Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM

60-ARM CALIPER
ODT
CASING INSPECTION LOG

Company LLANO DISPOSAL, LLC

Well STATE 4 #1

Field TATUM

County LEA **State** NM

Location: API # : 30-025-26370

Other Services
RCBL/CNL

SEC TWP RGE

Permanent Datum Elevation

Log Measured From G.L.

Drilling Measured From K.B.

Elevation
K.B.
D.F.
G.L.

Date	2-2-2018		
Run Number	ONE		
Depth Driller	13,476'		
Depth Logger	3298		
Bottom Logged Interval	3292		
Top Log Interval	SURFACE		
Open Hole Size	NA		
Type Fluid	H2O		
Density / Viscosity	NA		
Max. Recorded Temp.	NA		
Estimated Cement Top	SEE LOG		
Time Well Ready	ROA		
Time Logger on Bottom	9:00 AM		
Equipment Number	71		
Location	LEVELLAND TX		
Recorded By	R.D. MOTHERAL		
Witnessed By	MR. BURROWS		

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String	8.625"	28#	SURFACE	
Production String				
Liner				

<<< Fold Here >>>

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

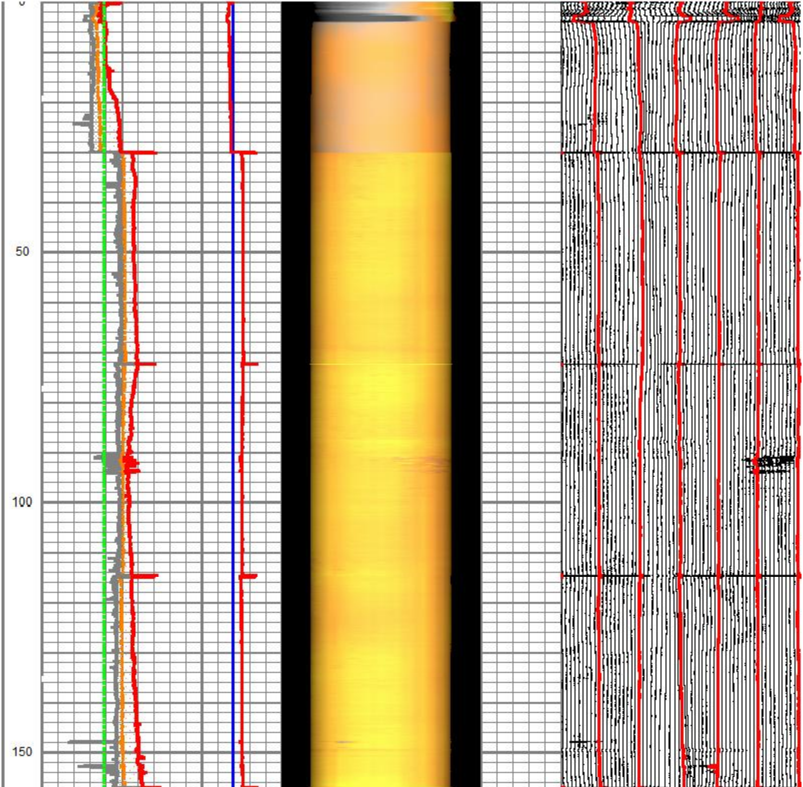
ALL DEPTHS ARE LOGGER DEPTHS
NO CORRELATION LOG AVAILABLE ON LOCATION
NO KB USED

