PUMP-IN TRACER

Company Owl SWD Operating
Well Maralo Sholes B #002
Field Maralo Sholes
County Lea State New Mexico
Location: API # :
660 FSL & 660' FEL
SEC N/A TWP N/A RGE N/A
Other Services
3-Arm
Caliper

Permanent Datum Ground Level Elevation 2749'
Log Measured From K.B. 13" Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation
K.B. 2762'
D.F. 2761'
G.L. 2749'

Company	Owl SWD Operating	
Well	Maralo Sholes B #002	
Field	Maralo Sholes	
County	Lea	
State	New Mexico	
Date	December 2, 2016	
Run Number	ONE	1.375" Tools
Depth Driller	2935'	
Depth Logger	3072'	
Bottom Logged Interval	3072'	
Top Log Interval	2600'	
Open Hole Size	N/A	
Type Fluid	Water	
Density / Viscosity	N/A	
Max. Recorded Temp.	122.1 F	
Estimated Cement Top	N/A	
Time Well Ready	R.O.A	
Time Logger on Bottom	9:00 AM	
Equipment Number	Truck #48	
Location	Levelland	
Recorded By	M.Salas	
Witnessed By		

Borehole Record			Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
				3.5"	N/A	Surface	2817'

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	7"	20#	Surface	2935'
Liner				
EXP. 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

LOG WAS SET TO 7" CASING-SHOE SET @ 2935'

PERFORATIONS

OPEN HOLE: 2935' - 3072'

INJECTION WELL:
SHUT-IN DATE 12-02-2016 HOUR 3:30 P.M. TOTAL S.I. TIME 1 HOUR S.I. PRESS 0 -PSI
METERED INJ. RATE 6542 B/D PRESSURE 0-PSI TEMP 122 DEG FLUID TYPE WATER
TOTAL VOLUME TO DATE FLUID LEVEL TUBING FULL

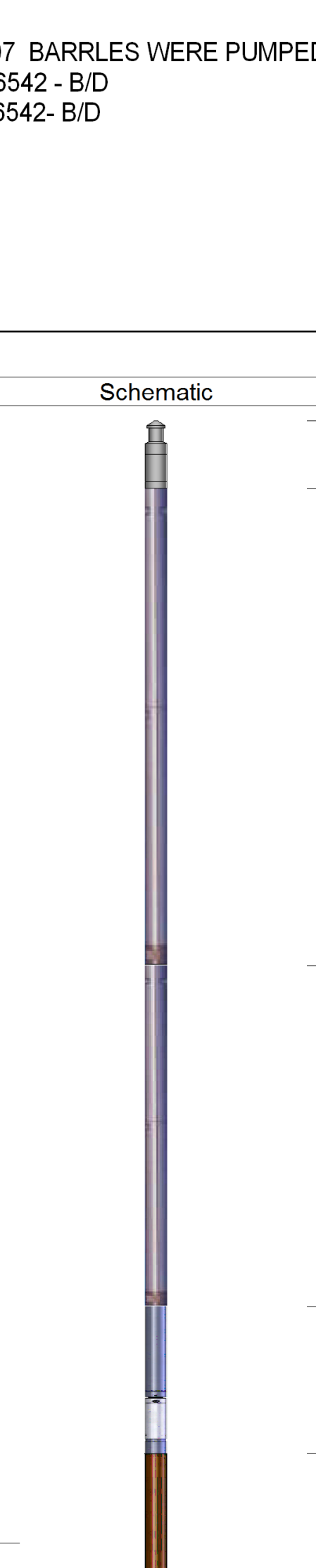
PRODUCER:
FLOWING PUMPING CHOKE SETTING HOURS PROD.
FLUID LEVEL CSG. TBG. RATE B/W B/O
FLUID TYPE WATER

FRAC OR ACID WELLS:
TIME FINISHED FRAC OR ACID ACID % FLUID - GALS SAND #
RATE - BPM PRESSURE

CONCLUSIONS

THIS SURVEY WAS RUN TO DETERMINE THE ZONES OF INJECTION,THERE WAS NO INDICATION OF A CHANNEL-UP FROM CASING SHOE

NOTE: A TOTAL OF 507 BARRLES WERE PUMPED DURING SURVEY
100% CASING RATE -6542 - B/D
100% TUBING RATE -6542- B/D

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			1.38CHD 1.38 Cable Head	1.00	1.38	2.00
			SBAR-1.375" (000) 7' 1.375" Tungsten Sinker Bar	7.00	1.38	61.00
			SBAR-169x5 (0001) Sinker Bar 1 3/8 by 5 foot	5.00	1.38	30.00
			DUMEJCT-PROBE (DUMPROBE)	2.17	1.38	10.00
CCL	8.94		CCL-Probe (Probe_1) 1 3/8" Probe Logging CCL	1.89	1.38	5.00
			DUMDET-KC (KCPOS) KC SCINT G/R	3.46	1.38	10.00
			DUMCAL-PROBE (PROBE01) PROBE XY CALIPER	3.43	1.38	20.00
TEMP	0.00		TEMP-Probe (P01) Probe 1 3/8" Temp	1.55	1.38	4.00

