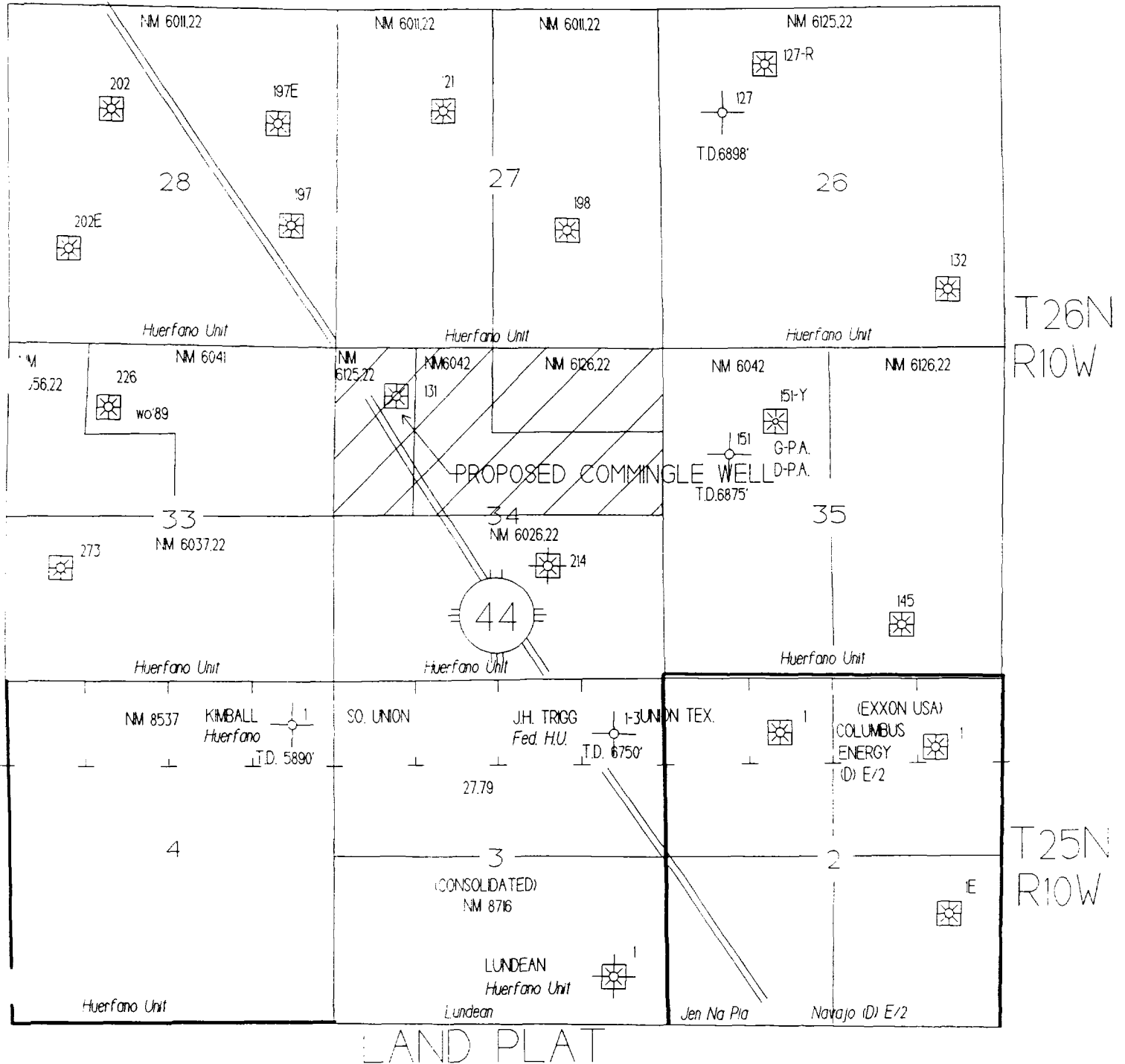


MERIDIAN OIL INC.  
 HUERFANO UNIT # 131 WELL  
 SECTION 34-26N-10W  
 SAN JUAN CO., NEW MEXICO



[illegible]