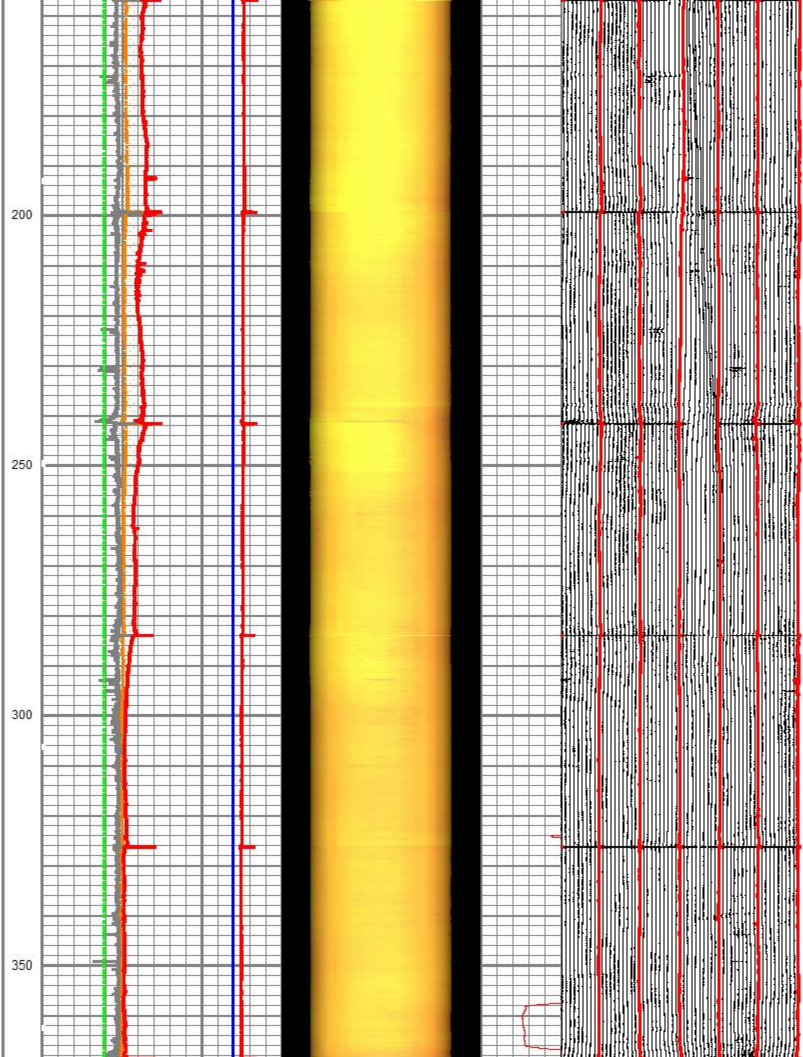
RENEGADE SERVICES

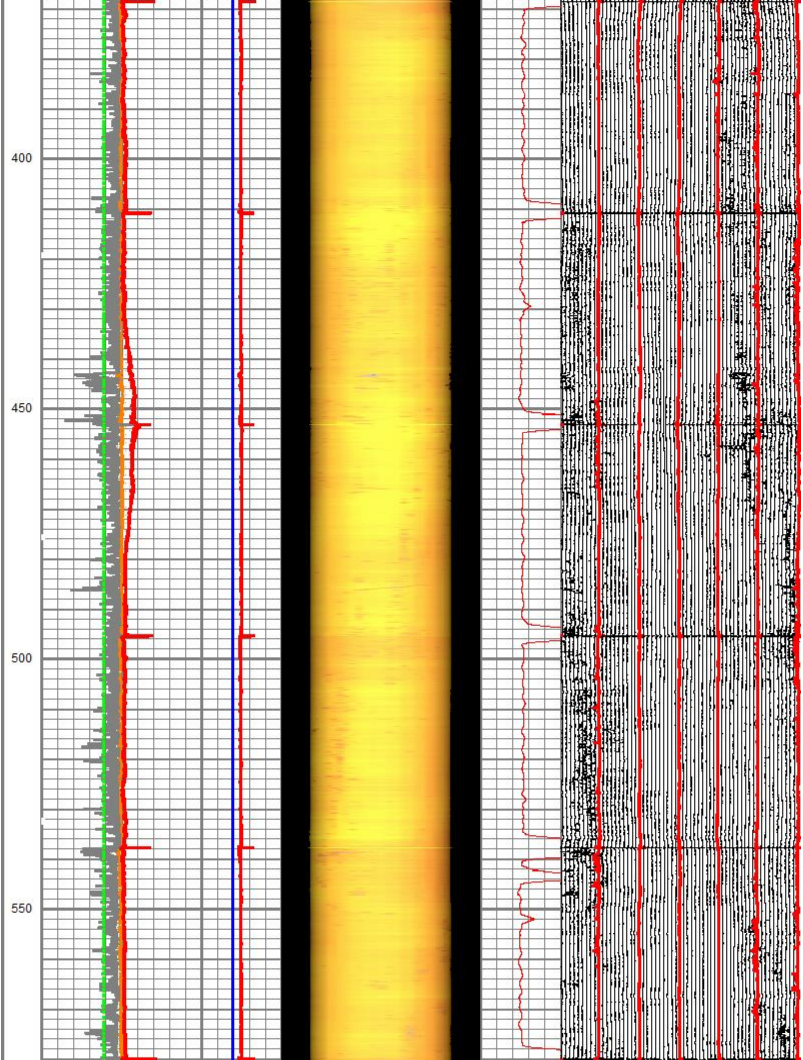
MAIN PASS

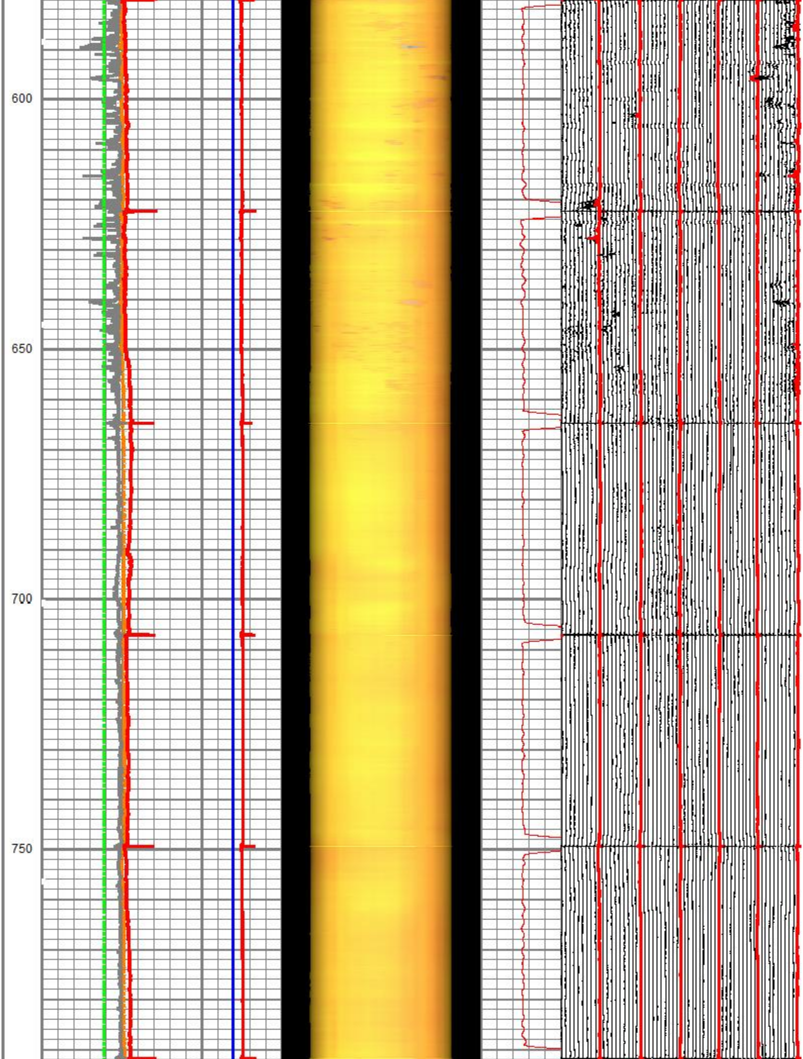
Database File	llanostate4#1.db
Dataset Pathname	pass2
Presentation Format	pr60im86
Dataset Creation	Fri Feb 02 09:24:08 2018
Charted by	Depth in Feet scaled 1:240

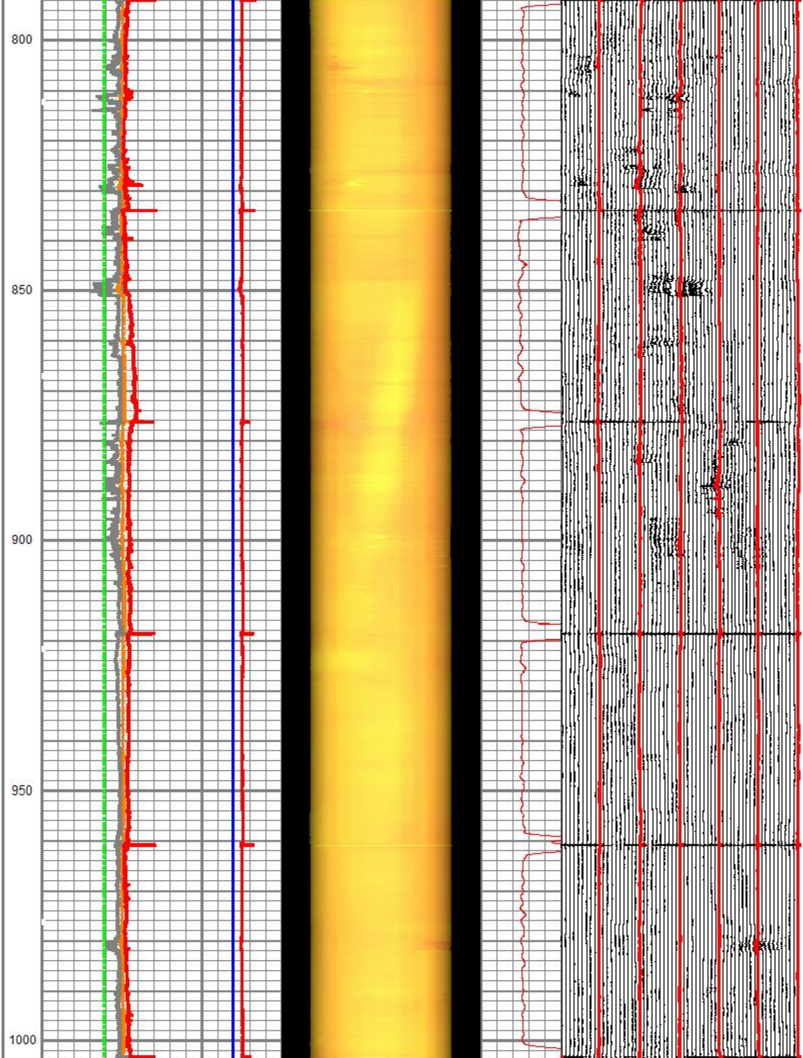
7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1 R10 (in) 9.1
7.625 IDMN (in) 8.625	7.625in8.625			2.1 R20 (in) 8.1
7.625 IDMX (in) 8.625	IDAV			1.1 R30 (in) 7.1
7.625 CASEID (in) 8.625	7.625in8.625			0.1 R40 (in) 6.1
				-0.9 R50 (in) 5.1
				-1.9 R60 (in) 4.1

