Company	TEP Rocky Mountain LLC
Well	Chevron GM 532-19
Field	Grand Valley
County	Garfield
State	Colorado

RELIANCE OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company TEP Rocky Mountain LLC

Well Chevron GM 532-19

Field Grand Valley

County Garfield State Colorado

Location: API # : 05-045-24358

SEC 20 TWP 6S RGE 96W

Other Services: ---

Permanent Datum Ground Level Elevation 5752.1'

Log Measured From Kelly Bushing 24 FT

Drilling Measured From Kelly Bushing

Elevation: K.B. 5776.1' D.F. --- G.L. 5752.1'

Date	01-FEB-2021
Run Number	One
Depth Driller	7745 FT
Depth Logger	7691 FT
Bottom Logged Interval	7691 FT
Top Log Interval	4186 FT
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	---
Estimated Cement Top	---
Time Well Ready	ROA
Time Logger on Bottom	7:47
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	A. Ellsworth
Witnessed By	---

Borehole Record			Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom
Surface Casing	9 5/8	36	J-55	Surface	1029 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	7704 FT
Intermediate #2					
Liner					

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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.

Comments

Log ran as per customer request
Depth referenced to Reliance Bond Log dated 01-FEB-2021
Log ran from 7691 FT to 4186 FT
Pulsed Neutron Data logged with the Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!

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Main Pass

Database File	f:\data\tep\chevron gm 532-19\pn\tep_chevron gm 532-19_pn_02-02-21.db
Dataset Pathname	runSHIFTED/merge2
Presentation Format	ros_pdn_hunter
Dataset Creation	Thu Feb 11 16:13:17 2021
Charted by	Depth in Feet scaled 1:240

0	GR (GAPI)	150
	PN Casing Collar Locator	
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	-1
1	PN Porosity (Sandstone) (pu)	0
0	FIS2 (cps)	45000
0	NIS2 (cps	100000

0	GR (GAPI)	150
	PN Casing Collar Locator	
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	-1
1	PN Porosity (Sandstone) (pu)	0
0	FIS2 (cps)	45000
0	NIS2 (cps	100000