- ☀ Dakota Wellbores
- ◆ Gallup Completions/Recompletions
- ▲ Flowing Gallup Recompletions
- Huerfano Unit #131 well

RECOMPLETION PROCEDURE  
HUERFANO UNIT #131

\*\*\* G A L L U P - D A K O T A   C O M M I N G L E \*\*\*

COMPLY WITH ALL BLM, NMOC D AND MERIDIAN OIL RULES AND REGULATIONS

1. Prepare location for workover. Set 3-400 bbl tanks and fill with 2% KCL water.
  2. MOL and RU. NU BOP with flow tee and stripping head, and test. NU 2-7/8" blowline with 5000# gate valve on tubing head.
  3. Flow test Dakota formation to establish production capability (swab if needed to kick off). Obtain fluid sample for compatibility analysis. Confirm gauge with Meridian office before proceeding to next step.
  4. Load backside with 2% KCL water and pressure test to \*1000 psi. Release pressure and TOOH with Baker Loc-set packer (216 joints, 6700') 2-3/8", 4.7#, J-55 8rd EUE tubing. TIH with 4-1/2" casing scraper to 6740'. Circulate hole clean. TOOH.
  5. RU wireline unit. TIH with wireline and Owen top-drillable bridge plug, set at 6100'. Run CBL from 6100' to 4100'. TIH with 4-1/2" fullbore packer on 2 joints of 2-7/8" tubing to protect wellhead from pressure. Pressure test CIBP and casing to \*3800 psi. Release pressure, TOOH.
- \* A modified procedure will be provided if pressure test fails or CBL shows insufficient cement coverage across Gallup interval.

\*\*\*STAGE ONE\*\*\*

6. RU wireline unit and perforate first stage (Tocito and Regressive Gallup) with a 3-1/8" HSC gun (0.49" hole, 16 gram GOEX or equivalent charge). Shoot 1 shot per foot top-down over the following intervals:

<u>Holes</u>	<u>Interval</u>	<u>Net Feet</u>	<u>Shot Density</u>	<u>Zone</u>
6	5843'-5848'	5	1 per ft	Tocito
11	5863'-5883'	20	1 per 2ft	Tocito
5	5914'-5918'	4	1 per ft	Reg. Gallup
5	5932'-5936'	4	1 per ft	"
5	5939'-5943'	4	1 per ft	"
4	5946'-5949'	3	1 per ft	"
16	5972'-5987'	15	1 per ft	"
<u>5</u>	5991'-5995'	<u>4</u>	1 per ft	"
57 Holes		59 Feet		

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7. RD wireline. TIH with 4-1/2" fullbore packer to 5900' on 2-3/8" tubing. Displace tubing with inhibited HCL acid. Set packer. Test backside to 1000 psi to insure packer is set. Breakdown and ball off the Regressive Gallup with a total of 70-1.3 S.G., 7/8" RCN ball sealers (seven sets of ten) and 700 gallons 15% inhibited HCL acid. Maximum pressure 3800 psi. Treat acid with the following additives per 1000 gallons:

- \* 2 gallons corrosion inhibitor
- \* 2 gallon silt suspender
- \* 5 gallons Citric Acid (Iron sequestering agent)
- \* 1 gallon quaternary amine-type clay stabilizer

\* Monitor pressure on backside during job.

8. Release pressures and TIH with packer to 6050' to knock off balls. TOOH..
9. TIH and set 4-1/2" fullbore packer on 2 joints of 2-7/8" tubing.

SHUT DOWN OVER NIGHT. BE PREPARED TO FRACTURE STIMULATE FIRST STAGE AT DAYLIGHT.

PURPOSE IS TO GET BOTH STAGES COMPLETED IN ONE (1) DAY.

10. Stimulation Company should be ready to pump at daylight. Hold safety meeting with all personnel on location. Pressure test surface lines to 4800 psi. Fracture treat first stage (Regressive Gallup) according to attached schedule at 40 BPM with 80,600 lbs. of sand and 22,600 gallons of gelled water. Exact flush to top perf is critical to second stage top drillable bridgeplug placement. MAXIMUM PRESSURE IS LIMITED TO 3800 PSI!
11. Flow well back slowly until closure is seen. Shut well in immediately after closure. RD Stimulation Company.

