

WORKOVER PROCEDURE

PROJECT: State M #8 - OAP and Frac

DRILLED & COMPLETED: 3/55 LAST WO: 7/79: Acidize

LOCATION: 914' FNL, 2,310' FEL Sec 1, T21S - R35E

FIELD: Eumont COUNTY: Lea STATE: NM

TD: 3,844' PBTD: 3,810' (CICR) DATUM: 3563' DF KB: 12'

CASING AND LINER RECORD

SIZE	WEIGHT	DEPTH	CEMENT	HOLE	TOC	REMARKS
8 5/8"	32#	317'	300 sxs	11"	Surf	Circ'd
5 1/2"	15.5#	3,844'	750 sxs	7 7/8"	600'	Calc w/ 75% xs

Producing Formation: Queen Perfs: 3,777' to 3,796' (76 holes)

Rods: 1 1/4" x 16' PR w/ 1 1/2" PRL; (12') 3/4" Grade KD subs; 149 3/4" Grade KD rods; (2') 3/4" KD sub; 2 1/2" x 1 1/2" x 12' pump w/ 8' GA

Tubing: (1) 2 7/8" 6.5 ppf J-55 sub, (122) 2 7/8" 6.5 ppf J-55 eue 8rd; (1) 2 7/8" SN; (1) 2 7/8" OPMA

Note: Fish - 1" x 4' sinkerbar @ 3,806'

PROCEDURE

- Notify NMOCD of planned work.
- Use 2% KCl water for all water placed in wellbore.
- RU gas buster pit and flowback manifold using secure steel lines w/ targeted connections.
- Need air unit to clean out after frac - flow back.
- Locate and rack 1 joint 2 7/8" IPC tbg.
- Locate and rack 3800' 2 7/8" 6.5# L-80 WS.
- Locate and rack 3800' 3 1/2" 9.3# L-80 WS for treating (Tarpon Pipe - Royce Watkins 432-638-8026).
- Contact Reef Chemical (Gary Hyer - 432-570-7038) to line up 750 gal Gas Plus (375 gal per stage).

1. MIRU PU. Kill w/ 2% KCL water if necessary.
2. ND WH. NU BOP.
3. RIH w/ 4 3/4" MT skirted bit and 2 7/8" SN on 2 7/8" 6.5# L-80 WS to 3,800' (Top of Fish @ 3,806'). Tally in hole. POH w/bit.
4. RIH w/ 2 7/8" WS and set CIBP @ +/- 3,750'. POH 2 7/8" WS (Note: do not use WL set CIBP).
5. RIH and dump bail 3 1/2 sx cmt on CIBP @ +/- 3750' (35' cement on CIBP).

