.800	4572.31	-56.47	160.29	296.97	1275159.02	341474.99	40°14'38.2021"N	80°14'29.5789"W	337.46	61.642	0.70	-0.15	4.15
4689.00	9.420	60.800	4659.12	-58.89	167.12	309.66	1275171.72	341481.83	40°14'38.2732"N	80°14'29.4176"W	351.88	61.645	0.41	-0.03	-2.50
4777.00	10.420	66.270	4745.80	-61.93	173.86	323.22	1275185.28	341488.56	40°14'38.3435"N	80°14'29.2453"W	367.02	61.724	1.59	1.14	6.44
4855.00	10.480	63.720	4832.34	-65.51	180.61	337.69	1275199.74	341495.31	40°14'38.4142"N	80°14'29.0613"W	382.95	61.860	0.53	0.07	-2.90
4953.00	10.520	60.140	4918.87	-66.27	188.15	351.83	1275213.89	341502.85	40°14'38.4926"N	80°14'28.8817"W	398.98	61.863	0.74	0.05	-4.07
5041.00	10.410	57.920	5005.41	-70.23	196.37	365.53	1275227.59	341511.08	40°14'38.5776"N	80°14'28.7081"W	414.94	61.754	0.47	-0.13	-2.52
5129.00	10.400	63.480	5091.96	-72.63	204.14	379.38	1275241.43	341518.84	40°14'38.6582"N	80°14'28.5324"W	430.81	61.715	1.14	-0.01	6.32
5217.00	10.220	61.180	5178.54	-75.45	211.45	393.32	1275255.38	341526.15	40°14'38.7343"N	80°14'28.3553"W	446.56	61.737	0.51	-0.20	-2.61
5305.00	9.120	66.410	5265.29	-78.43	218.01	406.56	1275268.61	341532.71	40°14'38.8027"N	80°14'28.1871"W	461.32	61.799	1.60	-1.25	5.94
5394.00	8.870	64.850	5353.20	-81.71	223.74	419.23	1275281.29	341538.45	40°14'38.8629"N	80°14'28.0258"W	475.20	61.911	0.39	-0.28	-1.75
5473.00	8.690	63.520	5431.27	-84.25	228.99	430.08	1275292.13	341543.69	40°14'38.9178"N	80°14'27.8799"W	487.24	61.967	0.35	-0.24	-1.68
5561.00	8.400	62.220	5518.30	-86.72	234.95	441.71	1275303.76	341549.65	40°14'38.9798"N	80°14'27.7401"W	500.31	61.991	0.38	-0.32	-1.48
5649.00	9.160	54.890	5605.27	-88.21	241.97	453.13	1275315.18	341556.67	40°14'39.0524"N	80°14'27.5955"W	513.69	61.898	1.54	0.86	-8.33
5736.00	8.770	53.370	5691.21	-88.71	249.91	464.11	1275326.17	341564.61	40°14'39.1339"N	80°14'27.4567"W	527.12	61.699	0.52	-0.45	-1.75
5824.00	8.710	52.120	5778.18	-88.88	258.01	474.76	1275336.81	341572.71	40°14'39.2188"N	80°14'27.3225"W	540.34	61.478	0.23	-0.07	-1.42
5913.00	9.860	23.250	5866.06	-85.23	269.15	483.09	1275345.14	341583.85	40°14'39.3292"N	80°14'27.1917"W	553.01	60.876	5.33	1.29	-32.44
6001.00	13.990	359.570	5952.20	-73.16	286.73	485.99	1275348.04	341601.43	40°14'39.5036"N	80°14'27.0681"W	564.27	59.460	7.18	4.68	-26.91
6089.00	18.340	352.450	6036.70	-52.78	311.11	484.09	1275346.14	341625.80	40°14'39.7439"N	80°14'26.9215"W	575.44	57.273	5.42	4.94	-8.09
6177.00	22.200	346.950	6119.25	-25.76	341.04	478.51	1275340.56	341655.74	40°14'40.0380"N	80°14'26.8042"W	587.61	54.522	4.89	4.39	-6.25
6265.00	25.780	344.360	6199.63	7.03	375.68	469.59	1275331.65	341690.37	40°14'40.3777"N	80°14'26.7117"W	601.37	51.340	4.24	4.07	-2.94
6353.00	28.880	338.550	6277.82	45.12	413.90	456.66	1275318.71	341728.59	40°14'40.7517"N	80°14'26.6123"W	616.32	47.812	4.64	3.52	-6.60
6441.00	32.540	334.780	6353.47	88.59	455.11	438.80	1275300.85	341769.80	40°14'41.1538"N	80°14'26.5195"W	632.19	43.955	4.70	4.16	-4.28

REFERENCE WELLPATH IDENTIFICATION

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Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

