

Rosa Unit # 643H

Basin Mancos

(page 1)

Spud: 7/26/15

Completed: 12/12/15

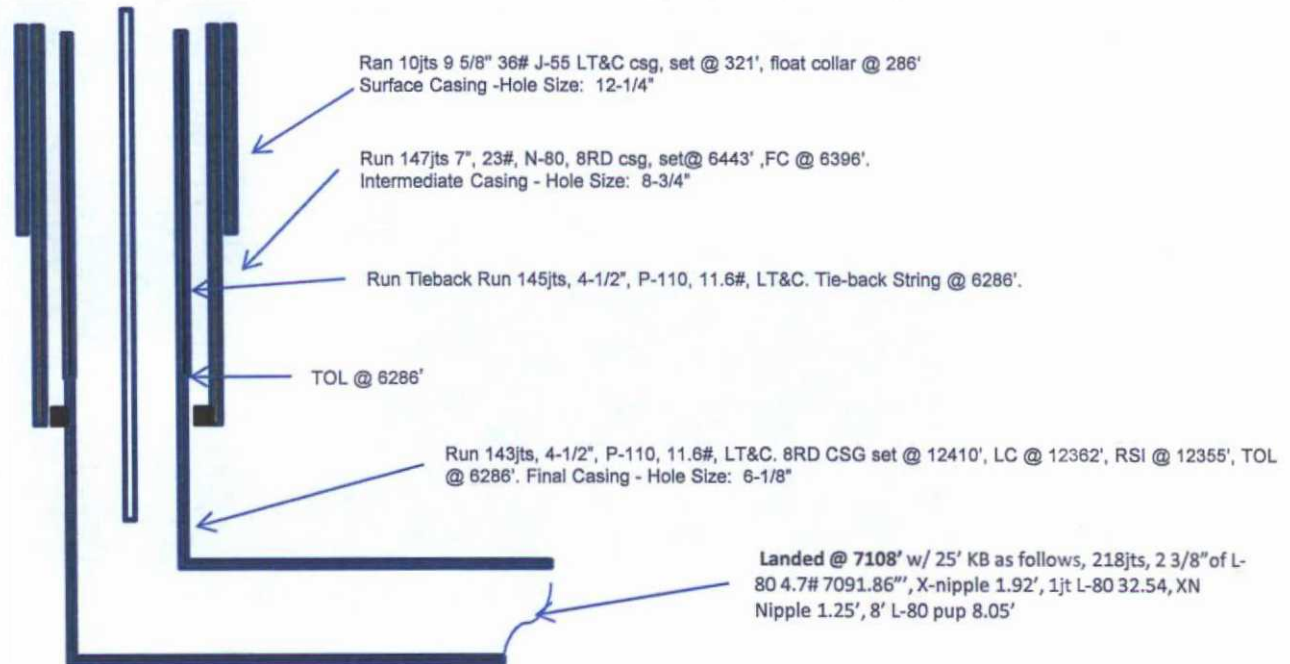
SHL: 972' FNL & 510' FWL
NE/4 NW/4 Section 19(C), T31N, R5W

BHL: 1927' FNL & 44' FWL
SW/4 NW/4 Section 24 (E), T31N, R6W

Rio Arriba, NM
Elevation: 6305'
API: 30-039-31317

Tops	MD	TVD
Ojo Alamo	2461	2433
Kirtland	2575	2545
Picture Cliffs	3397	3354
Lewis	3588	3542
Chacra	4641	4582
Cliff House	5449	5376
Menefee	5494	5420
Point Lookout	5723	5645
Mancos	6205	6121

CONFIDENTIAL



TD: 12415' MD
TVD: 7166'
PBD: 12362' MD

HOLE SIZE	CASING	CEMENT	VOLUME	CMT TOP
12-1/4"	9-5/8"	10lsx	163cu.ft.	Surface
8-3/4"	7"	1492sx	2114cu.ft.	TOC @ 425'
6-1/8"	4-1/2"	740sx	947cu.ft.	TOL @ 6286'

