

Darthrow 19 St 1
D-19-20s-30e
Eddy Co., NM
Recompletion Procedure 1
Morrow
4 Sept 2005

30 - 015 - 32873

Basic Data:

20" @ 325' Circ. Cmt.
13-3/8" @ 1784' Circ. Cmt.
8-5/8" @ 3425' Circ. Cmt.
5-1/2" @ 12300' DV @ 9495' TOC 3800' TS

5.5"/17ppf/M95-110/LTC Burst=10640 psi, 8512 psi at 80% Nom. ID=4.892" Drift ID=4.767"
2.375"/4.7ppf/L80/EUE Burst=11200 psi, 8960 psi at 80% Nom ID=1.995" Drift ID=1.901"
Collapse=11780 psi, 9424 at 80%
Tensile=104,300 lb with no safety factor

Objective: Add pay in the Morrow Sand.

Procedure:

1. When ready to test next zone, catch plunger at surface, blow well down, pump a slug of 7% KCl water down tubing (or skip slug of water and set BPV in tubing landing collar in tubing head adaptor), NU BOP and TOOH with packer (retrieve plunger spring from tubing at surface).

2. RU lubricator, run gauge ring to 12000' and set 10k composite frac plug (flow through, with ball) at 11925'. Load casing with 7% KCl and test to 2500 psi. RU lubricator and perf Morrow with 1 spf at any phasing using 3-3/8" or 4" casing gun at the depths shown below.

U. Morrow: 11791-11793', 11843-11851', 11883-11887', 11897-11902' (20 shots)

2. RIH with packer assembly, space out, tree up, test annulus to 500 psi, swab tubing dry and acidize with 2000 gals Clay Safe H acid. Pump acid at 3-5 bpm while limiting treating pressure to 8500 psi. Drop 60 ball sealers through the acid. Swab/flow test until notified to do otherwise.

3. If decision made to frac, install frac valve with BOP on top, unseat packer, swab as much fluid out of casing as possible while allowing a safe trip out, POOH with packer, RU lubricator and reperf above Morrow intervals with 3 spf at 120° phasing using 3-3/8" or 4" casing gun.

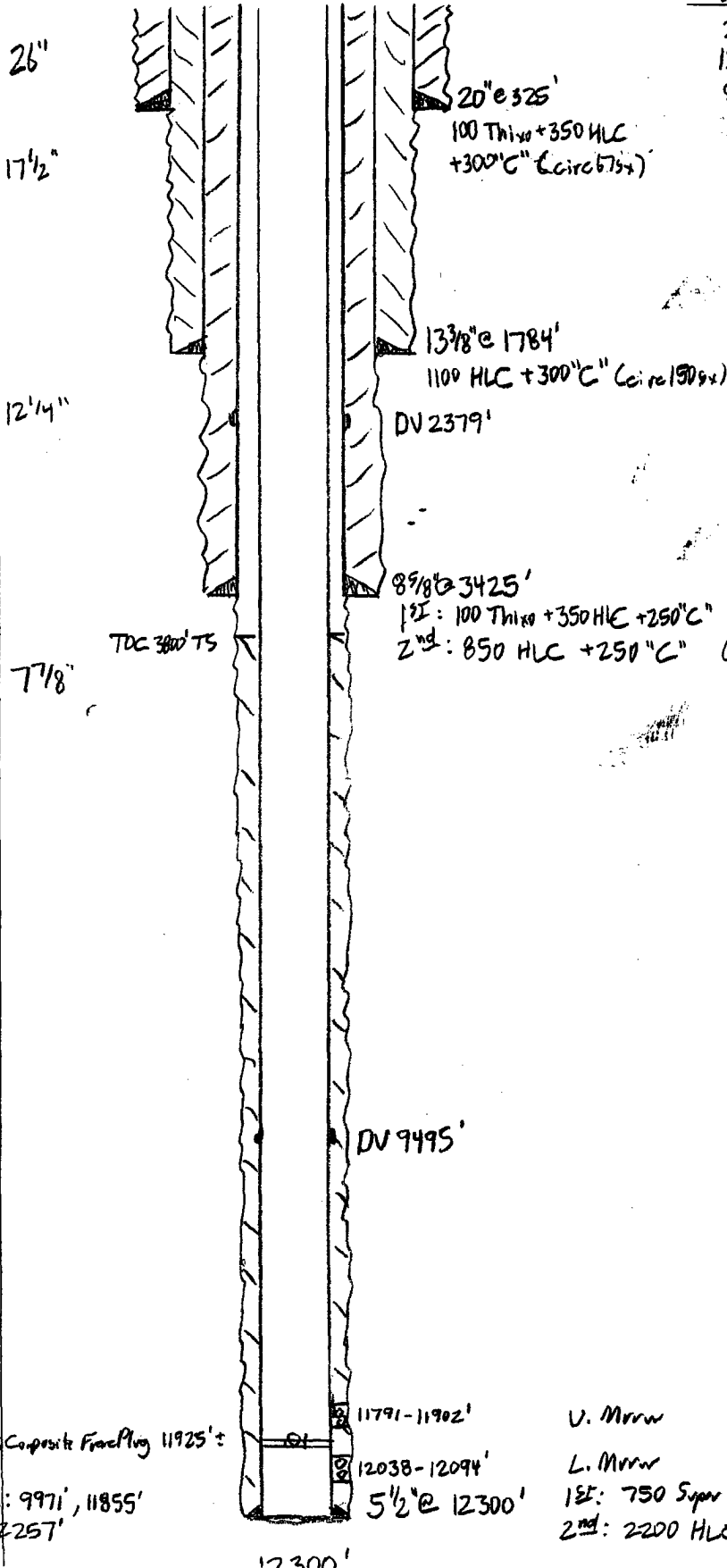
4. Install casing saver and frac down casing at 40 bpm using 65Q CO2 foam carrying 75,000 lbs. 18/40 versaprop. Flow well back until it burns gas, dump 20 bbls clean 7% KCl down casing, shut in overnight, then lubricate packer with plug in hole. Blow casing down to make sure packer is holding then run tubing. Fill annulus with treated packer fluid then pump plug out of packer. Swab tubing and clean well up before shutting in. Will get a static BHP before putting the well on line.