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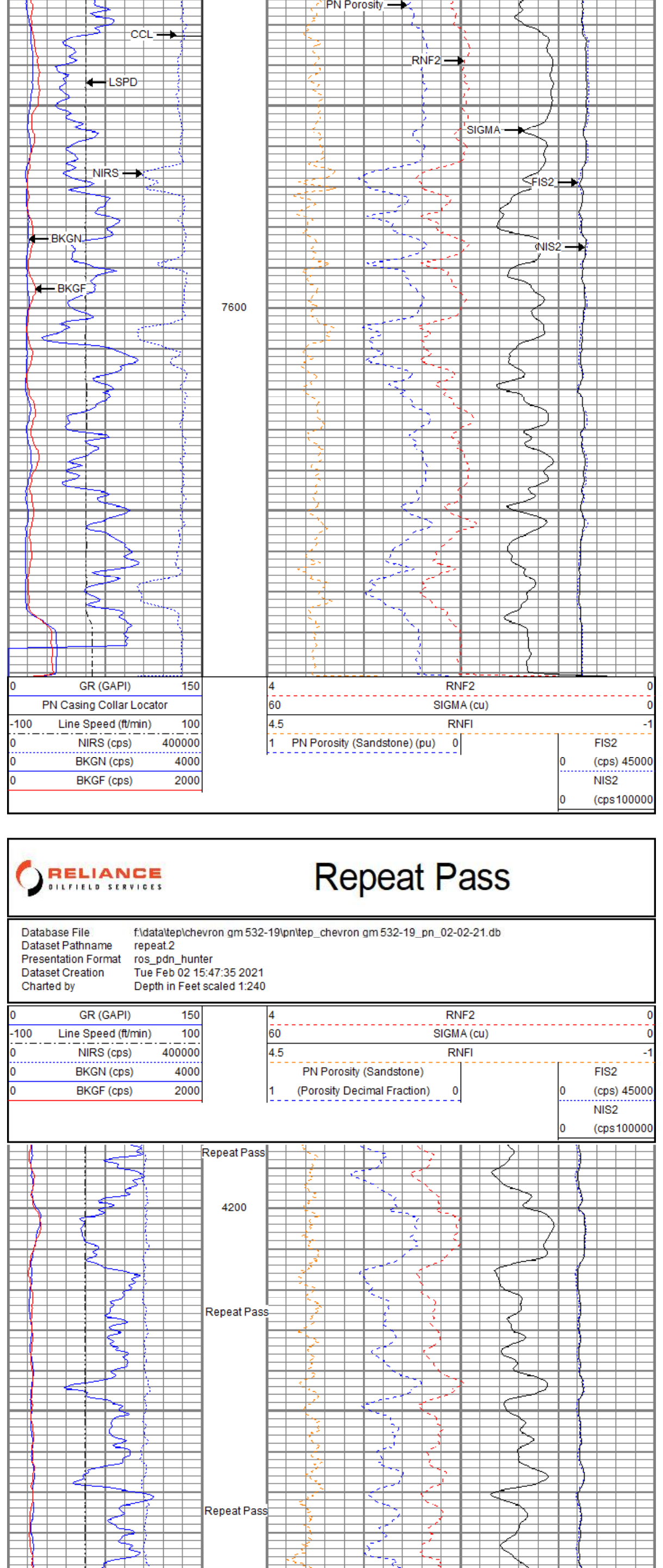
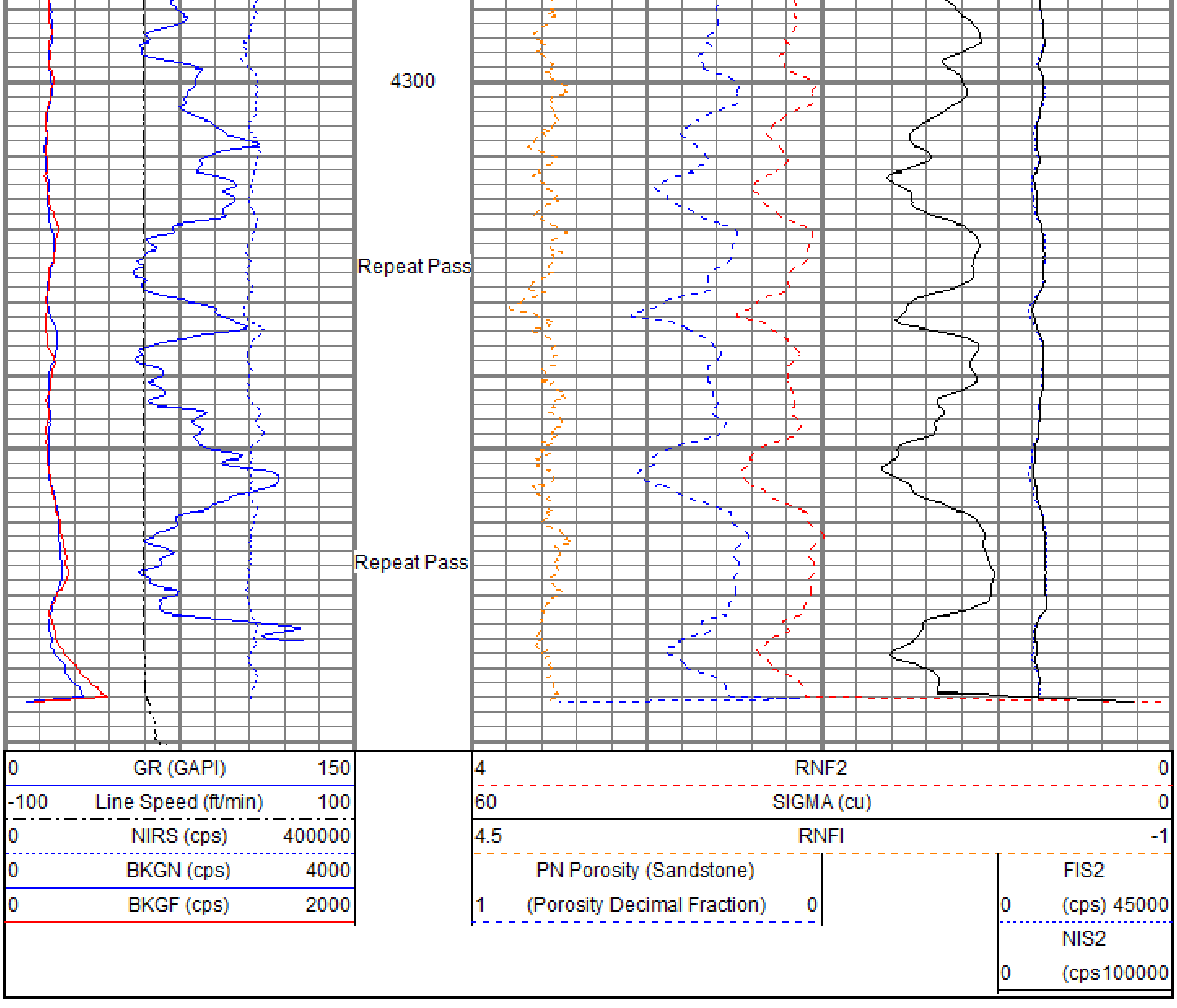
Repeat Pass