6. Load hole w/ 2% KCL and PT to 250 psi. (NOTIFY Midland of results.)
7. RIH w/ GR/CNL/CCL. Run from 3715' to surface. POH w/logging tools. Send GR/ Neutron log (need LAS Files) to Houston for evaluation of Yates and Seven Rivers formations. RIH w/ GR/CBL/CCL. Run f/ 3715' to TOC or minimum run. POH w/ logging tools. Evaluate log for cmt top.
8. RU WL w/ full lubricator. RIH w/ 4" csg gun. Correlate to above GR / CNL log. Perf (stage 1) Seven Rivers w/ 1 SPF (0.38" holes) as recommended by reservoir group.
9. POOH w/ Csg guns.
10. RU hydrotesters and RIH w/ PPI Tool, 2 7/8" SN on 2 7/8" 6.5 ppf L-80 WS to bottom perf of 1st stage hydrotesting to 7,000 psi (66% of new rating). Straddle target perfs and set PPI tool. Break down w/ 15% AS HCL acid (Max treating pressure = 6,000 psi). Rlse PPI tool and proceed to the next group of target perfs repeating the procedure until all Seven Rivers perfs are broken down / treated. (Note- Record Max and Min pressures, Average injection rate, ISIP and signs of communication for each tool setting-treatment). POOH w/ PPI tool on 2 7/8" WS.
11. RU hydrotesters. RIH w/ Arrowset 1X Frac Pkr w/ Dual Direction flapper valves, P-110 Inner Flow Tube (2.0"ID) and T-2 On/Off tool and 2 7/8" SN on 3 1/2" 9.3# L-80 WS. Test tbg to 7000 psi BS (69% of new rating). Set PKR +/- 50' above top perf.
12. Load csg w/ 2% KCl. Hold 500 psi on csg w/ pop off set at +/- 750 psi. Monitor csg throughout acid and frac job.
13. Pump (375 Gallons) Reef GAS PLUS as per recommendation. Frac Seven Rivers perfs as per service company recommendation using CO₂. Tag w/ IR-192 @ 0.5MC/1M# sand (74 day half-life). Record rates, max and min pressures and SIP's. (NOTE: Max pressure = 5,500 psi. All sand tagged w/ IR-192.)
14. RU gas buster pit and flowback manifold using secure steel lines w/ targeted connections. Connect steel lines to tubing via hose. Rlse On-Off Tool and sting +/- 10' out of packer. Check for backflow. Pump an tubing volume + 20 bbls of 2% KCL water using a pump truck down the back side, circulating out of the tubing to the steel lines, manifold and the gas buster pit (NOTE: Initial flowback will likely be hard due to CO2 bubble that will circulate off bottom).
15. POH w/ Inner Flow Tube and On-Off tool.
16. RU WL w/ full lubricator. Pressure csg to 500 psi w/ 2% KCL. RIH w/ 4" csg gun. Correlate to Gamma Ray Neutron log. Perf (stage 2) Yates w/ 1 SPF Select Fire (0.38" holes) as recommended by the Reservoir group.
17. POH w/ csg guns.
18. RIH w/ PPI Tool, 2 7/8" SN on 2 7/8" 6.5 ppf L-80 WS to bottom perf of 2nd stage. Straddle target perfs and set PPI tool (Max treating pressure = 6,000 psi). Break down w/ 15% AS HCL acid. Rlse PPI tool and proceed to the next group of target perfs repeating the procedure until all Yates perfs are broken down / treated. . (Note- Record Max and Min pressures, Average injection rate, ISIP and signs of communication for each tool setting-treatment). POOH w/ PPI tool on 2 7/8" WS.
19. RIH w/ treating PKR, 2 7/8" SN AND X-Over on 3 1/2" WS. Set pkr +/- 50' above top perf.
20. Load csg w/ 2% KCl. Hold 500 psi on csg w/ pop off set at +/- 750 psi. Monitor csg throughout acid and frac job.
21. Pump (375 Gallons) Reef GAS PLUS as per recommendation. Frac Yates as per service company recommendation using CO₂. Tag w/ SC-46 @ 0.5MC/1M# sand (84 day half-life). Record rates, max and min pressures and SIP's. (NOTE: Max pressure = 5,500 psi. All sand tagged w/SC-46.)
22. Flow back well to pit using frac manifold w/ targeted connections and secure steel lines.
23. Kill well w/ 2% KCL if required. Rlse Pkr. POH w/ 3 1/2" WS. LD Pkr and 3 1/2" WS.

24. RIH w/ frac Pkr retrieving head and 2 7/8" SN on 2 7/8" WS to frac Pkr. RU foam air unit and clean out sand to Pkr. RD foam air unit. Latch onto Pkr and release. POH w/ frac Pkr and 2 7/8" WS.
25. TIH w/ notched collar and 2 7/8" SN on 2 7/8" WS. Tag for fill. RU foam air unit and clean out frac sand to PBTD. CHC. RD foam air unit. POH w/ bit and LD 2 7/8" WS.
26. RU WL w/ Lubricator. Run After Frac Spectra (dual isotope) GR Log f/ 2,700' - PBTD. POH and RD WL.
27. Run 2 7/8" 6.5 ppf J-55 eue 8rd production tbg string as follows:

QTY	ITEM	LENGTH	DEPTH
TUBING	KB	12'	12'
115	Jts 2 7/8" 6.5# J-55 eue 8rd tbg	3565'	3577'
1	Jt 2 7/8" 6.5# J-55 eue 8rd IPC tbg	31'	3608'
1	2 7/8" SN	1'	3609'
1	2 7/8"x 4' TBG Sub	4'	3613'
1	Cavins D2701G Desander	20'	3633'
2	2 Jts 2 7/8" BPMA	62'	3695'

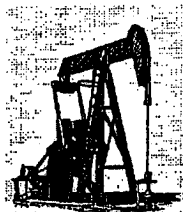
28. RU Swab. Swab well until clean fluid is produced. RD Swab.
29. Run rod string as follows:

