



**CEMENT BOND LOG
GAMMA RAY/ CCL**

Company	MAGPIE			
Well	IHNEN 3			
Field	LOVELAND			
County	LARIMER	State	CO	
Location:	API # : 05-069-06119			Other Services
Surface: LAT: 40.355936, LON: -105.043463				
SEC 31 TWP 5N RGE 68W		Elevation		
Permanent Datum		GROUND LEVEL		5074'
Log Measured From		G.L.		K.B. 5085'
Drilling Measured From		K.B.		D.F. 5084'
				G.L. 5074'
Date	7/15/21			
Run Number	ONE			
Depth Driller	4906'			
Present Depth Driller	N/A			
Depth Logger	406'			
Bottom Logged Interval	391'			
Top Log Interval	SURFACE			
Fluid Level	SURFACE			
Type Fluid	WATER			
Max. Recorded Temp.	N/A			
Estimated Cement Top	230'			
Equipment Number	223			
Location	JOHNSTOWN, CO			
Recorded By	Josh Houim			
Witnessed By	Juan Llerenas			
Borehole Record				
Run Number	Bit	From	To	Size
				8 5/8"
				4.5"
Casing Record				
				#24
				0'
				210'
				4906'

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

WARRIOR 7.0 SOFTWARE - Comments

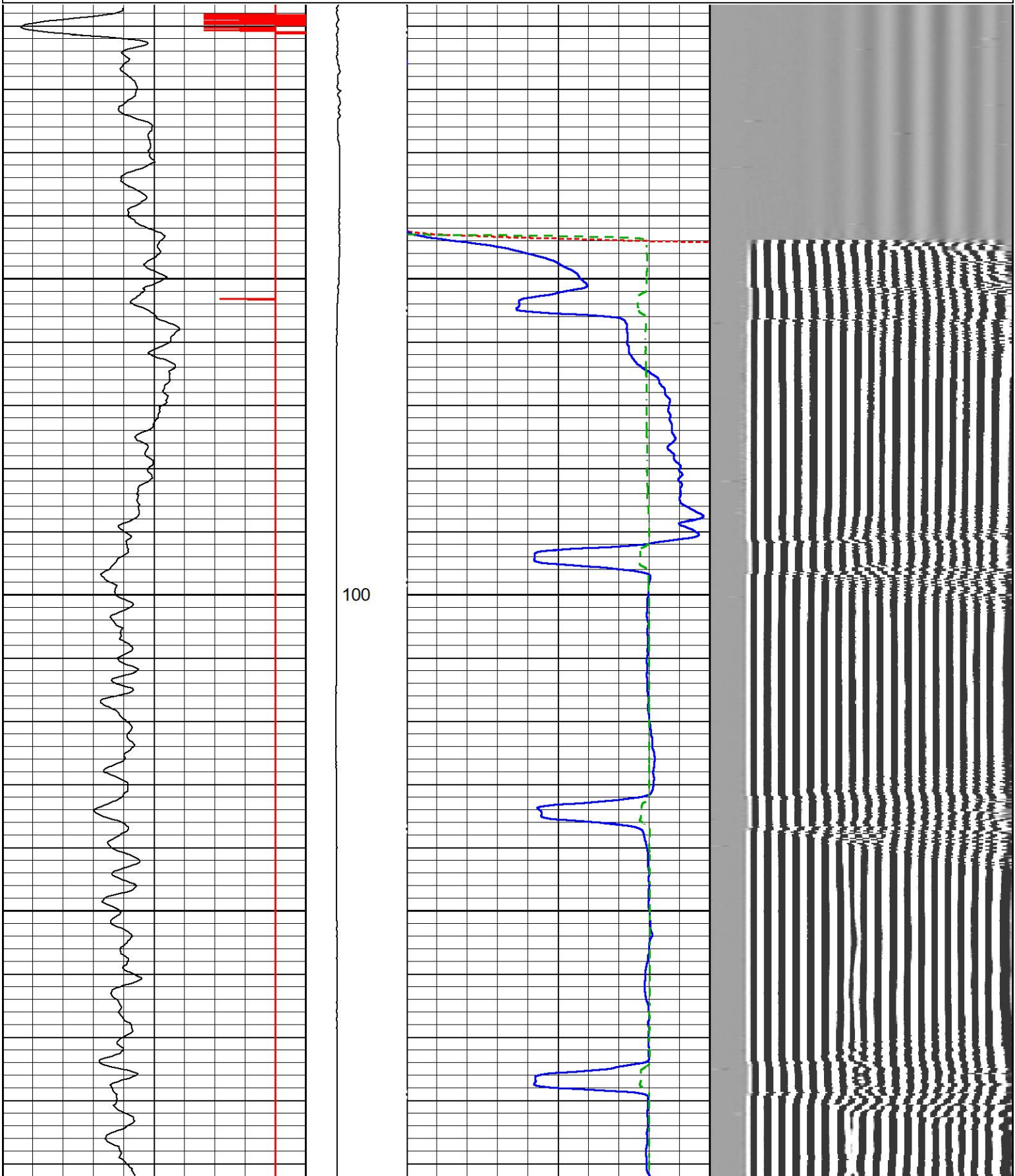
**LOG WAS CORRELATED TO SURFACE
MAIN PASS SCALE 5"=100'
CSG PSI= STATIC MAIN PASS**