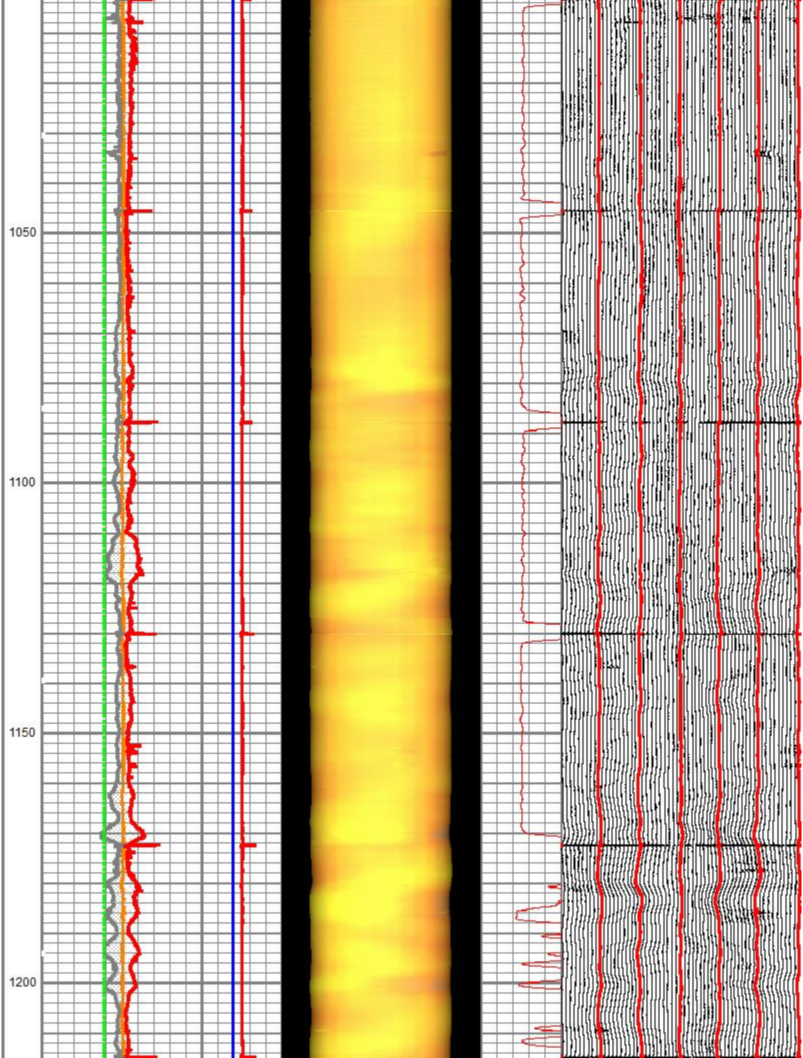


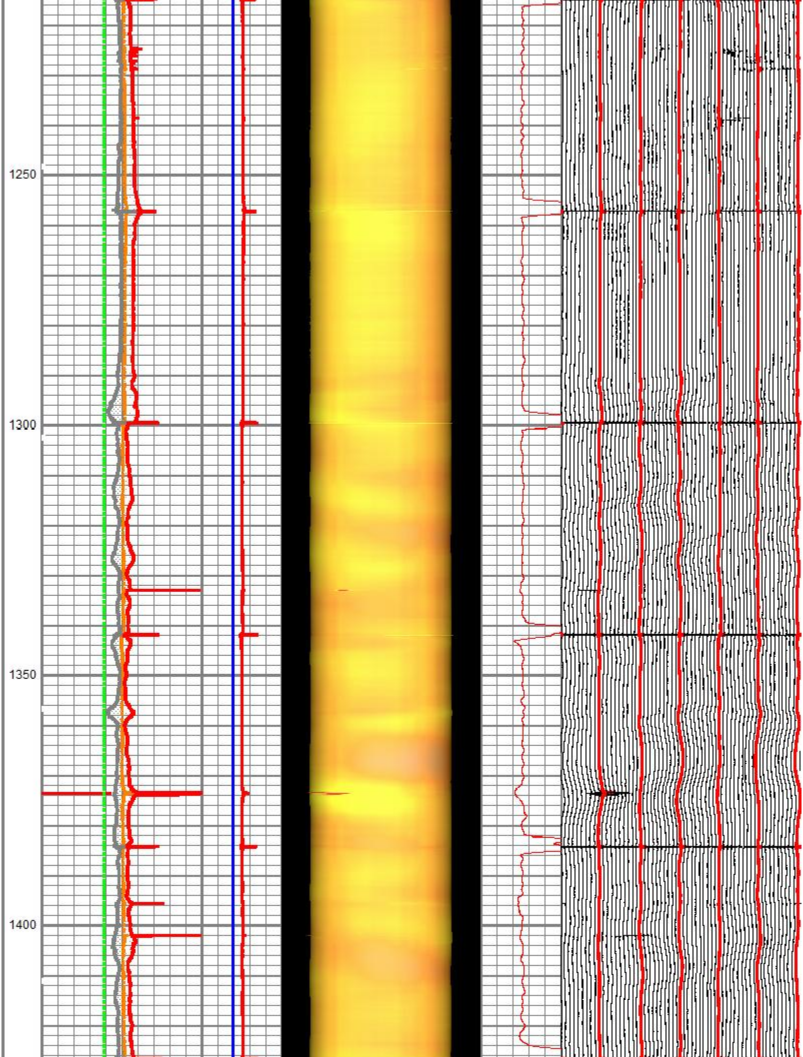


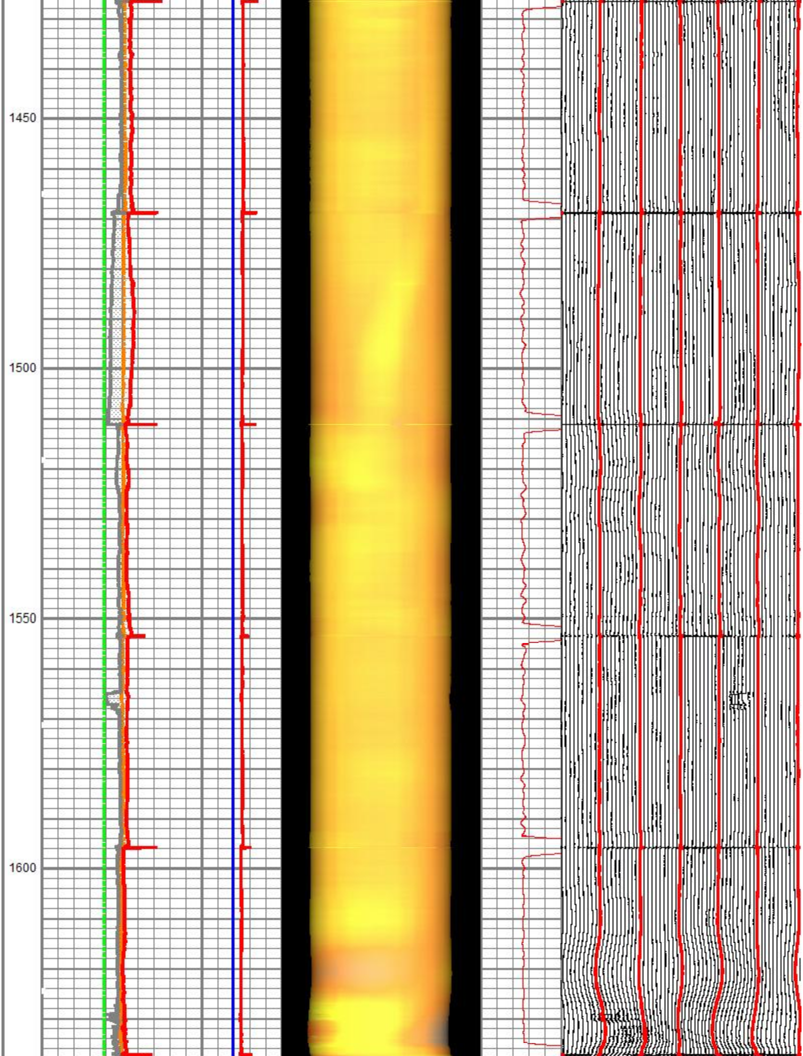


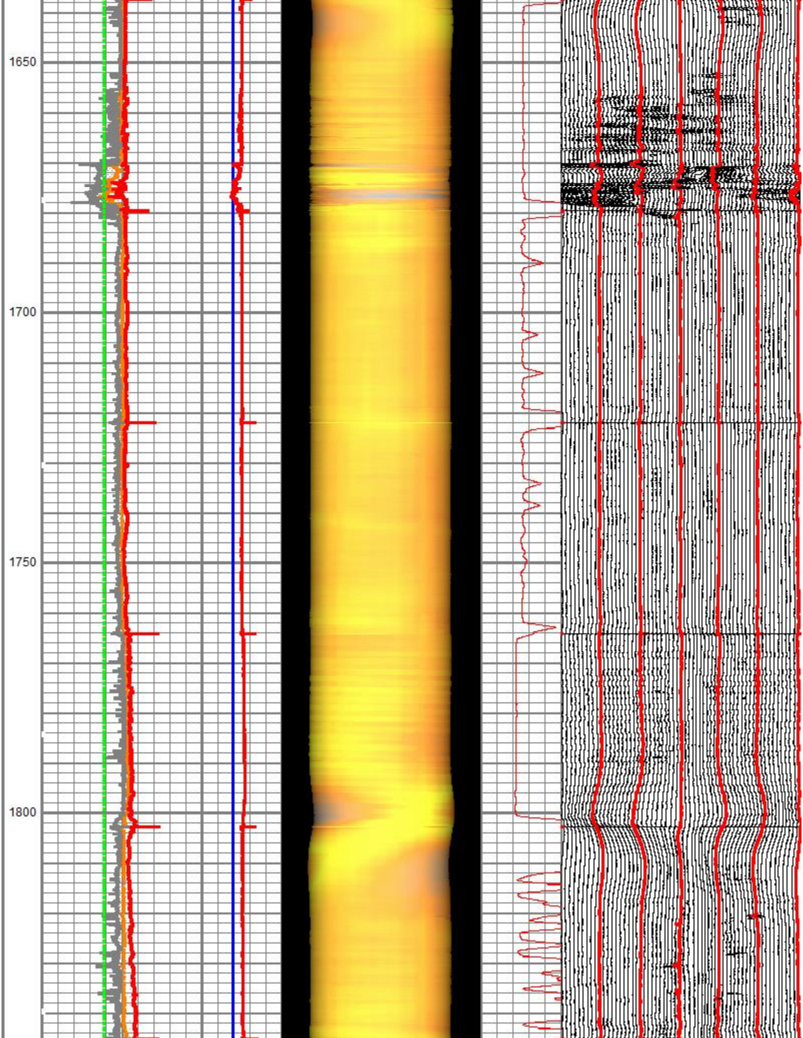