RODS			
1	1 1/4" x 16' PR w/ 1 1/2" x 10' Liner	16'	16'
Set	3/4" KD Rod Subs w/ SM couplings	10' (+/-)	26'
144	3/4" KD Rods w/ SM couplings	3600'	3626'
1	3/4" KD Rod Sub w/ SM couplings	2'	3628'
1	2 1/2" x 1 1/4" x 12' RHBC Pump	12'	3640'

30. Load tbg w 2% KCl and pressure test pump. Space out and hang well on. Place pumping unit in 54" SL at +/- 6 SPM (Expected production rate +/- 52 BFPD @ 100% efficiency and 1 1/4" pump).
31. RD MO PU. Return well to production and place on test.

CITATION OIL AND GAS CORPORATION CURRENT WELLBORE DIAGRAM AND INFORMATION

Well Name: State M#8 Field: Eumont
 Date: January 27th, 2006 Location: 914' FNL 2310' FEL, Sec 1
 County: Lea State: New Mexico



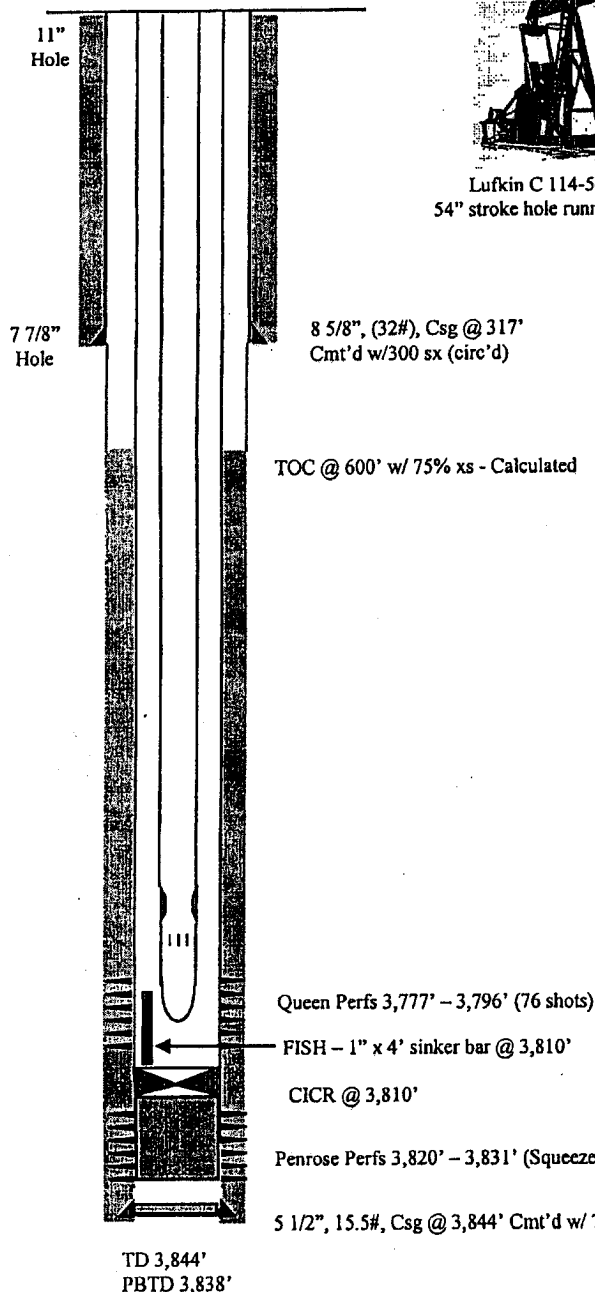
Lufkin C 114-54 in the
54" stroke hole running 7.5 spm

API #:	30-025-03371
Surface:	914' FNL 2310' FEL, Sec 1
	T21S-R35E
	Lea County, NM
Completed:	3/55
Elevation:	3,563' (DF)
KB:	12'

CASING DETAIL		
Size	Weight	Depth
8 5/8"	32	Surf - 317'
5 1/2"	15.5	Surf - 3844'

TUBING DETAIL			
Qty	Description	Length	Depth
—	KB	12	12
1	2 7/8" 6.5 ppf J-55 sub	4	16
122	2 7/8" 6.5 ppf J-55 eue 8rd	3767	3783
1	2 7/8" SN	1	3784
1	2 7/8" OPMA	20	3804