WELLPATH DATA (256 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
6470.00	34.310	334.020	6377.67	104.19	469.51	431.89	1275293.95	341784.20	40°14'41.2941"N	80°14'0.9517"W	637.94	42.610	6.27	6.10	-2.62
6496.00	35.400	333.780	6399.01	118.73	482.85	425.35	1275287.41	341797.55	40°14'41.4241"N	80°14'1.0408"W	643.49	41.377	4.23	4.19	-0.92
6591.00	39.200	329.420	6474.58	175.47	533.41	397.91	1275259.96	341848.10	40°14'41.9159"N	80°14'1.4130"W	665.48	36.722	4.87	4.00	-4.59
6696.00	40.390	328.860	6547.57	235.80	585.60	366.72	1275228.77	341900.29	40°14'42.4228"N	80°14'1.8340"W	690.95	32.056	1.31	1.25	-0.59
6781.00	46.370	327.870	6616.58	300.82	641.15	332.53	1275194.59	341955.83	40°14'42.9619"N	80°14'2.2947"W	722.25	27.414	6.33	6.28	-0.94
6876.00	59.440	326.320	6673.76	375.93	704.61	291.44	1275153.50	342019.29	40°14'43.5774"N	80°14'2.8475"W	762.50	22.471	13.83	13.76	-1.74
6971.00	72.540	326.560	6712.33	462.26	776.77	243.58	1275105.64	342091.45	40°14'44.2769"N	80°14'3.4907"W	814.07	17.410	13.79	13.79	0.25
7065.00	84.380	325.220	6731.10	553.98	852.88	192.00	1275054.07	342167.56	40°14'45.0143"N	80°14'4.1831"W	874.22	12.687	12.67	12.60	-1.43
7160.00	90.570	321.480	6733.17	648.80	928.97	135.38	1274997.45	342243.64	40°14'45.7502"N	80°14'4.9406"W	938.78	8.292	7.61	6.52	-3.94
7255.00	90.570	321.200	6734.34	743.79	1003.14	76.04	1274938.11	342317.82	40°14'46.4664"N	80°14'5.7325"W	1008.02	4.335	0.29	0.00	-0.28
7350.00	90.140	317.920	6733.76	838.69	1075.44	14.43	1274876.50	342390.11	40°14'47.1634"N	80°14'6.5530"W	1075.53	0.769	3.48	-0.45	-3.45
7445.00	90.140	320.650	6733.52	935.57	1147.44	-47.54	1274814.54	342462.10	40°14'47.8574"N	80°14'7.3779"W	1148.42	357.628	2.87	0.00	2.87
7540.00	90.290	320.750	6733.17	1028.55	1220.95	-107.71	1274754.37	342535.62	40°14'48.5668"N	80°14'8.1802"W	1225.69	354.959	0.19	0.16	0.11
7635.00	89.920	320.500	6732.99	1123.52	1294.39	-167.97	1274694.10	342609.05	40°14'49.2755"N	80°14'8.9838"W	1305.24	352.606	0.47	-0.39	-0.26
7723.00	89.920	320.620	6733.12	1216.49	1366.21	-227.05	1274635.02	342680.87	40°14'49.9685"N	80°14'9.7775"W	1384.95	350.584	0.13	0.00	0.13
7823.00	90.010	321.320	6733.18	1311.47	1440.01	-286.88	1274575.20	342754.66	40°14'50.6808"N	80°14'10.5694"W	1468.30	348.733	0.74	0.09	0.74
7916.00	89.710	317.900	6733.41	1404.38	1510.83	-347.13	1274514.95	342825.48	40°14'51.3637"N	80°14'11.3719"W	1550.19	347.060	3.69	-0.32	-3.68
8011.00	89.930	322.290	6733.71	1499.30	1583.69	-408.06	1274454.03	342898.34	40°14'52.0664"N	80°14'12.1836"W	1635.41	345.551	4.63	0.23	4.62
8106.00	89.780	323.210	6733.95	1594.29	1659.30	-465.56	1274396.53	342973.95	40°14'52.7973"N	80°14'12.9525"W	1723.38	344.327	0.98	-0.16	0.97
8201.00	89.930	325.700	6734.19	1689.20	1736.60	-520.78	1274341.30	343051.24	40°14'53.5455"N	80°14'13.6925"W	1813.00	343.307	2.63	0.16	2.62
8296.00	90.330	323.060	6733.97	1784.11	1813.81	-576.11	1274285.98	343128.46	40°14'54.2928"N	80°14'14.4337"W	1903.11	342.379	2.81	0.42	-2.78
8391.00	90.150	322.300	6733.57	1879.10	1889.36	-633.70	1274228.39	343204.00	40°14'55.0231"N	80°14'15.2037"W	1992.80	341.458	0.82	-0.19	-0.80
8486.00	90.920	322.740	6732.69	1974.09	1964.75	-691.51	1274170.59	343279.39	40°14'55.7516"N	80°14'15.9762"W	2082.88	340.610	0.93	0.81	0.46
8581.00	90.670	322.590	6731.37	2069.08	2040.27	-749.11	1274112.98	343354.91	40°14'56.4817"N	80°14'16.7463"W	2173.45	339.839	0.31	-0.26	-0.16
8676.00	90.490	321.780	6730.41	2164.07	2115.32	-807.36	1274054.74	343429.95	40°14'57.2067"N	80°14'17.5244"W	2264.16	339.110	0.87	-0.18	-0.85
8771.00	91.350	323.060	6728.88	2259.05	2190.59	-865.29	1273996.82	343505.23	40°14'57.9342"N	80°14'18.2985"W	2355.30	338.446	1.62	0.91	1.35
8865.00	90.050	321.950	6727.73	2353.04	2265.17	-922.50	1273939.61	343579.80	40°14'58.6549"N	80°14'19.0632"W	2445.81	337.841	1.82	-1.38	-1.18
8960.00	90.700	322.550	6727.11	2448.03	2340.28	-980.65	1273881.45	343654.91	40°14'59.3806"N	80°14'19.8402"W	2537.44	337.265	0.93	0.68	0.63
9055.00	90.630	322.630	6726.01	2543.02	2415.73	-1038.36	1273823.74	343730.36	40°15'0.1099"N	80°14'20.6116"W	2629.44	336.740	0.11	-0.07	0.08
9150.00	90.700	322.100	6724.91	2638.01	2490.86	-1096.37	1273765.74	343805.58	40°15'0.8368"N	80°14'21.3868"W	2721.56	336.244	0.56	0.07	-0.56



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938'

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REFERENCE WELLPATH IDENTIFICATION

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Field	Washington	API	37-125-29189-0000
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Slot	Slot #05		