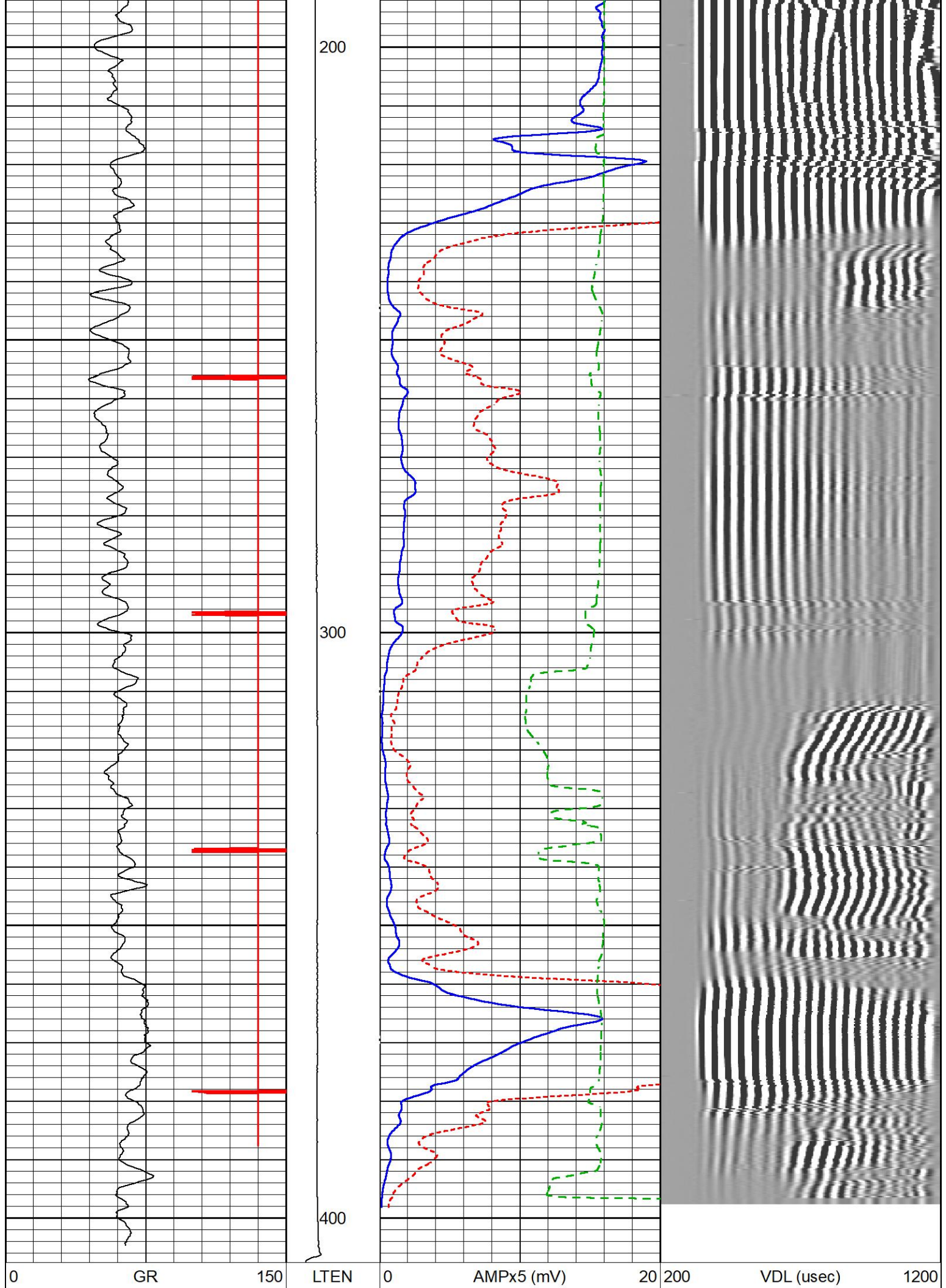


MAIN PASS

Database File	07152021_magpie_ihnen3_cbl.db
Dataset Pathname	pass3.1
Presentation Format	rmws_dsc
Dataset Creation	Thu Jul 15 10:25:15 2021
Charted by	Depth in Feet scaled 1:240