\*\*\*STAGE TWO\*\*\*

12. Release pressure. TOOH with packer. RU wireline unit. TIH with Owen top drillable bridge plug. Set at 5900'. TOOH with wireline. TIH with 4-1/2" fullbore packer on 2 joints of 2-7/8" tubing.
13. Pressure test bridge plug to 3800 psi. Release pressure. TOOH with packer.

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14. RU wireline unit and perforate second stage (Niobrara "A", "B", and "C") with a 3-1/8" HSC gun (0.49" hole, 16 gram GOEX or equivalent charge). Shoot top down, over the following intervals:

<u>Holes</u>	<u>Interval</u>	<u>Net Feet</u>	<u>Shot Density</u>	<u>Zone</u>
5	5624'-5628'	4	1 per ft	A
7	5721'-5727'	6	1 per ft	B
11	5737'-5747'	10	1 per ft	B
7	5782'-5788'	6	1 per ft	C
<u>8</u>	5794'-5808'	<u>14</u>	1 per 2ft	C
38 Holes		40 Feet		

15. RD wireline. TIH with 4-1/2" fullbore packer to 5900' on 2-3/8" tubing. Displace tubing with inhibited HCL acid. Set packer. Test backside to 1000 psi insure packer is set. Breakdown and ball off the "B" "C" and Tocito with a total of 50-1.3 S.G., 7/8" RCN ball sealers (five sets of ten) and 600 gallons 15% inhibited HCL acid. Maximum pressure 3800 psi. \* Monitor pressure on backside during job. Treat acid with the following additives per 1000 gallons:

- \* 2 gallons corrosion inhibitor
- \* 2 gallon silt suspender
- \* 5 gallons Citric Acid (Iron sequestering agent)
- \* 1 gallon quaternary amine-type clay stabilizer

16. Release pressures and TIH with packer to 5900' to knock off balls. TOOH. TIH and set 4-1/2" fullbore packer on 2 joints of 2-7/8" tubing.
17. RU Stimulation Company for fracture treatment. Hold safety meeting with all personnel on location. Pressure test surface lines to 4800 psi. Fracture stimulate second stage according to attached schedule at 40 BPM with 118,000 lbs. of sand and 26,900 gallons of gelled water. MAXIMUM PRESSURE IS LIMITED TO 3800 PSI!
18. Flow well back slowly until closure is seen. RD Stimulation Company. Release pressure TOOH with packer. TIH with 3-7/8" concave flat bottom mill, bit sub, and (4) 3-1/8" drill collars on 2-3/8" tubing, cleaning out with gas. Clean out upper zone until sand flow stops. Leave flowing over night (with gas).
19. TIH and check for fill. Gauge well. Drill out the first of two top drillable bridge plugs. Clean out lower zone with gas until sand flow stops. Wash down to lower bridge plug at 6100'. Do Not Drill Lower Bridge Plug At This Time !

RECOMPLETION PROCEDURE-pg 4  
HUERFANO UNIT #216

20. Establish Gallup flowrate (use gas injection or swab well if needed). Collect fluid sample for analysis. Confirm with Meridian office that gauge is acceptable before drilling bridge plug. Record flowrates.
21. Drill lower bridge plug (estimated Dakota pressure 700 psi). Clean out to PBTD at 6748'. Establish commingled Gallup/Dakota flowrate. Collect fluid sample for analysis. Confirm with Meridian office that gauge is acceptable before proceeding. Record flowrates. TOOH.
22. TIH with 1/2" tapped 2-3/8" bullplug (or pumpout plug if needed), 1 full joint 2-3/8" tubing, 3' perforated sub (set at 6724'), seating nipple, and 2-3/8" tubing to surface. Space out tubing string so that perforated sub is set at 6724', and no higher.
23. Flow test well for production capacity. Release rig.

Vendors

Wireline: Schlumberger 325-5006  
Frac. Stim.: Smith 327-7281

Approve: \_\_\_\_\_  
J. A. Howieson