mj 12/16/15

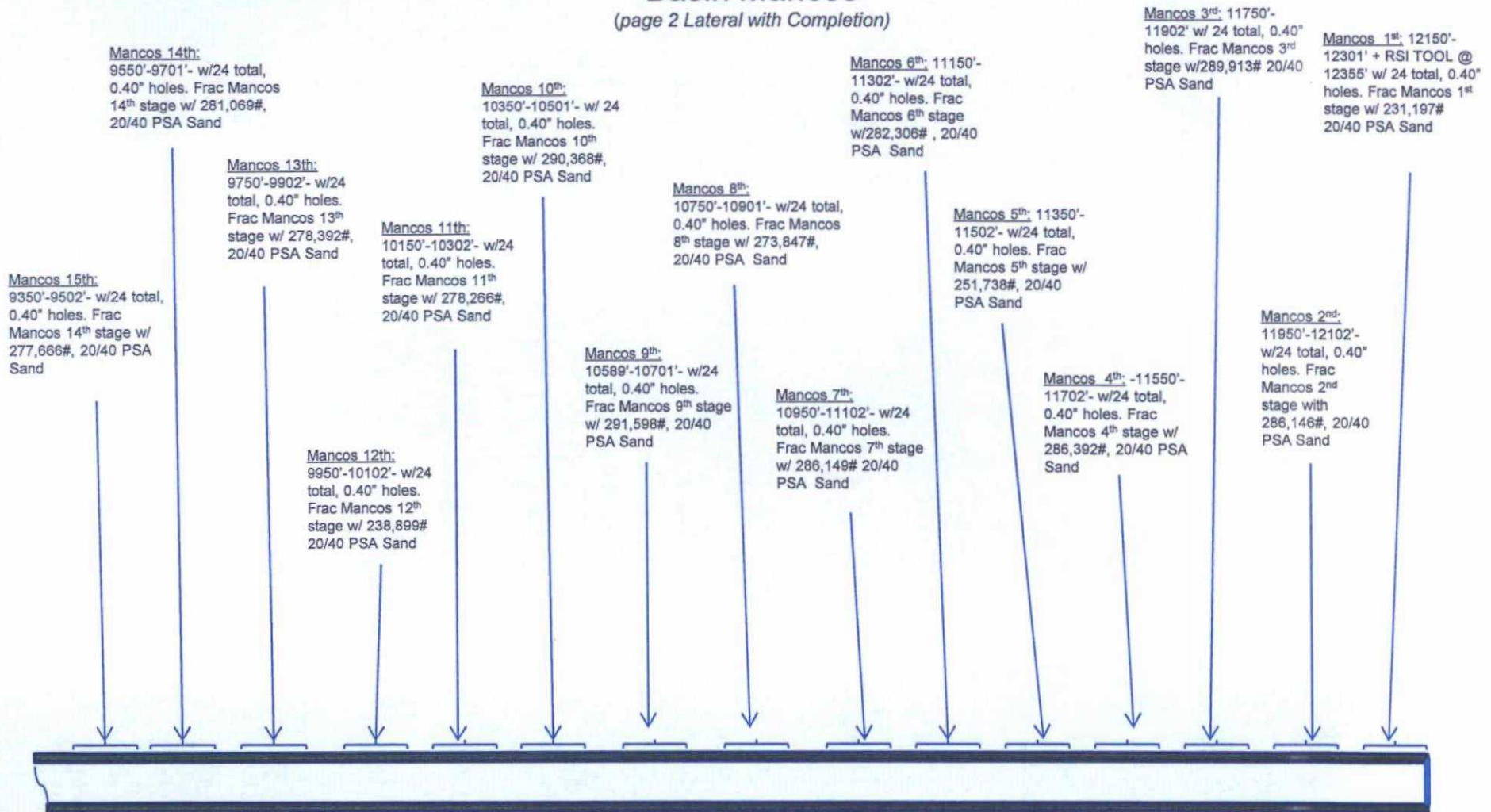
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(page 2 Lateral with Completion)



See page 1 for upper portion of hole

Rosa Unit # 641H

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(page 3 Lateral with Completion)

Mancos 24th:
7550'-7702'- w/24 total,
0.40" holes. Frac Mancos
24th stage w/ 283,341#,
20/40 PSA Sand

Mancos 21st: 8150'-
8302'- w/24 total,
0.40" holes. Frac
Mancos 21st stage
w/ 286,183#, 20/40
PSA Sand

Mancos 18TH: 8750'-
8902' w/24 total, 0.40"
holes. Frac Mancos
18th stage w/
282,499# 20/40 PSA
Sand

Mancos 16th:
9150'-9302'- w/24 total,
0.40" holes. Frac
Mancos 16th stage w/
284,330#, 20/40 PSA
Sand