WELLPATH DATA (256 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
9245.00	89.470	321.680	6724.76	2733.01	2565.71	-1155.00	1273707.11	343880.33	40°15'1.5589"N	80°14'22.1698"W	2813.70	335.764	1.37	-1.29	-0.44
9340.00	91.500	322.720	6723.96	2828.00	2640.76	-1213.22	1273648.89	343955.38	40°15'2.2840"N	80°14'22.9476"W	2906.12	335.325	2.40	2.14	1.09
9435.00	92.270	323.470	6720.84	2922.93	2716.69	-1270.24	1273591.88	344031.30	40°15'3.0181"N	80°14'23.7103"W	2998.98	334.941	1.13	2.998	0.79
9530.00	91.620	321.650	6717.61	3017.87	2792.07	-1327.95	1273534.16	344106.68	40°15'3.7467"N	80°14'24.4818"W	3091.78	334.563	2.03	-0.68	-1.92
9624.00	91.590	318.750	6714.98	3111.80	2864.78	-1387.47	1273474.65	344178.39	40°15'4.4483"N	80°14'25.2754"W	3183.08	334.158	2.02	-0.03	-2.02
9720.00	91.900	322.990	6712.05	3207.74	2939.73	-1447.36	1273414.76	344254.33	40°15'5.1720"N	80°14'26.0748"W	3276.71	333.787	3.39	0.32	3.38
9814.00	92.060	319.020	6708.81	3301.65	3012.73	-1506.46	1273355.66	344327.33	40°15'5.8766"N	80°14'26.8633"W	3368.38	333.433	4.22	0.17	-4.22
9909.00	92.360	322.960	6705.14	3396.54	3086.48	-1566.21	1273295.92	344401.07	40°15'6.5884"N	80°14'27.6604"W	3461.12	333.095	4.16	0.32	4.15
10004.00	91.320	318.650	6702.09	3491.45	3160.04	-1626.20	1273235.93	344474.64	40°15'7.2984"N	80°14'28.4605"W	3553.93	332.769	4.66	-1.09	-4.54
10098.00	92.180	319.500	6699.22	3585.28	3231.03	-1687.74	1273174.39	344545.63	40°15'7.9825"N	80°14'29.2788"W	3645.28	332.419	1.29	0.91	0.90
10193.00	91.250	320.220	6696.37	3680.17	3303.62	-1748.96	1273113.18	344618.21	40°15'8.6824"N	80°14'30.0954"W	3738.02	332.103	1.24	-0.98	0.76
10288.00	90.660	320.680	6694.79	3775.12	3376.86	-1809.44	1273052.69	344691.45	40°15'9.3891"N	80°14'30.9018"W	3831.09	331.816	0.79	-0.62	0.48
10383.00	92.180	322.910	6692.44	3870.08	3451.49	-1868.17	1272993.96	344766.07	40°15'10.1098"N	80°14'31.6861"W	3924.64	331.575	2.84	1.60	2.35
10478.00	92.360	323.010	6688.67	3965.00	3527.26	-1925.35	1272936.79	344841.84	40°15'10.8423"N	80°14'32.4509"W	4018.52	331.372	0.22	0.19	0.11
10573.00	92.390	323.230	6684.74	4059.90	3603.18	-1982.32	1272878.82	344917.76	40°15'11.5764"N	80°14'33.2128"W	4112.48	331.182	0.23	0.03	0.23
10668.00	92.390	323.200	6680.78	4154.79	3679.20	-2039.16	1272822.99	344993.78	40°15'12.3114"N	80°14'33.9734"W	4206.50	331.003	0.03	0.00	-0.03
10763.00	91.030	322.960	6677.94	4249.73	3755.11	-2096.20	1272765.95	345069.69	40°15'13.0454"N	80°14'34.7364"W	4300.57	330.829	1.45	-1.43	-0.25
10858.00	90.850	322.180	6676.38	4344.71	3830.54	-2153.93	1272708.22	345145.11	40°15'13.7744"N	80°14'35.5081"W	4394.59	330.651	0.84	-0.19	-0.82
10953.00	90.730	322.540	6675.07	4439.70	3905.76	-2211.94	1272650.21	345220.33	40°15'14.5012"N	80°14'36.2834"W	4488.61	330.476	0.40	-0.13	0.38
11048.00	90.940	322.590	6673.69	4534.69	3981.19	-2269.68	1272592.47	345295.75	40°15'15.2302"N	80°14'37.0553"W	4582.72	330.312	0.23	0.22	0.05
11142.00	90.540	322.240	6672.47	4628.68	4055.67	-2327.01	1272535.15	345370.24	40°15'15.9499"N	80°14'37.8216"W	4675.84	330.154	0.57	-0.43	-0.37
11238.00	91.100	322.960	6671.10	4724.66	4131.93	-2385.31	1272476.85	345446.49	40°15'16.6869"N	80°14'38.6010"W	4771.01	330.003	0.95	0.58	0.75
11333.00	90.940	322.620	6669.41	4819.64	4207.57	-2442.75	1272419.41	345522.13	40°15'17.4181"N	80°14'39.3691"W	4865.26	329.862	0.40	-0.17	-0.36
11428.00	91.000	323.260	6667.80	4914.61	4283.37	-2499.99	1272362.17	345597.93	40°15'18.1509"N	80°14'40.1347"W	4959.56	329.730	0.68	0.06	0.67
11522.00	90.940	322.980	6666.21	5008.58	4358.55	-2556.40	1272305.76	345673.11	40°15'18.8778"N	80°14'40.8893"W	5052.94	329.607	0.30	-0.06	-0.30
11617.00	91.100	323.260	6664.52	5103.55	4434.53	-2613.40	1272248.76	345749.08	40°15'19.6124"N	80°14'41.6519"W	5147.32	329.488	0.34	0.17	0.29
11712.00	91.000	323.100	6662.78	5198.51	4510.57	-2670.33	1272191.84	345825.12	40°15'20.3476"N	80°14'42.4135"W	5241.74	329.374	0.20	-0.11	-0.17
11807.00	91.130	324.240	6661.01	5293.45	4587.09	-2726.60	1272135.57	345901.63	40°15'21.0877"N	80°14'43.1669"W	5336.26	329.272	1.21	0.14	1.20
11902.00	90.700	320.250	6659.49	5388.42	4662.17	-2784.75	1272077.42	345976.71	40°15'21.8132"N	80°14'43.9440"W	5430.53	329.150	4.22	-0.45	-4.20
11997.00	90.170	320.310	6658.77	5483.37	4735.24	-2845.45	1272016.72	346048.78	40°15'22.5180"N	80°14'44.7533"W	5524.41	328.998	0.56	-0.56	0.06