Dataset: maralo-#2.db: MARALO/2/injtemp/pass1
Total Length: 25.49 ft
Total Weight: 142.00 lb
O.D. 1.38 in

Company:
Well:
File: F:\maralo-#2.db
Dataset: MARALO/2/TRACER/_tracer_/_shottabl_/1
Reference Rate: 6537.0 b/d

TRACER RESULTS

#	Depth (ft)	Time	Integration	Flow (%)	Delta (%)	Comment
2	2626.00	18:05:20	156472.00	100.00		
3	2852.00	18:05:55	156472.00	100.00	0.00	
4	2906.00	18:06:24	156472.00	100.00	0.00	
5	2956.00	18:06:56	156472.00	100.00	0.00	
6	3015.00	18:07:40	129882.00	83.01	16.99	
7	3044.00	18:08:16	53749.30	34.35	48.66	
8	3053.00	18:08:56	20823.60	13.31	21.04	
9	3056.00	18:09:49	7049.81	4.51	8.80	
10	3060.00	18:11:13	5049.81	3.23	1.28	

VELOCITY FROM TRACER

#	Depth (ft)	Time	D Space (ft)	D Time (sec)	Flow (b/d)	Flow (%)	Delta (b/d)	Delta (%)
11	2363	18:05:20	0.00	0.00				
12	2852	18:05:55	225.00	33.31	6537.78	100.00		
13	2906	18:06:24	54.00	29.00	6536.99	100.00	0.79	0.00
14	2956	18:06:56	50.00	29.07	6542.69	100.00	-5.70	0.00
15	3015	18:07:40	59.00	37.60	5400.26	82.61	1142.43	17.39
16	3044	18:08:16	29.00	42.94	2206.73	33.76	3193.53	48.85
17	3053	18:08:56	9.00	36.06	815.47	12.47	1391.25	21.28
18	3056	18:09:49	3.90	53.72	230.27	3.52	585.20	8.95
19	3060	18:11:13	4.00	69.32	180.42	2.76	49.85	0.76

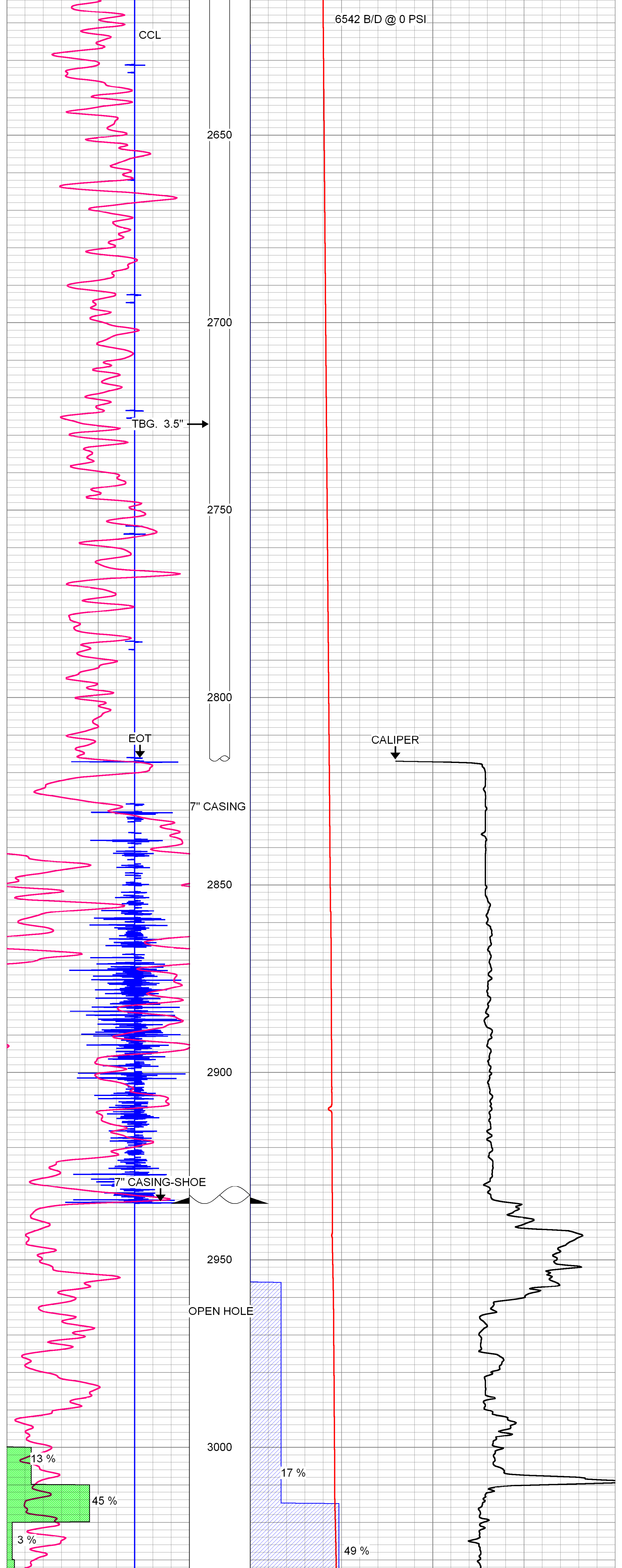
Company:
Well:
File: F:\maralo-#2.db
Dataset: MARALO/2/VEL./_tracer_/_shottabl_/1
Reference Rate: 6548.2 b/d