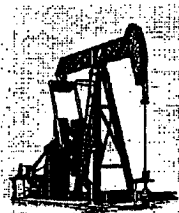
ROD DETAIL			
Qty	Size	Type	Length
1	3/4"	KD Subs	12'
149	3/4"	KD	3,725'
1	3/4"	KD Sub	2'
Polish Rod: 1 1/4" x 16' PR w/ 1 1/2" x 8' PRL			
Pump: 2 1/2" x 1 1/2" x 12' w/ 8' GA			



CITATION OIL AND GAS CORPORATION

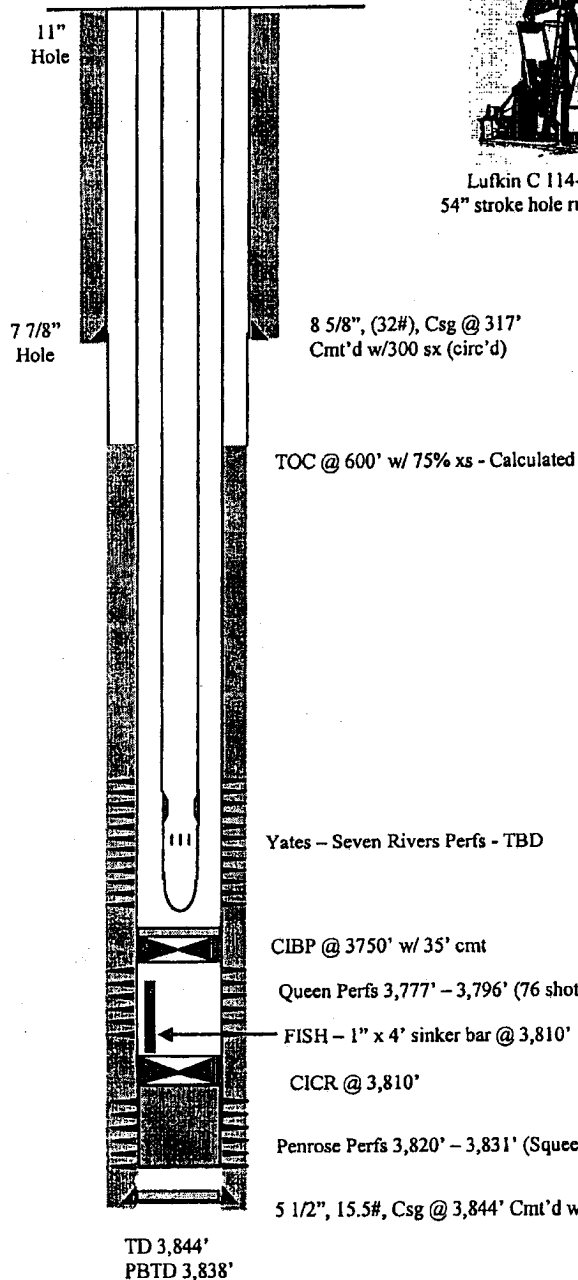
PROPOSED WELLBORE DIAGRAM AND INFORMATION

Well Name: State M#8 Field: Eumont
 Date: January 27th, 2006 Location: 914' FNL 2310' FEL, Sec 1
 County: Lea State: New Mexico



Lufkin C 114-54 in the
54" stroke hole running 6 spm

API #:	30-025-03371
Surface:	914' FNL 2310' FEL, Sec 1
	T21S-R35E
	Lea County, NM
Completed:	3/55
Elevation:	3,563' (DE)
KB:	12'



CASING DETAIL

Size	Weight	Depth
8 5/8"	32	Surf - 317'
5 1/2"	15.5	Surf - 3844'

TUBING DETAIL

Qty	Description	Length	Depth
—	KB	12	12
115	Jts 2 7/8", 6.5#, J-55 tbg	3565	3577
1	Jt 2 7/8", 6.5#, J-55 IPC tbg	31	3608
1	2 7/8" SN	1	3609
1	2 7/8" Tbg Sub	4	3613
1	Cavins D2701G Desander	20	3633
2	Jts 2 7/8" BPMA	62	3695

ROD DETAIL

Qty	Size	Type	Length
1	3/4"	KD Subs	+/- 10
144	3/4"	KD	3,600
1	3/4"	KD Sub	2
Polish Rod: 1 1/4" x 16' w/ 1 1/2" x 10' Liner			
Pump: 2 1/2" x 1 1/4" x 12'			