===== Additional Procedures Will Be Issued If/As Necessary =====

Darthrow 19 St. 1
 330' FNL 330' FNL
 D-19-20s-30e
 Eddy NM

Zero: 19' AGL
 K15: 3334'
 GL: 3315'

Size	Wt.	Gr.	Conn.	Depth
20"	94	H4D	BT	325'
13 7/8"	54.5	J55	LTC	1784'
8 5/8"	32	K55	BT	3425'
5 1/2"	17	M95-110	LTC	12,300'
2 3/8"	4.7	L80	EVE	



AFTER

OK Composite Fract Plug 11925'
 Markers: 9971', 11855'
 FC 12257'

U. Mrrw
 L. Mrrw
 1st: 750 Super H (circ 2499x)
 2nd: 2200 HLC + 200 Super H

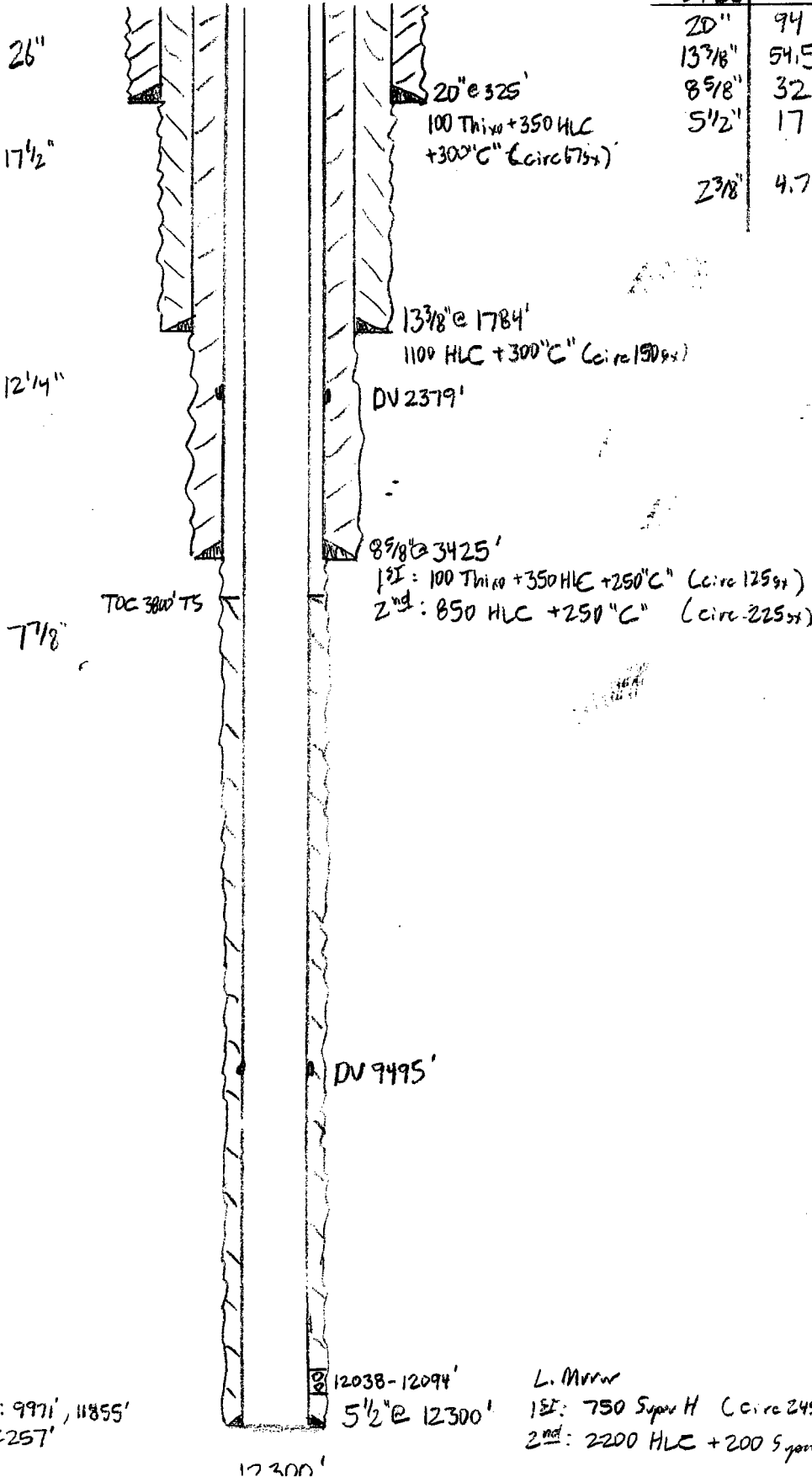
HBCollins / 25 May 04

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 100 SHEETS OF EASE
 200 SHEETS OF EASE
 400 SHEETS OF EASE
 800 SHEETS OF EASE
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BEFORE

Markers: 9971', 11855'
 FC 12257'

L. Morrow
 1st: 750 Super H (circ 2459x)
 2nd: 2200 HLC + 200 Super H

RBCollins / 25 May 04