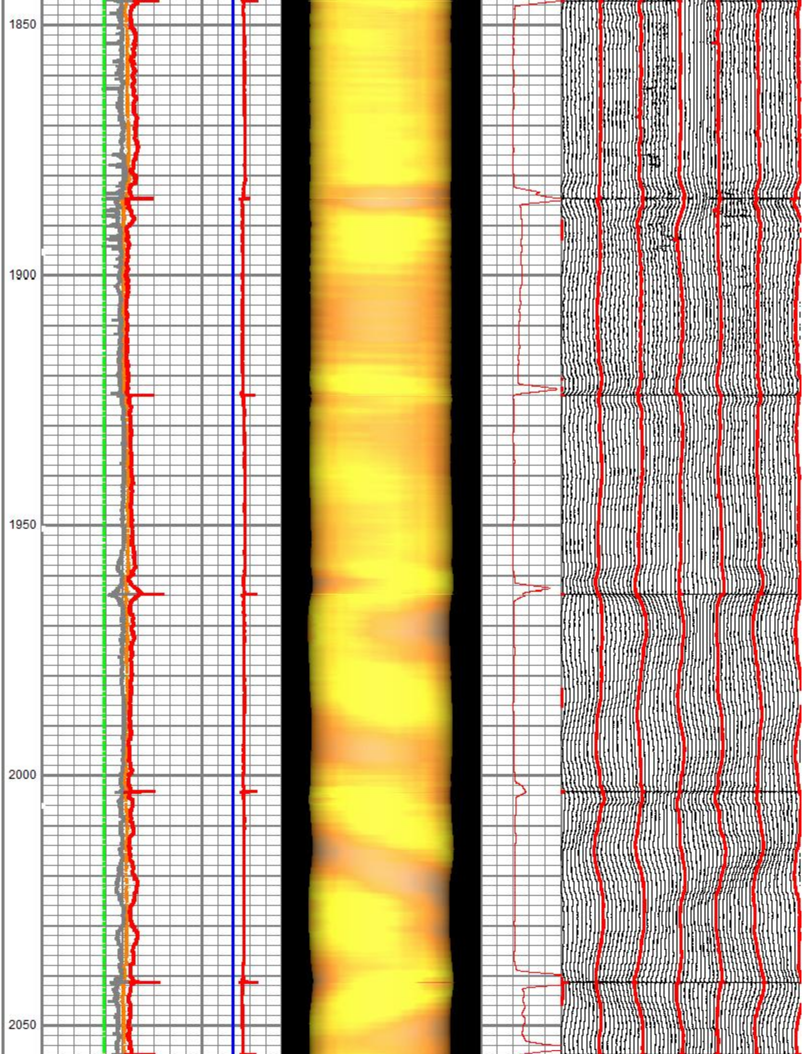


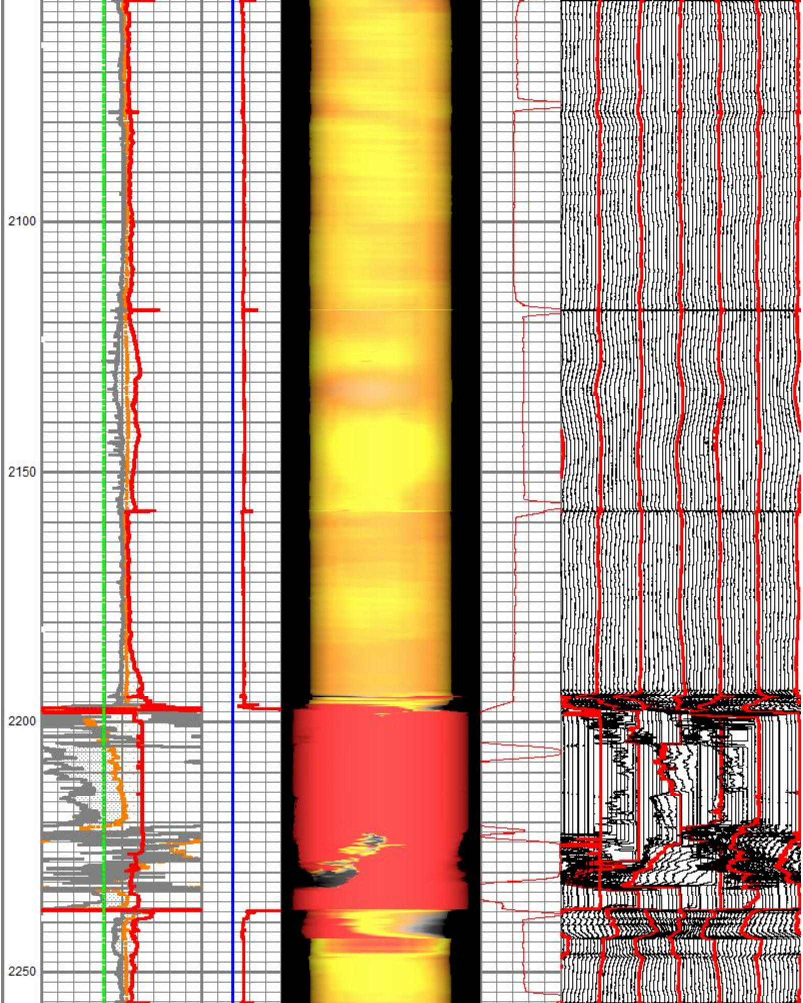


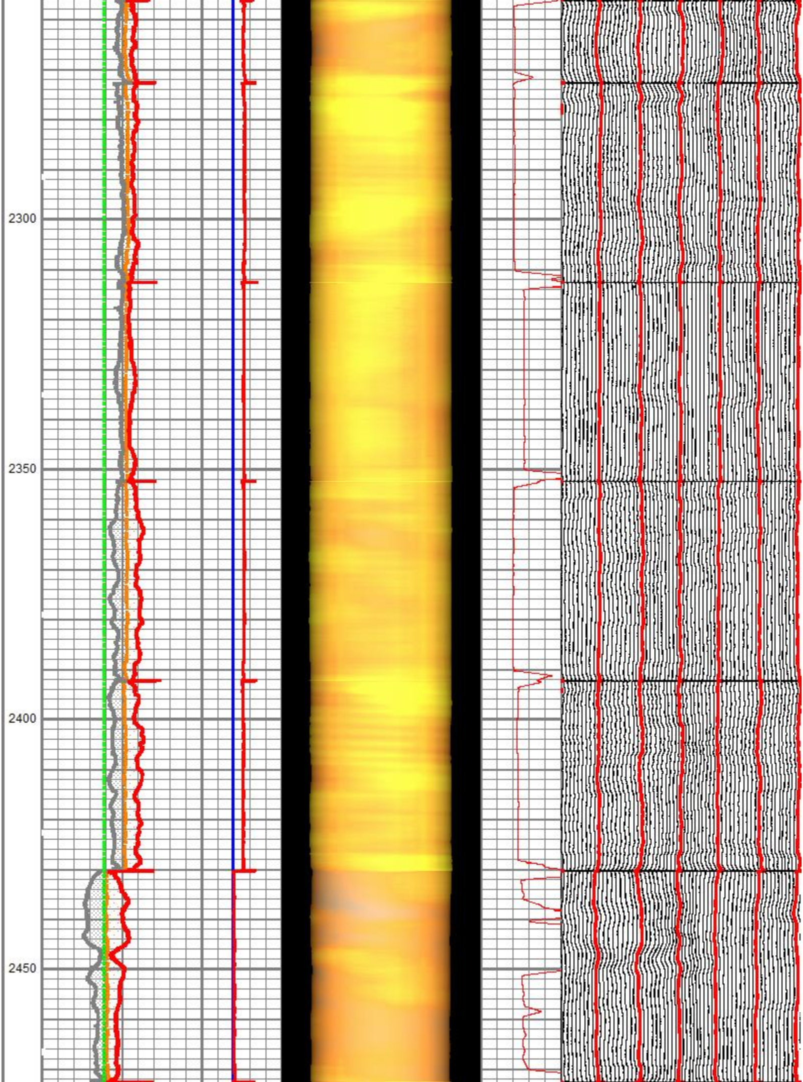


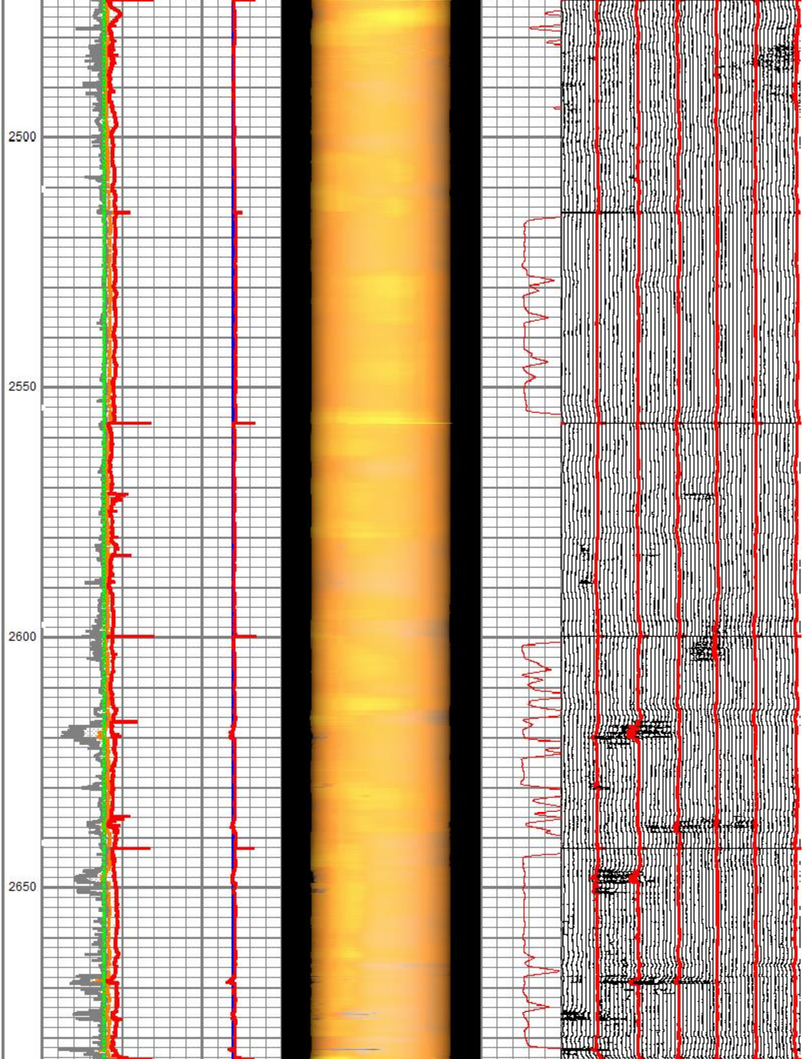