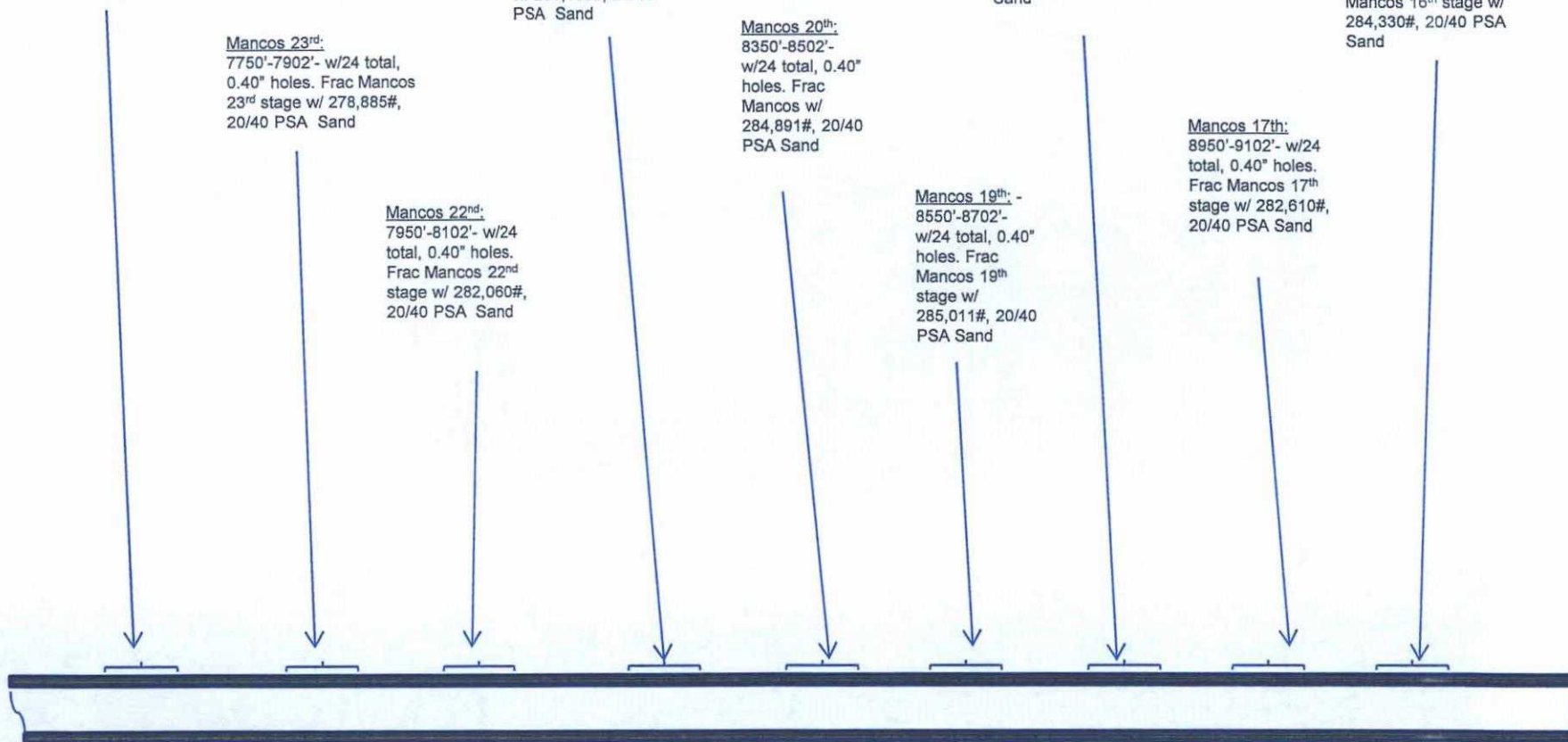
Mancos 23rd:
7750'-7902'- w/24 total,
0.40" holes. Frac Mancos
23rd stage w/ 278,885#,
20/40 PSA Sand

Mancos 20th:
8350'-8502'-
w/24 total, 0.40"
holes. Frac
Mancos w/
284,891#, 20/40
PSA Sand

Mancos 17th:
8950'-9102'- w/24
total, 0.40" holes.
Frac Mancos 17th
stage w/ 282,610#,
20/40 PSA Sand

Mancos 22nd:
7950'-8102'- w/24
total, 0.40" holes.
Frac Mancos 22nd
stage w/ 282,060#,
20/40 PSA Sand

Mancos 19th: -
8550'-8702'-
w/24 total, 0.40"
holes. Frac
Mancos 19th
stage w/
285,011#, 20/40
PSA Sand



See page 1 for upper portion of hole