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938'
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REFERENCE WELLPATH IDENTIFICATION

Operator	RANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	BIRD RUN 10938 Pad	Slot #05	

WELLPATH DATA (256 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
12092.00	90.360	322.020	6658.33	5578.36	4809.24	-2905.02	1271957.15	3461233.78	40°15'23.2323"N	80°14'45.5483"W	5618.53	328.866	1.81	0.20	1.80
12187.00	90.230	318.510	6657.84	5673.30	4882.28	-2965.74	1271896.44	346196.82	40°15'23.9368"N	80°14'46.3577"W	5712.47	328.723	3.70	-0.14	-3.69
12282.00	90.510	321.240	6657.23	5768.22	4954.91	-3026.96	1271835.22	346269.45	40°15'24.6372"N	80°14'47.1734"W	5806.34	328.579	2.89	0.29	2.87
12377.00	90.540	322.650	6656.36	5863.22	5029.71	-3085.51	1271776.67	346344.24	40°15'25.3597"N	80°14'47.9557"W	5900.71	328.473	1.48	0.03	1.48
12471.00	90.300	321.350	6655.87	5957.21	5103.78	-3143.38	1271718.80	346418.31	40°15'26.0752"N	80°14'48.7288"W	5994.12	328.371	1.41	-0.26	-1.38
12567.00	90.390	322.590	6655.09	6053.21	5179.40	-3202.52	1271659.66	346493.92	40°15'26.8056"N	80°14'49.5189"W	6089.53	328.271	1.30	0.09	1.29
12662.00	90.260	319.480	6654.55	6148.18	5253.24	-3262.27	1271599.92	346567.76	40°15'27.5183"N	80°14'50.3161"W	6183.77	328.160	3.30	-0.14	-3.29
12756.00	90.200	322.590	6654.18	6242.15	5326.31	-3321.38	1271540.81	346640.83	40°15'28.2236"N	80°14'51.1049"W	6277.04	328.053	3.33	-0.06	3.33
12851.00	90.110	323.290	6653.92	6337.14	5402.12	-3378.63	1271483.56	346716.64	40°15'28.9564"N	80°14'51.8707"W	6371.66	327.977	0.74	-0.09	0.74
12946.00	89.900	324.120	6653.91	6432.10	5478.69	-3434.87	1271427.33	346793.20	40°15'29.6970"N	80°14'52.6237"W	6466.40	327.914	0.90	-0.22	0.87
13041.00	90.510	324.910	6653.57	6527.01	5556.04	-3490.01	1271372.18	346870.55	40°15'30.4457"N	80°14'53.3629"W	6561.23	327.865	1.05	0.64	0.83
13136.00	90.570	325.300	6652.88	6621.86	5633.96	-3544.36	1271317.84	346948.47	40°15'31.2002"N	80°14'54.0920"W	6656.12	327.826	0.42	0.06	0.41
13231.00	90.080	321.670	6652.14	6716.81	5710.30	-3600.88	1271261.32	347024.80	40°15'31.9384"N	80°14'54.8486"W	6750.84	327.765	3.86	-0.52	-3.82
13326.00	90.390	321.300	6651.75	6811.81	5784.63	-3660.03	1271202.17	347099.13	40°15'32.6561"N	80°14'55.6384"W	6845.27	327.678	0.51	0.33	-0.39
13421.00	90.450	321.700	6651.05	6906.80	5856.97	-3718.17	1271143.03	347173.47	40°15'33.3740"N	80°14'56.4281"W	6939.73	327.593	0.43	0.06	0.42
13517.00	90.510	321.700	6650.25	7002.80	5934.31	-3778.67	1271083.54	347248.80	40°15'34.1015"N	80°14'57.2227"W	7035.22	327.513	0.06	0.06	0.00
13611.00	90.540	321.750	6649.39	7096.79	6008.10	-3836.89	1271025.32	347322.59	40°15'34.8141"N	80°14'58.0003"W	7128.74	327.437	0.06	0.03	0.05
13706.00	90.420	321.790	6648.59	7191.79	6082.72	-3895.68	1270966.53	347397.21	40°15'35.5348"N	80°14'58.7855"W	7223.28	327.362	0.13	-0.13	0.04
13801.00	90.480	322.170	6647.84	7286.78	6157.56	-3954.19	1270908.02	347472.05	40°15'36.2577"N	80°14'59.5673"W	7317.87	327.293	0.40	0.06	0.40
13895.00	90.330	321.630	6647.18	7380.78	6231.53	-4012.19	1270850.02	347546.02	40°15'36.9721"N	80°15'0.3421"W	7411.45	327.224	0.60	-0.16	-0.57
13990.00	90.360	321.630	6646.61	7475.78	6306.01	-4071.16	1270791.06	347620.49	40°15'37.6914"N	80°15'1.1296"W	7506.00	327.154	0.03	0.03	0.00
14086.00	90.450	321.840	6645.93	7571.77	6381.38	-4130.61	1270731.61	347695.86	40°15'38.4193"N	80°15'1.9237"W	7601.58	327.085	0.24	0.09	0.22
14181.00	90.360	321.840	6645.26	7666.77	6456.08	-4189.30	1270672.92	347770.56	40°15'39.1407"N	80°15'2.7077"W	7696.18	327.021	0.09	-0.09	0.00
14276.00	90.390	321.860	6644.63	7761.77	6530.79	-4247.99	1270614.24	347845.26	40°15'39.8622"N	80°15'3.4917"W	7790.80	326.958	0.04	0.03	0.02
14371.00	90.380	322.040	6644.01	7856.77	6605.59	-4306.54	1270555.89	347920.07	40°15'40.5848"N	80°15'4.2739"W	7885.44	326.898	0.19	-0.03	0.19
14466.00	90.420	321.780	6643.37	7951.76	6680.36	-4365.14	1270497.08	347994.83	40°15'41.3069"N	80°15'5.0569"W	7980.08	326.838	0.28	0.06	-0.27
14561.00	90.390	321.700	6642.70	8046.76	6754.95	-4423.97	1270438.26	348069.42	40°15'42.0273"N	80°15'5.8426"W	8074.71	326.778	0.09	-0.03	-0.08
14656.00	90.390	321.680	6642.05	8141.76	6829.50	-4482.86	1270379.37	348143.96	40°15'42.7471"N	80°15'6.6292"W	8169.34	326.719	0.02	0.00	-0.02
14751.00	90.510	321.820	6641.30	8236.75	6904.10	-4541.67	1270320.56	348218.56	40°15'43.4676"N	80°15'7.4148"W	8263.98	326.662	0.19	0.13	0.15
14846.00	90.260	321.590	6640.66	8331.75	6978.66	-4600.54	1270261.69	348293.11	40°15'44.1875"N	80°15'8.2011"W	8358.63	326.606	0.36	-0.26	-0.24