VELOCITY RESULTS

#	Depth (ft)	Time	D Space (ft)	D Time (sec)	Csg ID (in)	Flow (b/d)	Flow (%)	Delta (%)	Comment
1	2920.00	18:31:15	5.28	5.00	8.35				Channel C
9	3000.00	18:37:11	5.28	2.26	6.81	6548.22	100.00		
8	3010.00	18:36:37	5.28	2.60	6.80	5669.71	86.58	13.42	
7	3020.00	18:35:21	5.28	6.40	6.39	2697.26	41.19	45.39	
6	3030.00	18:34:49	5.28	5.00	6.29	2502.73	38.22	2.97	
5	3040.00	18:33:42	5.28	5.80	6.39	2230.05	34.06	4.16	
4	3050.00	18:32:52	5.28	12.00	6.30	1047.91	16.00	18.05	
3	3060.00	18:32:02	5.28	69.00	6.26	179.50	2.74	13.26	
2	3066.00	18:31:52	0.00	300.00	6.28	0.01	0.00	2.74	NO FLOW

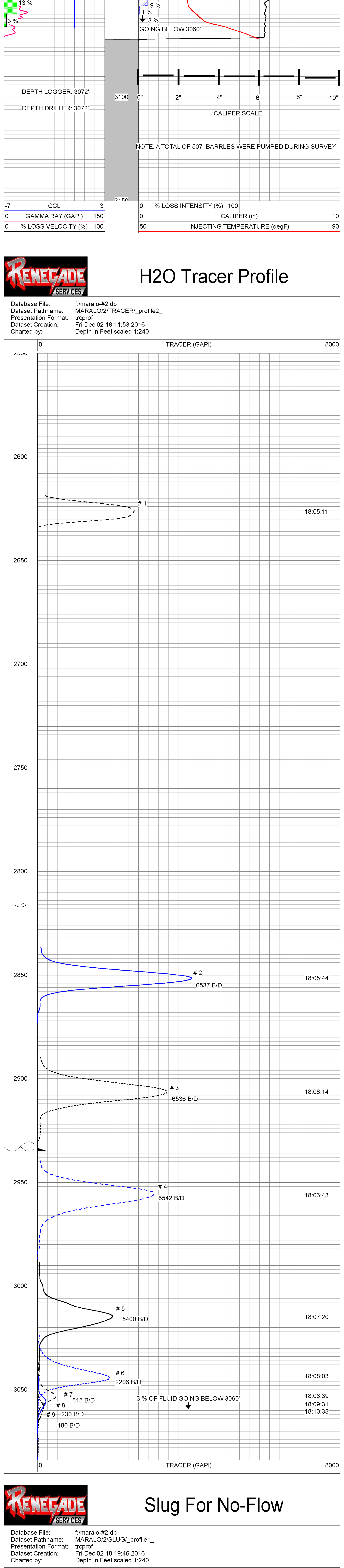
H2O Injection Composite

Database File: f:\maralo-#2.db
Dataset Pathname: MARALO/2/VEL./_composFIN
Presentation Format: trccomp
Dataset Creation: Fri Dec 02 20:21:38 2016
Charted by: Depth in Feet scaled 1:240