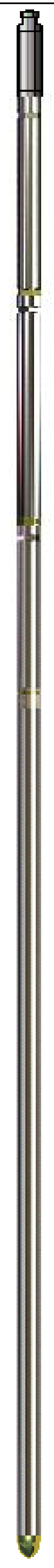
Database File	f:\data\tep\chevron gm 532-19\pn\tep_chevron gm 532-19_pn_02-02-21.db
Dataset Pathname	repeat.2
Presentation Format	ros_pdn_hunter
Dataset Creation	Tue Feb 02 15:47:35 2021
Charted by	Depth in Feet scaled 1:240

0	GR (GAPI)	150
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	-1
1	PN Porosity (Sandstone) (Porosity Decimal Fraction)	0
0	FIS2 (cps)	45000
0	NIS2 (cps	100000





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.69	5.40
			HWS_TCU-002 (001704) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
TCUTEMP	14.69					
TCUVOLT	14.69					
GCL_CCL	13.97					
			HWS_GCL-001 (001681) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
GCL_GR	12.50					
Long	6.25		HWS_RAS-RAS002 (003040) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
Far	6.25					
Near	6.25					
Anci	6.25					
LOCTIM	0.00					
UTCTIM	0.00		HWS_TBN-001 (001724) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset: tep_chevron gm 532-19_pn_02-02-21.db: field/well/run1/main.2
Total length: 18.02 ft
Total weight: 86.48 lb
O.D.: 1.69 in

Calibration Report

Database File f:\data\tep\chevron gm 532-19\pn\tep_chevron gm 532-19_pn_02-02-21.db
Dataset Pathname main.2
Dataset Creation Tue Feb 02 16:05:06 2021

RAS Calibration Report

Calibration Date: Tue Jun 11 14:55 2020

Meas #: 003041

Water Tank

Description	Curve	Standard	Mean	Dev
Sigma Near	SIGN	23.1	24.1	0.23
Sigma Far	SIGF	22.8	23.5	0.27
Ratio Near-Long Capture	RNL2	5.79	6.45	0.04
Ratio Near-Long Burst	RNLB	6.49	6.87	0.04
Ratio Near-Far Capture	RNF2	1.85	2.00	0.01
Ratio Near-Far Burst	RNFB	2.03	2.16	0.01
Spectral Hydrogen Index	HIS2	12.84	12.61	0.16
Carbon-Oxygen Ratio	CORS	1.34	1.30	0.05
Ratio Burst-Capture Near	RNBC	1.46	1.73	0.01
Ratio Burst-Capture Far	RFBC	1.50	1.67	0.01

Hydrocarbon Tank

Description	Curve	Standard	Mean	Dev
Sigma Near	SIGN	25.7	26.8	0.26
Sigma Far	SIGF	25.1	25.5	0.45
Ratio Near-Long Capture	RNL2	1.78	2.98	0.02
Ratio Near-Long Burst	RNLB	2.57	4.38	0.02
Ratio Near-Far Capture	RNF2	0.98	1.30	0.01
Ratio Near-Far Burst	RNFB	1.30	1.64	0.01
Spectral Hydrogen Index	HIS2	16.68	17.41	0.28
Carbon-Oxygen Ratio	CORS	1.51	1.54	0.04
Ratio Burst-Capture Near	RNBC	2.23	2.46	0.02
Ratio Burst-Capture Far	RFBC	2.09	2.18	0.02

Gamma Ray Calibration Report

Serial Number:	001681	
Tool Model:	001	
Performed:	(Not Performed)	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	
Calibrator Reading:	1.0	
Sensitivity:	1.0000	GAPI/

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