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938'
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REFERENCE WELLPATH IDENTIFICATION

Operator	RANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

WELLPATH DATA (256 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
14941.00	90.260	321.750	6640.23	8426.75	7053.18	-4659.46	1270202.78	348367.63	40°15'44.9072"N	80°15'18.9880"W	8453.28	326.551	0.17	0.00	0.17
15036.00	89.860	321.250	6640.13	8521.74	7127.53	-4718.60	1270143.64	348441.98	40°15'45.6250"N	80°15'19.7777"W	8547.91	326.494	0.67	-0.42	-0.53
15131.00	90.910	321.650	6639.50	8616.73	7201.82	-4777.80	1270084.44	348516.27	40°15'46.3423"N	80°15'10.5682"W	8642.54	326.439	1.18	1.11	0.42
15226.00	90.880	321.710	6638.01	8711.72	7276.34	-4836.70	1270025.55	348590.79	40°15'47.0619"N	80°15'11.3549"W	8737.21	326.387	0.07	-0.03	0.06
15321.00	91.070	321.900	6638.39	8806.71	7350.99	-4895.43	1269966.81	348665.44	40°15'47.7828"N	80°15'12.1395"W	8831.89	326.338	0.28	0.20	0.20
15416.00	91.250	321.700	6634.47	8901.69	7425.63	-4954.17	1269908.08	348740.08	40°15'48.5037"N	80°15'12.9241"W	8926.58	326.290	0.28	0.19	-0.21
15511.00	91.370	321.910	6632.30	8996.66	7500.28	-5012.89	1269849.36	348814.72	40°15'49.2246"N	80°15'14.4907"W	9021.27	326.243	0.25	0.13	0.22
15606.00	91.340	322.000	6630.05	9091.63	7575.07	-5071.43	1269790.83	348889.51	40°15'49.9470"N	80°15'14.4907"W	9115.98	326.198	0.10	-0.03	0.09
15701.00	91.220	322.100	6627.93	9186.61	7649.96	-5129.83	1269732.42	348964.40	40°15'50.6704"N	80°15'15.2713"W	9210.71	326.155	0.16	-0.13	0.11
15796.00	90.570	320.940	6626.45	9281.59	7724.32	-5188.94	1269673.32	349038.75	40°15'51.3884"N	80°15'16.0606"W	9305.39	326.108	1.40	-0.88	-1.22
15891.00	90.510	320.220	6625.55	9376.56	7797.71	-5249.26	1269613.00	349112.14	40°15'52.8098"N	80°15'16.8652"W	9399.94	326.063	0.76	-0.06	-0.76
15986.00	91.530	321.980	6623.86	9471.53	7871.62	-5308.90	1269553.36	349186.05	40°15'52.8098"N	80°15'17.6613"W	9494.57	326.003	2.14	1.07	1.85
16081.00	90.850	320.550	6621.89	9566.50	7945.71	-5368.33	1269493.93	349260.13	40°15'52.0963"N	80°15'18.4547"W	9589.23	325.956	1.67	-0.72	-1.51
16176.00	90.860	321.280	6620.48	9661.47	8019.44	-5428.22	1269434.05	349333.86	40°15'54.2365"N	80°15'19.2539"W	9683.85	325.907	0.77	0.00	0.77
16271.00	91.430	320.780	6618.59	9756.43	8093.29	-5487.95	1269374.31	349407.70	40°15'54.9492"N	80°15'20.0512"W	9778.49	325.859	0.81	0.61	-0.53
16366.00	91.740	322.250	6615.96	9851.39	8167.62	-5547.05	1269315.22	349482.03	40°15'55.6668"N	80°15'20.8404"W	9873.18	325.818	1.58	0.33	1.55
16461.00	91.220	322.460	6613.51	9946.36	8242.82	-5605.05	1269257.22	349557.23	40°15'56.3934"N	80°15'21.6159"W	9967.98	325.785	0.59	-0.55	0.22
16555.00	90.970	322.770	6611.71	10040.33	8317.49	-5662.12	1269200.16	349631.90	40°15'57.1150"N	80°15'22.3790"W	10061.82	325.755	0.42	-0.27	0.33
16650.00	90.820	321.690	6610.23	10135.32	8392.58	-5720.30	1269141.98	349706.98	40°15'57.8404"N	80°15'23.1567"W	10156.63	325.722	1.15	-0.16	-1.14
16744.00	91.340	322.610	6608.45	10229.30	8468.79	-5777.98	1269084.32	349781.19	40°15'58.5572"N	80°15'23.9274"W	10250.43	325.689	1.12	0.55	0.98
16839.00	91.060	322.100	6606.46	10324.28	8541.99	-5835.97	1269026.31	349856.39	40°15'59.2838"N	80°15'24.7030"W	10345.25	325.659	0.61	-0.29	-0.54
16933.00	91.090	322.480	6604.70	10418.26	8616.34	-5893.46	1268968.82	349930.74	40°16'0.0022"N	80°15'25.4715"W	10439.07	325.628	0.41	0.03	0.40
17028.00	90.850	322.090	6603.09	10513.25	8691.48	-5951.56	1268910.72	350005.88	40°16'0.7281"N	80°15'26.2483"W	10533.90	325.598	0.48	-0.25	-0.41
17122.00	90.970	321.970	6601.60	10607.23	8765.58	-6009.39	1268852.90	350079.97	40°16'1.4437"N	80°15'27.0211"W	10627.71	325.567	0.18	0.13	-0.13
17217.00	90.970	322.000	6599.99	10702.22	8840.41	-6087.89	1268794.40	350154.80	40°16'2.1865"N	80°15'27.8028"W	10722.51	325.535	0.03	0.00	0.03
17312.00	90.910	322.020	6598.43	10797.21	8915.27	-6126.36	1268735.93	350229.66	40°16'2.8896"N	80°15'28.5842"W	10811.32	325.504	0.07	-0.06	0.02
17406.00	90.850	322.320	6596.99	10891.20	8989.51	-6184.00	1268678.29	350303.90	40°16'3.6067"N	80°15'29.3547"W	10911.15	325.475	0.33	-0.06	0.32
17501.00	90.970	321.880	6595.48	10986.18	9064.46	-6242.35	1268620.94	350378.85	40°16'4.3307"N	80°15'30.1346"W	11005.97	325.446	0.48	0.13	-0.46
17596.00	90.940	321.990	6593.90	11081.17	9139.25	-6300.92	1268563.38	350453.63	40°16'5.0530"N	80°15'30.9172"W	11100.78	325.416	0.12	-0.03	0.12
17690.00	90.880	321.930	6592.40	11175.16	9213.27	-6358.83	1268503.47	350527.65	40°16'5.7679"N	80°15'31.6911"W	11194.60	325.387	0.09	-0.06	-0.06



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938'

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REFERENCE WELLPATH IDENTIFICATION

Operator	RANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

WELLPATH DATA (256 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
17785.00	90.880	321.770	6590.95	11270.15	9287.97	-6475.51	1268444.79	350802.34	40°16'6.4893"N	80°15'32.4751"W	11289.41	325.358	0.17	0.00	-0.17
17879.00	90.910	321.830	6589.48	11364.14	9361.83	-6475.63	1268386.67	350676.20	40°16'7.2026"N	80°15'33.2517"W	11383.22	325.328	0.07	0.03	0.06
17974.00	91.100	322.190	6587.81	11459.12	9436.69	-6534.10	1268328.21	350751.06	40°16'7.9257"N	80°15'34.0331"W	11478.05	325.301	0.43	0.20	0.38
18069.00	90.880	321.770	6586.17	11554.11	9511.52	-6592.60	1268269.70	350825.89	40°16'8.6484"N	80°15'34.8149"W	11572.87	325.273	0.50	-0.23	-0.44
18164.00	90.970	322.030	6584.64	11649.09	9586.27	-6651.21	1268211.10	350900.63	40°16'9.3703"N	80°15'35.5981"W	11667.70	325.246	0.29	0.08	0.27
18259.00	90.880	321.780	6583.10	11744.08	9661.02	-6709.82	1268152.49	350975.38	40°16'10.0922"N	80°15'36.3813"W	11762.53	325.219	0.28	-0.09	-0.26
18354.00	91.370	321.830	6581.24	11839.06	9735.67	-6768.55	1268093.76	351050.03	40°16'10.8131"N	80°15'37.1660"W	11857.34	325.192	0.52	0.52	0.05
18449.00	91.440	322.480	6578.91	11934.03	9810.66	-6826.82	1268035.50	351125.02	40°16'11.5375"N	80°15'37.9449"W	11952.18	325.168	0.69	0.07	0.68
18543.00	91.220	322.640	6576.73	12028.00	9885.28	-6883.95	1267978.37	351199.63	40°16'12.2585"N	80°15'38.7089"W	12046.06	325.147	0.29	-0.23	0.17
18638.00	91.590	323.240	6574.40	12122.96	9961.07	-6941.18	1267921.14	351275.42	40°16'12.9911"N	80°15'39.4748"W	12140.98	325.130	0.74	0.38	0.63
18732.00	91.400	322.920	6571.94	12216.91	10036.19	-6997.63	1267864.69	351350.54	40°16'13.7173"N	80°15'40.2302"W	12234.87	325.114	0.40	-0.20	-0.34
18827.00	91.400	322.990	6569.62	12311.87	10111.88	-7054.99	1267807.34	351426.23	40°16'14.4489"N	80°15'40.9977"W	12329.76	325.097	0.16	0.00	-0.16
19017.00	91.250	323.610	6565.25	12501.79	10263.76	-7169.06	1267750.02	351501.96	40°16'15.1808"N	80°15'41.7646"W	12424.67	325.080	0.25	-0.09	0.23
19112.00	90.480	325.000	6563.82	12596.70	10340.90	-7224.48	1267693.27	351578.10	40°16'15.9170"N	80°15'42.5245"W	12519.60	325.066	0.66	-0.06	0.65
19207.00	90.260	323.210	6563.21	12691.63	10417.86	-7280.18	1267636.50	351655.24	40°16'16.6635"N	80°15'43.2675"W	12614.57	325.061	1.67	-0.81	1.48
19301.00	90.330	323.170	6562.72	12785.61	10493.12	-7336.50	1267579.25	351732.19	40°16'17.4079"N	80°15'44.0139"W	12709.56	325.053	1.90	-0.23	-1.88
19396.00	89.900	323.170	6562.53	12880.59	10569.16	-7393.45	1267522.83	351807.45	40°16'18.1355"N	80°15'44.7678"W	12803.50	325.040	0.09	0.07	-0.04
19491.00	89.800	323.050	6562.78	12975.57	10645.14	-7450.47	1267466.89	351883.49	40°16'18.8706"N	80°15'45.5301"W	12898.45	325.026	0.45	-0.45	0.00
19586.00	89.900	322.110	6563.03	13070.56	10720.58	-7508.20	1267411.86	351959.46	40°16'19.6051"N	80°15'46.2934"W	12993.40	325.012	0.16	0.11	-0.13
19681.00	89.830	322.010	6563.25	13165.56	10795.51	-7566.61	1267354.14	352034.91	40°16'20.3341"N	80°15'47.0655"W	13088.31	324.994	1.00	0.11	-0.99
19776.00	89.870	321.960	6563.50	13260.56	10870.35	-7625.12	1267297.23	352109.83	40°16'21.0578"N	80°15'47.8463"W	13183.19	324.973	0.13	-0.07	-0.11
19871.00	89.800	321.880	6563.78	13355.56	10945.13	-7683.71	1267240.55	352184.67	40°16'21.7806"N	80°15'48.6293"W	13278.06	324.952	0.07	0.04	-0.05
19965.00	89.800	321.780	6564.10	13449.56	11019.03	-7741.80	1267183.64	352259.45	40°16'22.5028"N	80°15'49.4113"W	13372.93	324.930	0.11	-0.07	-0.08
20060.00	89.900	321.820	6564.35	13544.56	11093.69	-7800.55	1267126.55	352333.34	40°16'23.2165"N	80°15'50.1876"W	13466.79	324.909	0.11	0.00	-0.11
20154.00	89.870	322.080	6564.54	13638.56	11167.71	-7858.48	1267070.87	352408.00	40°16'23.9374"N	80°15'50.9726"W	13561.65	324.887	0.11	0.11	0.04
20249.00	89.960	322.720	6564.68	13733.56	11242.98	-7916.45	1267013.87	352482.02	40°16'24.6523"N	80°15'51.7470"W	13655.53	324.867	0.28	-0.03	0.28
20344.00	89.800	321.900	6564.88	13828.55	11318.15	-7974.53	1266956.91	352557.28	40°16'25.3794"N	80°15'52.5221"W	13750.44	324.850	0.68	0.09	0.67
20439.00	90.050	322.760	6565.01	13923.55	11393.35	-8032.58	1266899.83	352632.45	40°16'26.1057"N	80°15'53.2987"W	13845.35	324.832	0.88	-0.17	-0.86
20534.00	89.900	322.010	6565.05	14018.55	11468.60	-8090.57	1266842.77	352707.65	40°16'26.8321"N	80°15'54.0751"W	13940.26	324.815	0.94	0.26	0.91
							1266771.79	352782.90	40°16'27.5591"N	80°15'54.8505"W	14035.17	324.799	0.81	-0.16	-0.78



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938'

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REFERENCE WELLPATH IDENTIFICATION

Operator	RANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

WELLPATH DATA (256 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Built Rate ["/100ft]	Turn Rate ["/100ft]
20629.00	89.740	324.290	6565.35	14113.52	11544.61	-8147.54	1266714.83	352858.91	40°16'28.2939"N	80°15'55.6131"W	14130.13	324.788	2.41	-0.17	2.40
20724.00	89.650	323.400	6565.85	14208.47	11621.32	-8203.58	1266668.78	352935.61	40°16'29.0358"N	80°15'56.3640"W	14225.11	324.781	0.94	-0.09	-0.94
20819.00	89.530	320.930	6566.53	14303.46	11696.34	-8261.85	1266600.52	353010.63	40°16'29.7605"N	80°15'57.1430"W	14320.00	324.764	2.60	-0.13	-2.60
20914.00	89.400	321.800	6567.42	14398.45	11770.54	-8321.16	1266541.21	353084.83	40°16'30.4768"N	80°15'57.9352"W	14414.83	324.742	0.93	-0.14	0.92
21009.00	89.990	321.840	6567.92	14493.45	11845.22	-8378.88	1266482.49	353159.50	40°16'31.1979"N	80°15'58.7199"W	14508.71	324.723	0.62	0.62	0.04
21104.00	90.670	321.190	6567.38	14588.44	11919.58	-8439.00	1266423.37	353233.86	40°16'31.9157"N	80°15'59.5097"W	14604.56	324.702	0.99	0.72	-0.68
21198.00	90.700	321.420	6566.25	14682.43	11992.94	-8497.76	1266364.61	353307.22	40°16'32.6238"N	80°16'0.2945"W	14698.39	324.680	0.25	0.03	0.24
21293.00	90.670	320.880	6565.12	14777.41	12066.92	-8557.35	1266305.03	353381.20	40°16'33.3378"N	80°16'1.0901"W	14793.20	324.657	0.57	-0.03	-0.57
21389.00	90.910	322.290	6563.79	14873.40	12142.13	-8616.99	1266245.39	353456.40	40°16'34.0639"N	80°16'1.8870"W	14889.05	324.638	1.49	0.29	1.47
21484.00	90.790	321.400	6562.38	14968.39	12216.82	-8675.67	1266186.71	353531.09	40°16'34.7852"N	80°16'2.6712"W	14983.93	324.620	0.85	-0.13	-0.94
21579.00	90.670	320.830	6561.17	15063.37	12290.77	-8735.31	1266127.08	353605.03	40°16'35.4988"N	80°16'3.4675"W	15078.74	324.598	0.61	-0.13	-0.60
21674.00	90.880	321.140	6559.89	15158.34	12364.57	-8795.11	1266067.28	353678.84	40°16'36.2110"N	80°16'4.2658"W	15173.55	324.575	0.39	0.22	0.33
21768.00	90.760	320.860	6558.54	15252.32	12437.52	-8854.26	1266008.13	353751.88	40°16'36.9159"N	80°16'5.0555"W	15267.35	324.553	0.32	-0.13	-0.30
21863.00	90.640	321.880	6557.38	15347.30	12511.82	-8913.56	1265948.83	353826.08	40°16'37.6322"N	80°16'5.8476"W	15362.20	324.534	1.08	-0.13	1.07
21913.00	90.700	321.270	6556.80	15397.30	12550.99	-8944.63	1265897.76	353865.25	40°16'38.0703"N	80°16'6.2628"W	15412.13	324.524	1.23	0.12	-1.22
21938.00‡	90.700	321.270	6556.49	15422.29	12570.49	-8960.27	1265902.12	353884.75	40°16'38.1985"N	80°16'6.4717"W	15437.09	324.519	0.00	0.00	0.00