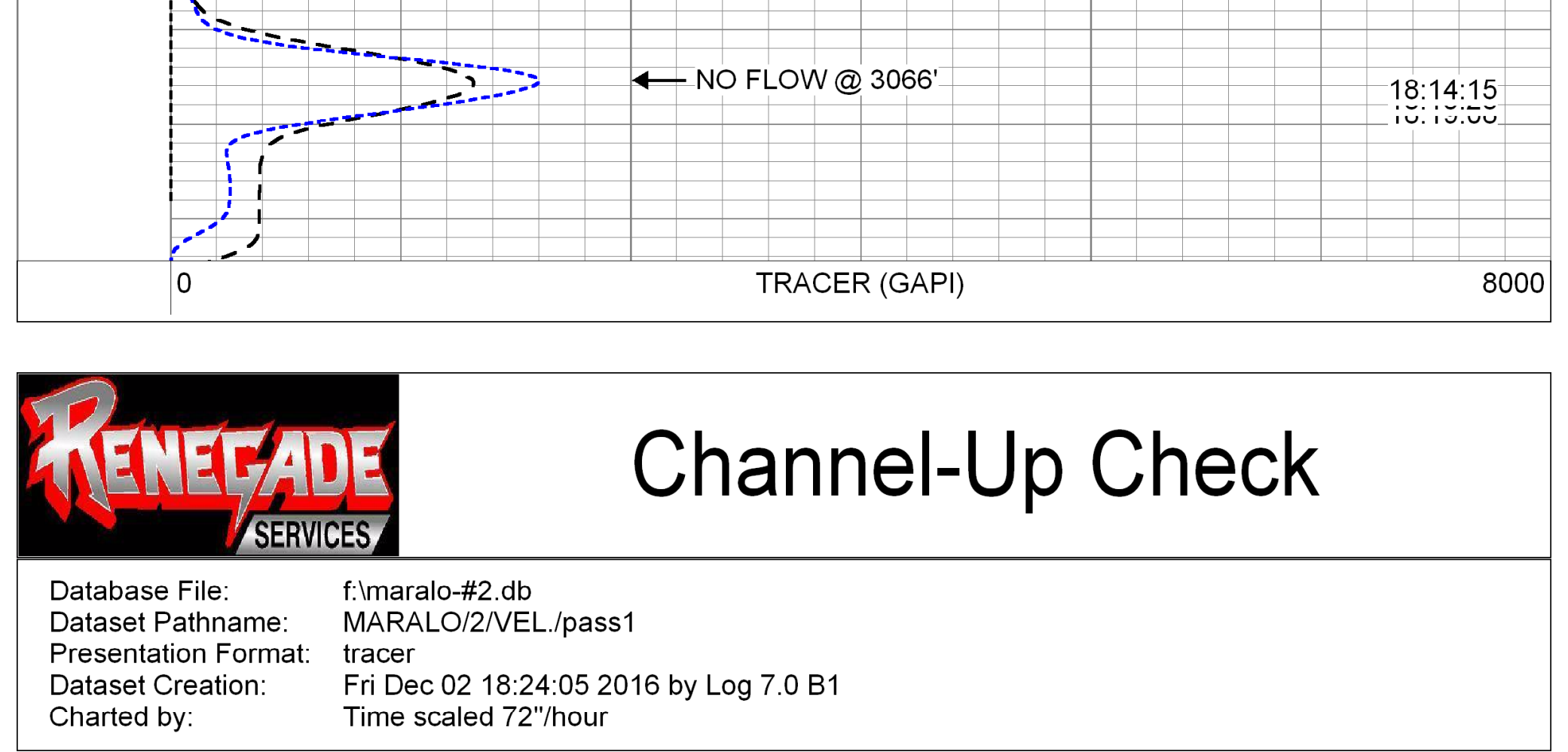
H2O Tracer Profile

Database File: f:\maralo-#2.db
Dataset Pathname: MARALO/2/TRACER/_profile2_
Presentation Format: trcprof
Dataset Creation: Fri Dec 02 18:11:53 2016
Charted by: Depth in Feet scaled 1:240