0	GR	150	LTEN	0	AMPx5 (mV)	20	200	VDL (usec)	1200
-27	CCL	3	0	(lb 1500	0	AMP (mV)	100		
				380	TT (usec)	180	200	PPT (usec)	1200





-27	CCL	3	0	(lb/1500	0	AMP (mV)	100		
					380	TT (usec)	180	200	PPT (usec) 1200

Log Variables

DatabaseC:\ProgramData\Warrior\Data\07152021_magpie_ihnen3_cbl.db
Dataset field/well/run1/pass3.1/_vars_

Top - Bottom

BOREID in 7.875	BOTTEMP degF 100	CASEOD in 4.5	CASETHCK in 0	CASEWGHT lb/ft 10.5	MAXAMPL mV 81.2	MINAMPL mV 1	MINATTN db/ft 0.8
PERFS No	PPT usec 0	SRFTEMP degF 0	TDEPTH ft 0				

Variable Description

BOREID : Borehole I.D.	CASEWGHT : Casing Weight	PERFS : Perforation Flag
BOTTEMP : Bottom Hole Temperature	MAXAMPL : Maximum Amplitude	PPT : Predicted Pipe Time
CASEOD : Casing O.D.	MINAMPL : Minimum Amplitude	SRFTEMP : Surface Temperature
CASETHCK : Casing Thickness	MINATTN : Minimum Attenuation	TDEPTH : Total Depth

Calibration Report

Database File 07152021_magpie_ihnen3_cbl.db
Dataset Pathname pass3.1
Dataset Creation Thu Jul 15 10:25:15 2021

Segmented Cement Bond Log Calibration Report

Serial Number: TEKCO234_3025
Tool Model: TEKCO

Calibration Casing Diameter: 4.500 in
Calibration Depth: 89.842 ft

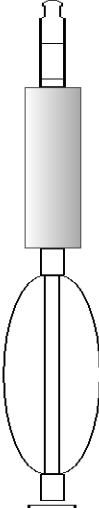


Master Calibration, performed (Derived):

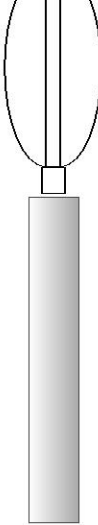
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.005	1.187	1.000	81.196	67.844	0.632
CAL	0.015	0.868				
5'	-0.006	1.754	1.000	81.196	45.569	1.279
SUM						
S1	0.085	0.981	0.000	100.000	111.667	-9.521
S2	0.088	0.940	0.000	100.000	117.365	-10.359
S3	0.080	0.924	0.000	100.000	118.562	-9.522
S4	0.084	0.979	0.000	100.000	111.752	-9.398
S5	0.101	1.008	0.000	100.000	110.311	-11.180
S6	0.089	0.942	0.000	100.000	117.331	-10.473
S7	0.090	0.949	0.000	100.000	116.336	-10.435
S8	0.084	0.923	0.000	100.000	119.151	-10.002


Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset

CAL	0.000	0.000	0.015	0.868	1.000	0.000
Air Zero Calibration, performed Fri Apr 16 12:47:40 2010:						
	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	
S6	0.000		0.000		0.000	
S7	0.000		0.000		0.000	
S8	0.000		0.000		0.000	

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	19.74		CHD-STNDRD Standard Cable Head	1.00	2.00	2.00
			CCL-312tekco (3.12TEKCO) 3 1/8 TEK CCL Earth Mag	1.82	3.12	25.00
			CENT-TITAN_234 TITAN 2 3/4" BOWSPRING CENT	2.92	2.75	25.00
WVFS8	11.60		SCBLTEKCO-TEKCO (TEKCO234_3025) Tekco 2 3/4" Radial Bond	9.08	2.75	50.00
WVFS7	11.60					
WVFS6	11.60					
WVFS5	11.60					
WVFS4	11.60					
WVFS3	11.60					
WVFS2	11.60					
WVFS1	11.60					
WVF3FT	10.85					
WVF5FT	9.85					
WVFSYNC	6.60					
WVFCAL	6.60					

GR	1.00		CENT-TITAN_234 TITAN 2 3/4" BOWSPRING CENT	2.92	2.75	25.00
			GR-TEKCO234 (TEKCO234_314) Tekco 2 3/4" Gamma Ray	3.69	2.75	20.00
Dataset: 07152021_magpie_ihnen3_cbl.db: field/well/run1/pass3.1 Total length: 21.42 ft Total weight: 147.00 lb O.D.: 3.12 in						

	Company	MAGPIE
	Well	IHNEN 3
	Field	LOVELAND
	County	LARIMER
	State	CO