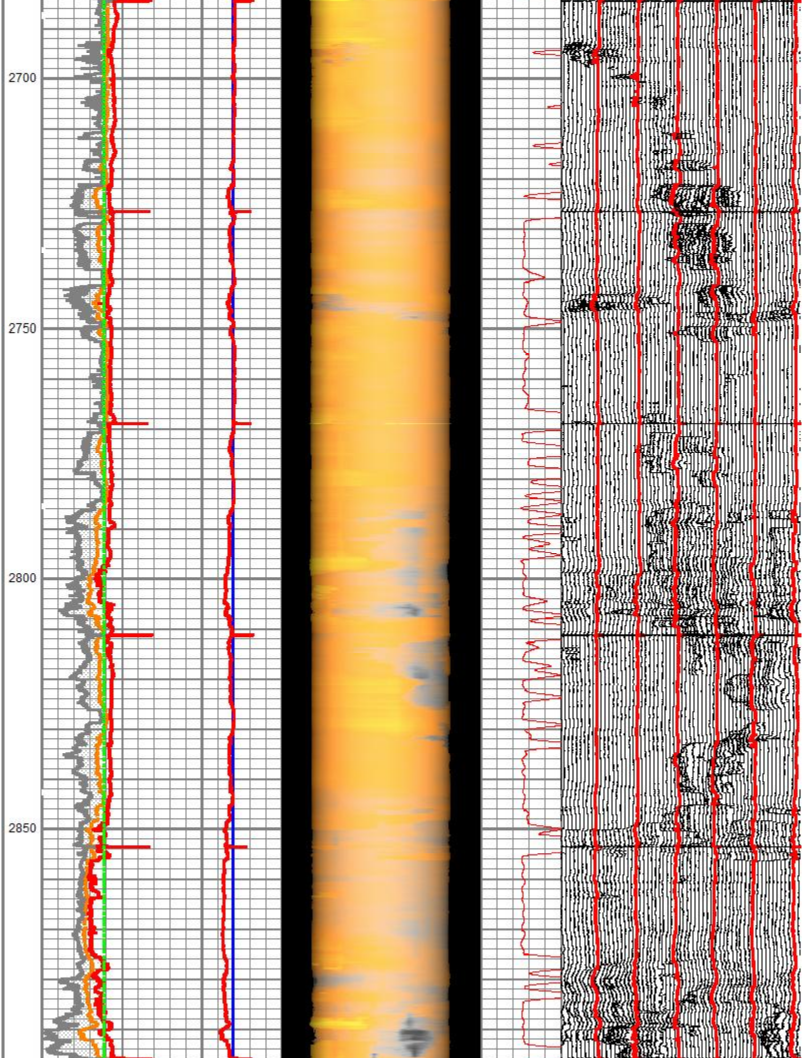


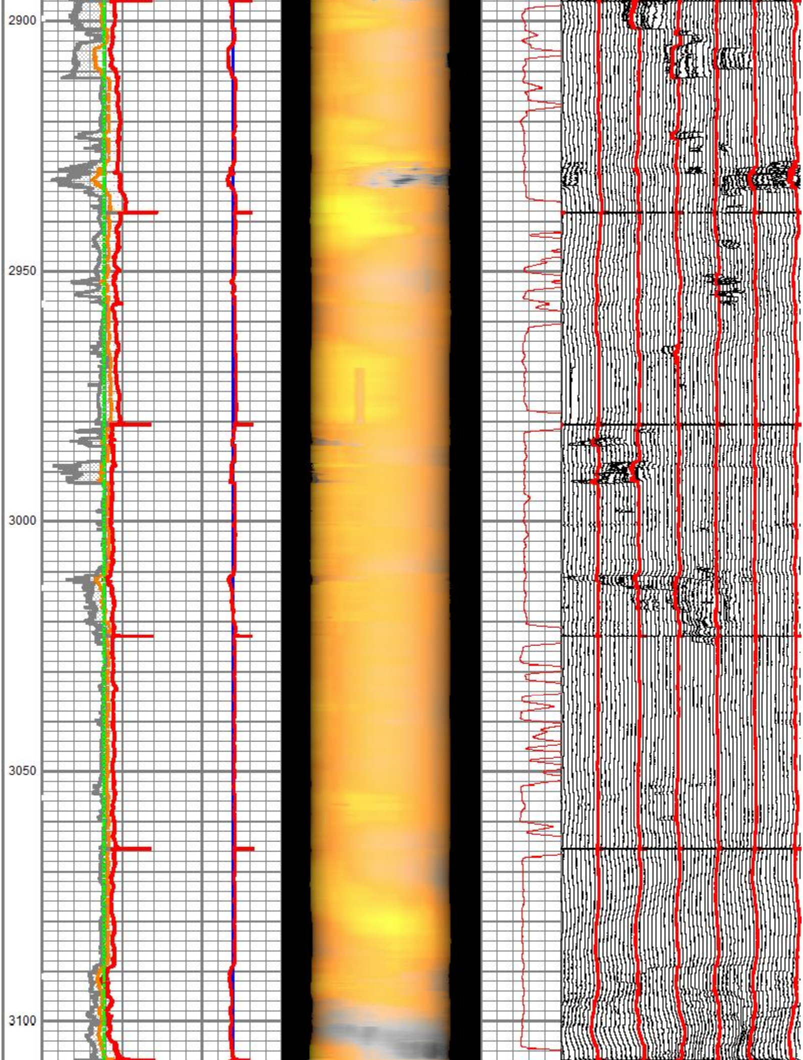


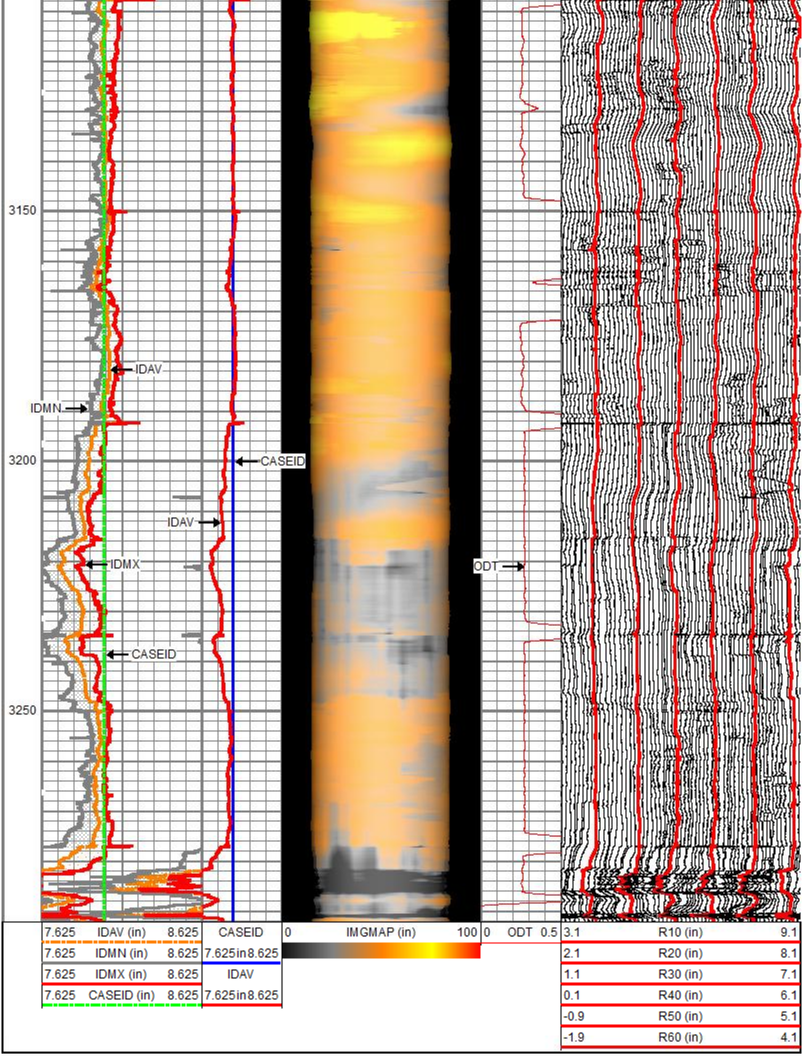












REPEAT SECTION

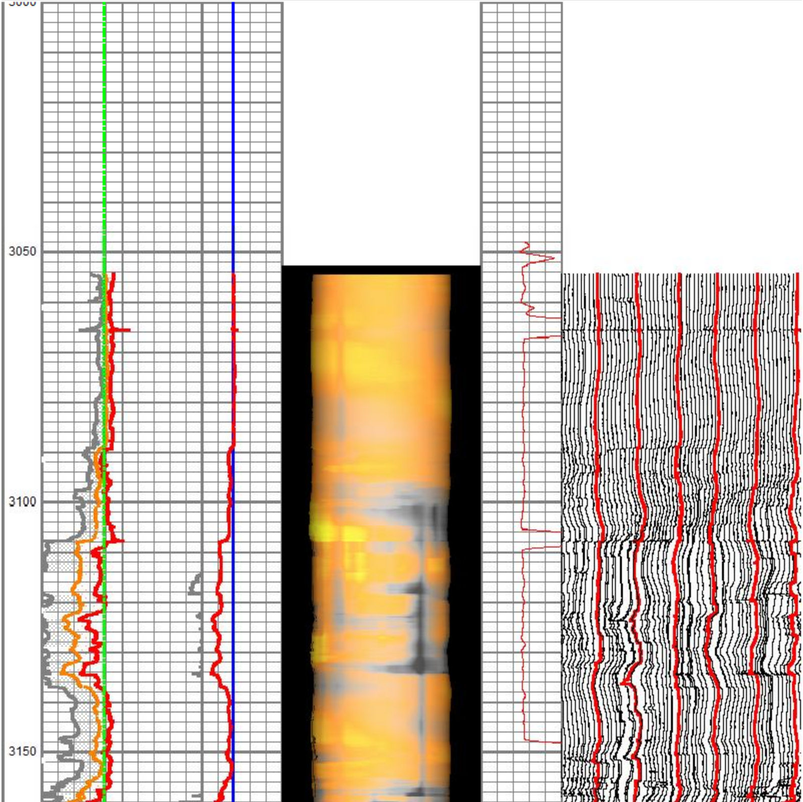
Database File	llanostate4#1.db
Dataset Pathname	pass1
Presentation Format	pr60im86
Dataset Creation	Fri Feb 02 09:08:26 2018
Charted by	Depth in Feet scaled 1:240