REFERENCE WELLPATH IDENTIFICATION

Operator	RANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

HOLE & CASING SECTIONS - Ref Wellbore: BIRD RUN 10938 5H AWB Ref Wellpath: BIRD RUN 10938 5H AWP Proj: 21938'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
26in Conductor	26.00	67.00	41.00	26.00	67.00	0.00	0.00	0.02	0.34
24in Open Hole	67.00	240.00	173.00	67.00	239.95	0.02	0.34	-3.30	2.31
18.625in Casing Surface	26.00	228.00	202.00	26.00	227.95	0.00	0.00	-3.03	2.15
17.5in Open Hole	240.00	319.00	79.00	239.95	318.92	-3.30	2.31	-5.11	3.41
13.375in Casing	26.00	308.00	282.00	26.00	307.93	0.00	0.00	-4.85	3.25
12.25in Open Hole	319.00	1700.00	1381.00	318.92	1698.98	-5.11	3.41	-50.97	24.65
9.625in Casing Intermediate	26.00	1683.00	1657.00	26.00	1682.00	0.00	0.00	-50.40	24.42
8.75in Open Hole	1700.00	6552.00	4852.00	1698.98	6444.02	-50.97	24.65	512.38	409.93
8.5in Open Hole	6552.00	21938.00	15386.00	6444.02	6556.49	512.38	409.93	12570.49	-8960.27
5.5in Casing Production	26.00	21938.00	21912.00	26.00	6556.49	0.00	0.00	12570.49	-8960.27

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BIRD RUN 10938 5H BHL Rev-3	6539.58	12566.54	-8966.98	1265895.41	353880.80	40°16'38.1576"N	80°16'6.5568"W	point
BIRD RUN 10938 5H LP Rev-4	6745.91	912.68	134.85	1274996.91	342227.36	40°14'45.5892"N	80°14'4.9416"W	point



Actual Wellpath Report
 BIRD RUN 10938 5H AWP Proj: 21938'
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REFERENCE WELLPATH IDENTIFICATION	
Operator	RANGE RESOURCES APPALACHIA, LLC
Field	Washington
Facility	BIRD RUN 10938 Pad
Slot	Slot #05
Well	BIRD RUN 10938 5H
API	37-125-29189-0000
Wellbore	BIRD RUN 10938 5H AWB

WELLPATH COMPOSITION - Ref Wellbore: BIRD RUN 10938 5H AWB Ref Wellpath: BIRD RUN 10938 5H AWP Proj: 21938'					
Start MID [ft]	End MID [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	234.00	Gyrodatta 2015 - CT+WIR+DPIPE	01 Gyrodatta Cont. Gyro <17'-1/2"> (50'-219')	BIRD RUN 10938 5H AWB	3/26/2025
234.00	1595.00	OWSG MWD rev2 + IFRT + Sag Correction	02 Total MWD+SuperiorQC IFRT+Sag <12'-1/4"> (219')(322'-1580')	BIRD RUN 10938 5H AWB	3/26/2025
1595.00	6470.00	OWSG MWD rev2 + IFRT + Sag + Multi-Station Correction	03 Total MWD+SuperiorQC IFRT+Sag+FDIR <8'-3/4"> (1580')(1706'-6455')	BIRD RUN 10938 5H AWB	3/26/2025
6470.00	21938.00	OWSG MWD rev2 + IFRT + Sag + Multi-Station Correction	04 BH Lucida+SuperiorQC IFRT+Sag+FDIR <8'-1/2"> (6470')(6496'-21913')	BIRD RUN 10938 5H AWB	4/28/2025



Actual Wellpath Report

BIRD RUN 10938 5H AWP Proj: 21938'
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REFERENCE WELLPATH IDENTIFICATION

Operator	RANGE RESOURCES APPALACHIA, LLC	Well	BIRD RUN 10938 5H
Field	Washington	API	37-125-29189-0000
Facility	BIRD RUN 10938 Pad	Wellbore	BIRD RUN 10938 5H AWB
Slot	Slot #05		

COMMENTS

Wellpath general comments
 API: 37-125-29189-0000
 BH Job #: 112639172
 Rig: Patterson 876
 Duration: 5/3/2025-5/6/2025
 Gyrodata Cont. Gyro <17-1/2"> (50'-219')
 Total MWD+SuperiorQC IFR1+Sag <12-1/4"> (219')(322'-1580')
 Total MWD+SuperiorQC IFR1+Sag+FDIR <8-3/4"> (1580')(1706'-6455')
 BH Lucida+SuperiorQC IFR1+Sag+FDIR <8-1/2"> (6470')(6496'-21913')
 Projected MD at TD: 21938'

Teresa Matinko

From: Jason Hicks
Sent: Tuesday, June 3, 2025 3:19 PM
To: Teresa Matinko
Cc: Laura Rusmiser; Melissa Shaughnessy; Leagha Courtney
Subject: Well Record - BIRD RUN 5H
Attachments: WR BIRD RUN 10938 5H Final.pdf

Good Afternoon,

The well record for the **BIRD RUN 5H** is attached and has been submitted to the DEP via Greenport today; eSubmission confirmation below:

 PA GOV OFFICIAL APP

Josh Sh

eSubmission

Submission details:

Submission: Well Record (Unconventional - non-vertical well)
Submitted: 6/3/2025 3:16:54 PM
Status: Submitted
County: Washington
Municipality: Chartiers Township
Region: EP DOGO SWDO Dstr Off
Primary_Facility_Id: 880727
WellAPI: 125-29189
User: HICKSJN
Operator: 60915 - RANGE RESOURCES APPALACHIA LLC

Files attached:

File	Document_Type	Description
WR BIRD RUN 10938 5H Final.pdf	Well Record (Unconventional)	

Thank you,

Jason Hicks
Drilling Engineering Tech II
Office: 724.743.5232 -- Cell: 724.993.7173
Email: jhicks@rangeresources.com

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