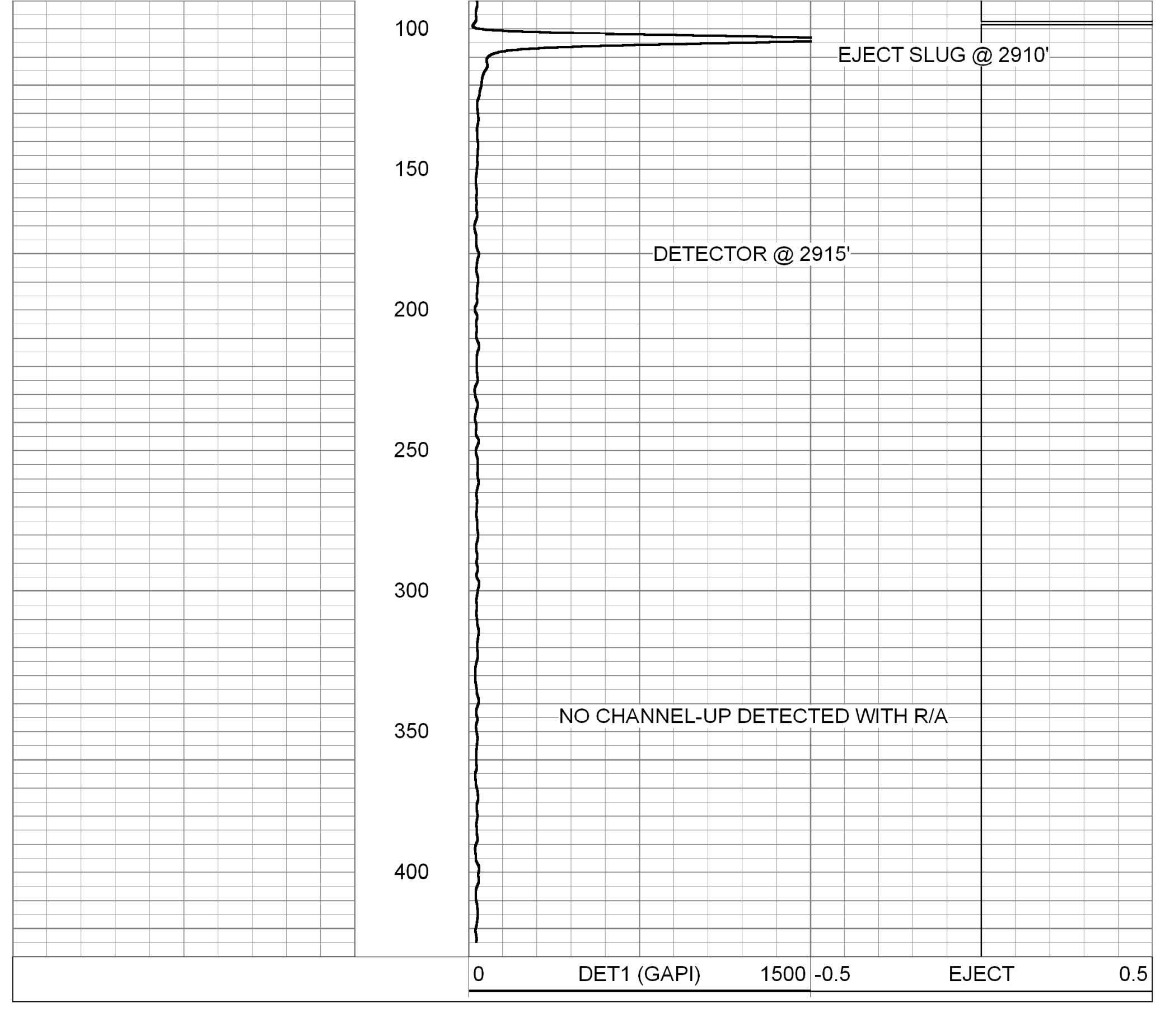
Slug For No-Flow

Database File: f:\maralo-#2.db
Dataset Pathname: MARALO/2/SLUG/_profile1_
Presentation Format: trcprof
Dataset Creation: Fri Dec 02 18:19:46 2016
Charted by: Depth in Feet scaled 1:240



Channel-Up Check

Database File: f:\maralo-#2.db
Dataset Pathname: MARALO/2/VEL./pass1
Presentation Format: tracer
Dataset Creation: Fri Dec 02 18:24:05 2016 by Log 7.0 B1
Charted by: Time scaled 72"/hour



Company Owl SWD Operating
Well Maralo Sholes B #002
Field Maralo Sholes
County Lea
State New Mexico