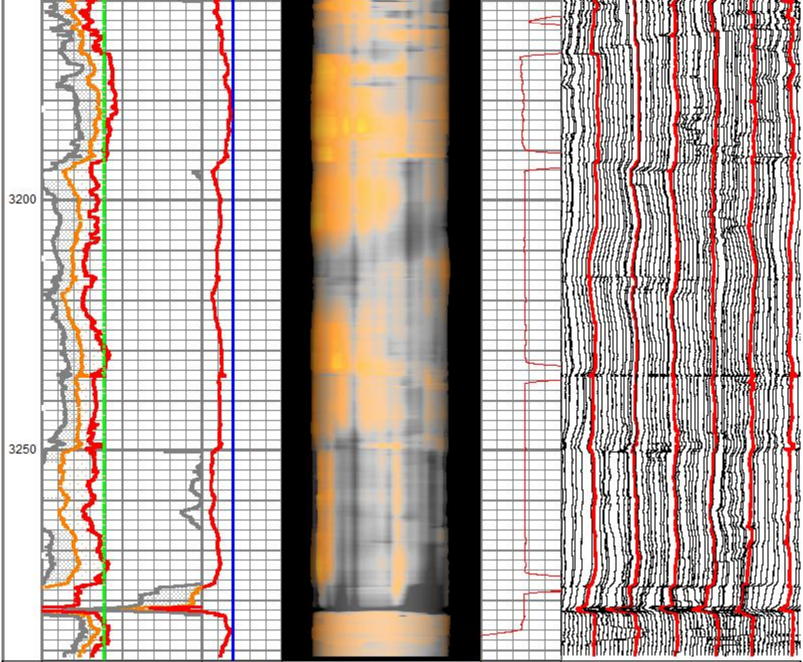
7.625	IDAV (in)	8.625	CASEID	
7.625	IDMN (in)	8.625	7.625in8.625	
7.625	IDMX (in)	8.625	IDAV	
7.625	CASEID (in)	8.625	7.625in8.625	

0 IMGMAP (in) 100

0 ODT 0.5

3.1	R10 (in)	9.1
2.1	R20 (in)	8.1
1.1	R30 (in)	7.1
0.1	R40 (in)	6.1
-0.9	R50 (in)	5.1
-1.9	R60 (in)	4.1

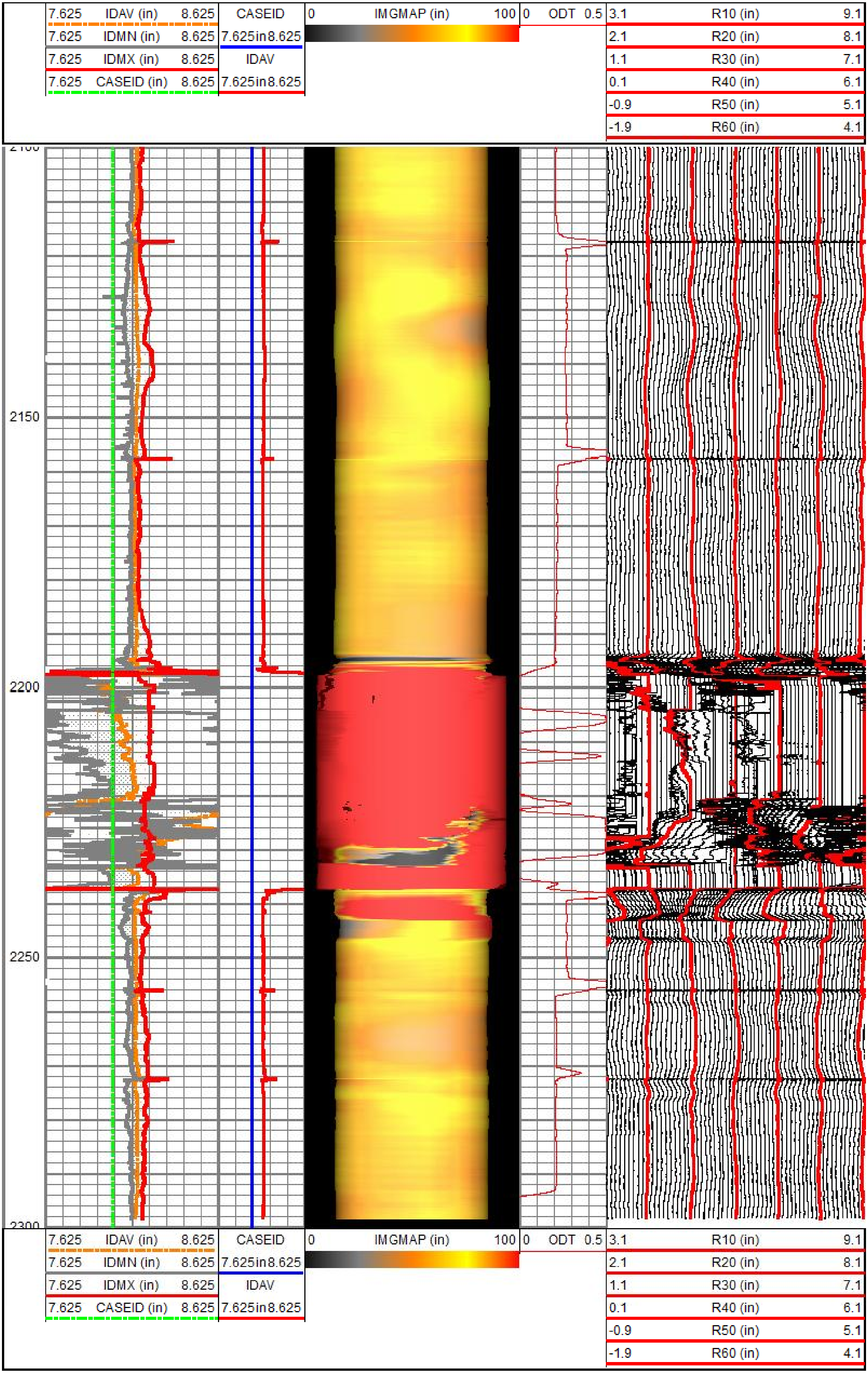




7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1 R10 (in) 9.1
7.625 IDMN (in) 8.625	7.625in 8.625			2.1 R20 (in) 8.1
7.625 IDMX (in) 8.625	IDAV			1.1 R30 (in) 7.1
7.625 CASEID (in) 8.625	7.625in 8.625			0.1 R40 (in) 6.1
				-0.9 R50 (in) 5.1
				-1.9 R60 (in) 4.1

REPEAT SECTION

Database File llanostate4#1.db
Dataset Pathname pass3
Presentation Format pr60im86
Dataset Creation Fri Feb 02 10:47:52 2018
Charted by Depth in Feet scaled 1:240



Calibration Report

Database File llanostate4#1.db
Dataset Pathname pass3
Dataset Creation Fri Feb 02 10:47:52 2018

60 Arm Multi Sensor Caliper Calibration Report

Serial Number: 1507709
Tool Model: 60
Performed: Fri Feb 02 08:36:52 2018

Ref ID:	4.02	4.33	4.92	6.10	6.69	in
Arm1	1501.00	1780.50	2288.05	3272.00	3768.05	in
Arm2	1446.30	1713.25	2204.20	3164.50	3648.35	in
Arm3	1392.10	1664.55	2164.85	3134.95	3621.90	in
Arm4	1519.80	1780.45	2259.55	3189.55	3654.50	in
Arm5	1525.25	1791.70	2284.05	3241.70	3723.10	in
Arm6	1181.45	1446.65	1940.35	2904.10	3390.15	in
Arm7	1347.05	1620.00	2129.00	3112.95	3597.65	in
Arm8	1423.55	1686.05	2172.55	3127.95	3609.35	in
Arm9	1455.80	1725.00	2221.95	3178.25	3648.75	in
Arm10	1495.75	1766.30	2272.15	3261.95	3753.40	in
Arm11	1605.70	1878.00	2374.60	3339.00	3820.60	in
Arm12	1434.10	1697.10	2188.65	3144.20	3620.35	in
Arm13	1516.05	1787.85	2292.90	3278.15	3770.60	in
Arm14	1455.15	1710.65	2192.00	3144.55	3630.15	in
Arm15	1654.20	1921.45	2418.30	3384.90	3867.65	in
Arm16	1551.60	1825.30	2333.35	3318.05	3807.75	in
Arm17	1329.25	1583.80	2068.40	3010.30	3478.90	in
Arm18	1465.80	1722.25	2214.00	3178.55	3658.10	in
Arm19	1345.15	1613.35	2120.45	3095.40	3570.90	in
Arm20	1315.15	1579.20	2073.25	3032.35	3512.65	in
Arm21	1574.40	1831.55	2319.30	3277.00	3756.90	in
Arm22	1358.00	1618.20	2107.85	3061.95	3535.80	in
Arm23	1381.15	1648.05	2146.45	3111.25	3591.10	in
Arm24	1386.20	1635.90	2106.95	3035.95	3509.30	in
Arm25	1420.05	1682.35	2175.90	3140.70	3625.60	in
Arm26	1552.50	1810.10	2302.45	3276.45	3765.65	in
Arm27	1452.00	1705.85	2190.65	3142.15	3616.90	in
Arm28	1212.65	1474.10	1971.10	2944.90	3428.35	in
Arm29	1494.30	1749.00	2239.35	3199.30	3677.20	in
Arm30	1435.20	1690.95	2173.05	3116.30	3592.65	in

* Bad

Calibration Report

Serial Number:
Tool Model:
Performed:

Ref ID:	4.02	4.33	4.92	6.10	6.69	in
Arm31	1568.60	1825.00	2311.70	3268.20	3745.95	in
Arm32	1316.75	1586.70	2097.00	3086.50	3582.45	in
Arm33	1584.75	1844.50	2340.75	3313.55	3798.00	in
Arm34	1498.90	1762.95	2268.70	3246.75	3736.20	in
Arm35	1408.35	1676.25	2181.10	3164.40	3652.95	in
Arm36	1353.70	1616.70	2112.90	3080.15	3566.05	in
Arm37	1475.25	1738.20	2229.50	3196.05	3683.65	in
Arm38	1161.50	1428.60	1925.65	2908.55	3397.55	in
Arm39	1348.80	1618.80	2115.00	3076.45	3552.55	in
Arm40	1439.30	1703.05	2201.75	3176.00	3662.40	in
Arm41	1073.20	1347.95	1861.30	2846.95	3329.45	in
Arm42	1474.40	1728.95	2204.70	3145.45	3617.20	in
Arm43	1404.50	1675.40	2180.35	3153.60	3632.60	in
Arm44	1490.90	1746.50	2234.55	3187.15	3663.55	in
Arm45	1246.90	1521.05	2027.00	3006.50	3491.95	in
Arm46	1728.80	1987.10	2467.40	3409.90	3888.20	in
Arm47	1396.80	1659.90	2145.65	3093.35	3567.65	in
Arm48	1457.05	1716.00	2197.45	3127.90	3597.00	in
Arm49	1470.90	1737.60	2234.40	3205.15	3695.90	in
Arm50	1542.90	1813.55	2299.25	3247.55	3725.65	in
Arm51	1201.05	1469.25	1961.20	2923.50	3411.00	in
Arm52	1303.45	1562.45	2046.95	3000.10	3478.80	in
Arm53	1426.00	1684.80	2164.35	3106.40	3589.20	in
Arm54	1396.75	1648.95	2121.65	3063.00	3537.30	in
Arm55	1626.30	1889.90	2373.75	3317.05	3791.15	in
Arm56	1289.75	1553.25	2046.35	3009.00	3485.65	in
Arm57	1462.05	1714.55	2173.60	3071.75	3521.80	in
Arm58	1702.10	1969.00	2451.55	3394.25	3865.95	in
Arm59	1445.00	1707.80	2185.70	3132.45	3616.05	in
Arm60	1281.20	1544.50	2027.80	2974.25	3449.10	in

* Bad

HWWSMFC verifications Calibration Report

	Pre Verification	Post Verification	Casing Check	
Performed:	Fri Dec 29 09:42:20 2017	Thu Dec 28 13:33:28 2017		
Ref ID:	6.10	4.92	0.00	in
Min.	6.08	4.90	0.00	in
Max.	6.10	4.93	0.00	in
Avg.	6.09	4.92	0.00	in
Dia1	6.08	4.92	0.00	in
Dia2	6.09	4.92	0.00	in
Dia3	6.08	4.92	0.00	in
Dia4	6.08	4.92	0.00	in
Dia5	6.08	4.92	0.00	in
Dia6	6.09	4.93	0.00	in
Dia7	6.08	4.92	0.00	in
Dia8	6.09	4.92	0.00	in
Dia9	6.09	4.92	0.00	in
Dia10	6.09	4.90	0.00	in
Dia11	6.09	4.92	0.00	in
Dia12	6.09	4.92	0.00	in
Dia13	6.09	4.92	0.00	in
Dia14	6.10	4.91	0.00	in
Dia15	6.09	4.92	0.00	in
Dia16	6.09	4.92	0.00	in
Dia17	6.09	4.92	0.00	in
Dia18	6.09	4.92	0.00	in
Dia19	6.08	4.93	0.00	in
Dia20	6.08	4.91	0.00	in
Dia21	6.09	4.93	0.00	in
Dia22	6.08	4.91	0.00	in
Dia23	6.09	4.92	0.00	in
Dia24	6.09	4.93	0.00	in
Dia25	6.09	4.93	0.00	in
Dia26	6.08	4.92	0.00	in
Dia27	6.08	4.93	0.00	in
Dia28	6.08	4.92	0.00	in
Dia29	6.09	4.92	0.00	in
Dia30	6.09	4.92	0.00	in

Inclinometer Calibration Report

Performed: (Not Performed)

	Low Read.	High Read.	Low Ref.	High Ref.		Gain	Offset
X Accelerometer	0.00	1.00	0.00	1.00	gee	1.00	0.00
Y Accelerometer	0.00	1.00	0.00	1.00	gee	1.00	0.00
Z Accelerometer	0.00	1.00	0.00	1.00	gee	1.00	0.00
RB						1.00	0.00

Log Variables

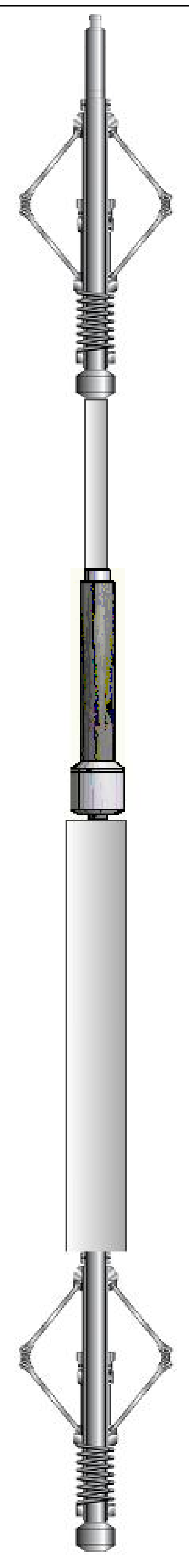
DatabaseC:\ProgramData\Warrior\Data\llanostate4#1.db
Dataset field/well/run1/pass3/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEID in	CASEOD in	CASETHCK in	MinAPIWall in	PERFS	SRFTEMP degF	TDEPTH ft
7.875	100	8.016	8.625	0	0.264	0	0	0

Variable Description

BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEID : Casing I.D.
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
MinAPIWall : Minimum API Wall Thickness
PERFS : Perforation Flag
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-1.4375CHD Titan Cable Head 1 7/16	1.00	1.44	10.00
			CENT-Probe Probe 2 3/4 Centralizer	3.50	2.75	20.00
			GDT_WTC-WTS01 (1503889) Digital Telemetry GDTBus	1.97	1.38	5.60
CRCCnt	11.50					
FrmCnt	11.50					
WTSTime	11.50					
WTSTemp	11.50					
CHV	11.50		HWT_ODT-ODT01 (0001) Hotwell ODT	2.96	2.75	22.05
ODTRawP	9.87					
ODTTemp	9.87					
ODTTIME	9.87					
			GDT_MFI-60 (1507709) Multi-Finger Caliper Tool (60) GDTBus	5.04	4.00	68.89
Meas	5.27					
MFCBEAR	3.50					
MFCACCZ	3.50					
MFCACCY	3.50					
MFCACCX	3.50					
Aux1	3.50		CENT-Probe Probe 2 3/4 Centralizer	3.50	2.75	20.00

Dataset:	llanostate4#1.db: field/well/run1/pass3
Total length:	17.98 ft
Total weight:	146.54 lb
O.D.:	4.00 in

RENEGADE SERVICES

Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM