STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

9-5-90

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC
DHC X
NSL
NSP
SWD
WFX
PMX

Gentlemen:

I have examined the application for the:

Mallon Oil Co. Mobil "5" State #1-O 5-17-36
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed

APPLICATON FOR DOWNHOLE COMMINGLING
OF OIL PRODUCTION

OPERATOR: Mallon Oil Company
1099 18th St., Ste. 2750
Denver, CO. 80202

LEASE NAME: Mobil "5" State

WELL NUMBER: #1

LOCATION: 760' FSL, 1750' FEL, Sec. 5, T17S, R36E
Lea County, New Mexico

POOLS: Undesignated - Blinebry, Undesignated - Lower San Andres

OWNERSHIP OF ACREAGE OFFSETTING SPACING UNIT TO BE COMMINGLED:
(See Attached Plat)

BOTTOM HOLE PRESSURES:

Blinebry A drill stem test across a portion of the completed interval in the Blinebry (test interval 7243-7290') recorded a maximum shut-in pressure of 2443 psi. After 44 days producing on rod pump a 72 hour bottom hole pressure build up was measured at 7238' recording a maximum pressure of 357 psig. Although conventional analysis is questionable on the final portion of the buildup curve on extrapolated "p*" of 1062 psi is estimated..

The producing bottom hole pressures of the zone has remained at just the gas gradient plus about 30 psi CP since just after pumping began as indicated by fluid level shots.

Lower
San Andres: No shut in bottom hole pressures have been measured. The isolated producing interval has remained "pumped-off" since immediately after pump testing began, 8/17/90, as indicated by fluid level shots.

FLUID CHARACTERIESTCS:

Produced fluids do not appear to be incompatible. (See attached analyses). No uncontaminated L. San Andres water sample has been available.

VALUE OF COMMINGLED vs. ISOLATED PRODUCTION:

Both of the oils fall in the West Texas - Southeast New Mexico/Sour category due to the measured sulphur contents. Gravity adjustments will depend upon the proportion of each oil produced and would bring the gravity closer to the 34 degree penalty break point. An overall increase in price should be seen since the Blinebry oil is 1.3 degrees API above the break point.

Examples: Isolated Blinebry Production
Gravity = 35.3 degrees API (No penalty)
8/17/90 Price (Texaco Bulletin 90-67)
$25.00/Bbl.

Isolated Lower San Andres Production
Gravity = 28.9 degrees API (Deduct $0.765/Bbl)
8/17/90 Price $25.00 - 0.765 = $24.235/Bbl

Combined Blinebry - Lower San Andres (50/50)
Est. Gravity = 32.1 degrees API (Deduct $0.285/Bbl)
8/17/90 Price $25.00 - 0.285 = $24.715/Bbl

Average value of separately produced oils = ($25/Bbl + 24.235/bbl) /2 = $24.618/Bbl

OWNERSHIP OF COMMINGLED ZONES:

Both zones are spaced on a 40 acre tract which falls wholly within State Lease B-3009, which has been farmed out from Mobil Exploration and Production U.S. Inc. Working interest ownership for the well has remained consistent throughout all work to date, as have royalty and overriding royalty interests.

EFFECT OF COMMINGLING ON SECONDARY RECOVERY:

Neither the Blinebry or Lower San Andres produce within several miles of the Mobil "5" State #1. The pressure buildup test from the Blinebry indicates a limited, closely bounded reservoir. If this is the case it is unlikely to be a secondary recovery candidate. The Lower San Andres does not appear from production data to date to hold a great deal of promise for development either.

PRODUCTION ALLOCATION METHOD:

Since the Blinebry has the best historical basis, the projected Blinebry production stream will be used as the basis for allocation. The attached Blinebry curve is based on July 05 to Aug. 05, 1990 oil production instantaneous, nominal annual decline of 98.468% projected hyperbolically with "shaping factor", n = 1.6.

The difference between the actual production and the projected Blinebry production will be assumed to be from the Lower San Andres interval. A first year table of the projected monthly Blinebry production begining September 1990 will follow, (an adjustment for "flush production" from the Blinebry buildup since temporarily plugging back August 10, 1990 will probably be necessary during September 1990 and will be made based on swab test data from the Lower San Andres and projected Blineby production). Gas will be allocated based on a ratio of the calculated volumes for each zone (based on GOR) times the actual production.

Projected Blinebry Production

9/90	552 BO
10/90	467 BO
11/90	409 BO
12/90	367 BO
1/91	335 BO
2/91	309 BO
3/91	288 BO
4/91	270 BO
5/91	254 BO
6/91	242 BO
7/91	230 BO
8/91	220 BO

OFFSETING OPERATORS AND LEASE OWNERS:

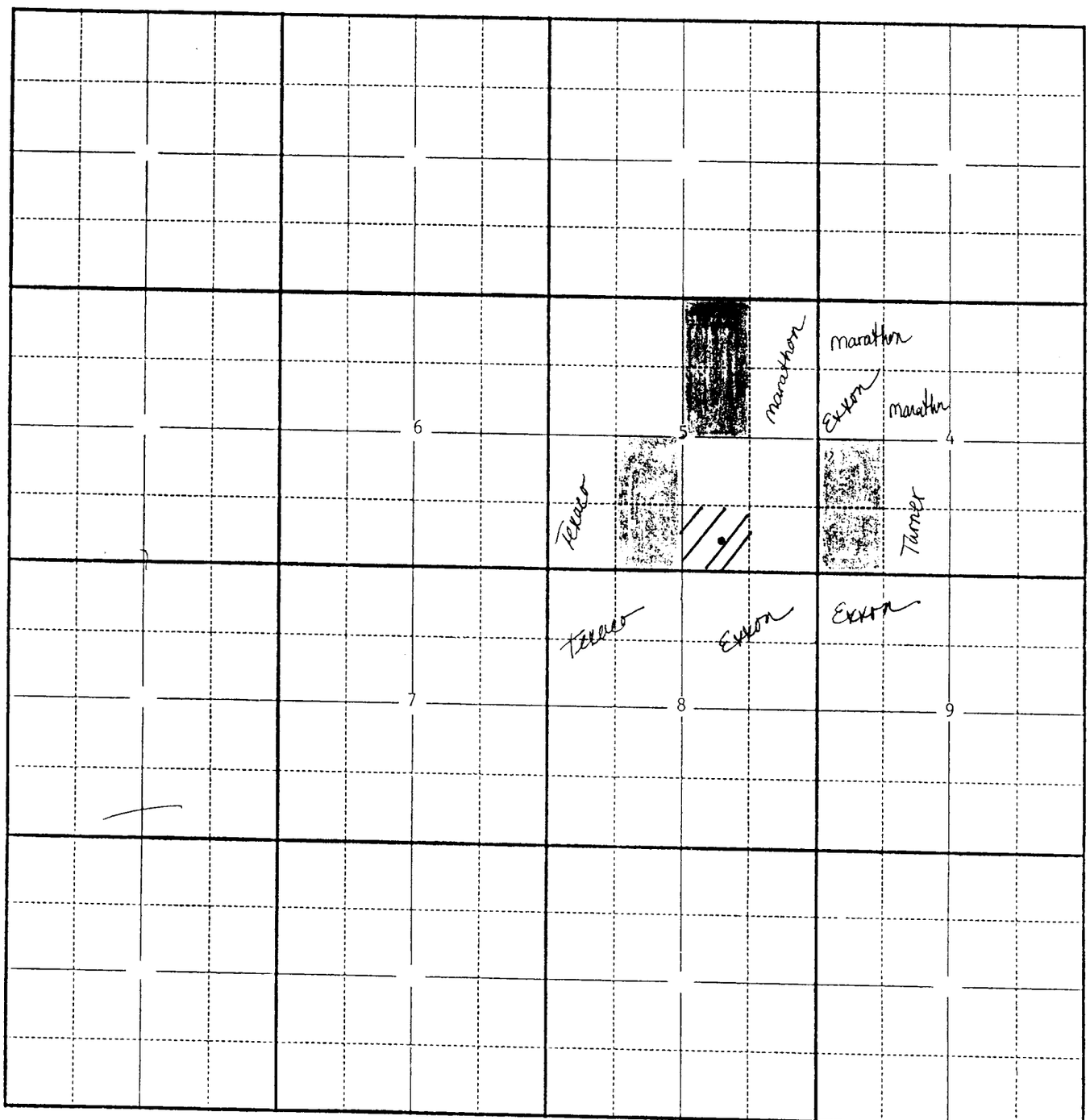
Letters notifying all holders of acreage offsetting the proposed commingled spacing unit have been sent, copies are attached.

ADDITIONAL FACTOR IN COMMINGLING REQUEST:

The Mobil farmout agreement stipulates that after the assignments are prepared, after 60 consecutive days of non-production Mallon Oil Company will relinquish all rights below the deepest producing formation. This could lead to the non-production of the Blinebry reserves if commingling was not possible and the costs of squeezing the Lower San Andres or dual completing the zones was prohibitive.

A 180 day continuous drilling obligation under the farmout agreement will require the spudding of a second earning well by December 23, 1990 to keep the agreement effective. This factor prompted the Lower San Andres recompletion work to further evaluate the acreage.

Township 17 South Range 36 East County Lea State New Mexico



FORM 44

MOBIL EXPLORATION & PRODUCING U.S. INC.
- -producing well earns proration unit below base of Upper San Andres (5,160') to 100' below base of deepest producing formation
- -12.5% royalty convertible to a 25% W.I. (well by well election)
- -continuous drilling 180 days after completion of previous well (Dec 23, 1990)

OXY USA INC. (option)
- -initial OXY option well drilled within 180 days from drilling rig release of Mobil well (Nov. 18, 1990)
- -producing well earns 80 acres below 6500' to 100' below depth drilled
- -12.5% royalty convertible to a 25% WI. (well by well election)
- -2nd option well 180 days from drilling rig release of OXY initial well

PHILLIPS PETROLEUM COMPANY (option)
- -producing well earns proration unit from base of upper San Andres to base of Abo or depth drilled whichever lesser
- -12.5% royalty convertible to a 25% WI (well by well election)
- -initial Phillips option well drilled within 180 of TD of Mobil well (November 17, 1990)
- -2nd option well drilled within 90 days of TD of initial Phillips well

Lower San Andres 5280'- 5710'
Glorieta/Paddock 6210'- 6300'
Blinebry 7160'- 7350'

Mobil "5" State #1 Completing Lower San Andres
Lea Co., New Mexico

08/17/90 Rod String:
cont'd

KB - Top tbg	12.5'	0-12.5'
22' Polished Rod 9' out	13'	12.5-25.5'
7/8" Rod subs 4', 6', 2', 1'	23'	25.5'-38.5'
75 - 7/8" rods	1875'	38.5'-1912.5'
137 3/4" rods	3525'	1913.5'-5338.5'
Pump 2 1/" X 1 1/4" X 20'	20'	5338.5'-5358.5'
Rod Stretch	0.65'	5358.5'-5359.15'
Put on ump @ 1:15 PM.		
Day Cost: $1,550	Day Cost: $17,870	

Pump Testing L. San Andres:

08/18/90	0 BO 71 BW in 20.75 hrs.	
08/19/90	14 BO 64 BW in 24 hrs.	
08/20/90	14 BO 9 BW in 24 hrs.	
08/21/90	14 BO & 0 BW in 24 hrs.	Shot FL @ 169 Jts (5211')
08/22/90	14 BO & 0 BW in 24 hrs.	
08/23/90	14 BO & 3 BW in 29 hrs..	
	(11.6 BO & 2.5 BW in 24 hrs.)	
08/24/90	6 BO & 0 BW, 9 Mcfg in 19 hr. GOR=1184 Scf/Bbl.	
	(7.6 BO & 0 BW, 9 Mcfg om 24 Hr.)	
08/25/90	9 BO & 3 BW	
08/26/90	11 BO & 0 BW	
08/27/90	7 BO & 0 BW	
08/28/90	7 BO & 3 BW.	
08/29/90	11 BO & 2 BW	
08/30/90	6 BO & 9 BW	
08/31/90	6 BO & 0 BW	
09/01/90	6 BO & 0 BW	
09/02/90	8 BO & 0 BW	
09/03/90	7 BO & 0 BW	
09/.04/90	8 BO & 0 BW	

Mobil "5" State #1 Completing the Lower San Andres
Lea County, NM

Cont'd

8/15/90 began on 2nd swb, tr oil on 5th swb. Lots of mud solids in each swb. 7th swb from SN w/fluid level around 4700' on 9th through 14th swb. Oil cut increased steadily to 80% w/approx 90 BLTR by 14th swb. Opened equalizer and allowed annular wtr to flow into tbg to flush any acid that may have entered annulus between breakdown and treatment. Made 4 more swb runs rec about 14 BW and 5 BO. SIFN.
Day Cost: $5300 Cum. Cost: $14,870

8/16/90 Swb Testing & Prepare to Pump.
SITP 50 psi, RIH w/swb found liquid level @ 2750'. Swb as follows:

Run	Time	Est. FL	Swb Depth	Est. Oil Cut	Comments
#1	07:10	2750'	4200'	100%	To Pit
#2	07:30	3400'	4900'	100%	To tanks
#3	07:50	4400'	5160' (SN)	100%	"
#4	08:10	4600'	"	30%	"
#5	08:34	4700'	"	30%	"
#6	09:00	4800'	"	50%	
#7	09:35	4800'	"	100%	"
#8	10:15	4800'	"	100%	
#9	11:05	4800'	"	100%	Gauged 2.79 Bbl
#10	11:40	4800'	"	100%	

TOOH w/tbg & pkr., could not get tbg anchor today to TIH w/tbg. SIFN.
(Note: An est. 60 - 100 bbl KCL water was released onto completed interval when packer was released)
Day Cost: $1,450 Cum. Cost: $16,320

8/17/90 Set up for pumping and begin pmp test. SICP 55 psi. TIH w/tbg string. ND BOP, NU wellhead, set anchor. TIH w/pump & rods.

Tubing String:

Description	Length	Depth
LB - Top tbg.	12.5	0-12.5'
170 Jts 2 7/8" EUE, N-80 used tbg	5247.85	12.5-5260.35'
Tbg. Anchor/Catcher	3.00'	5260.35'-5263.35'
3 Jts. 2 7/8" Tbg.	95.30'	5263.35'-5358.65'
Seating Nipple	1.00'	5358.65'-5359.65'
1 Jt 2 7/8" Tbg.	31.30'	5359.65'-5390.95'

Mobil "5" State #1
Lea Co., NM

8/6/90 6 BO & 3 BW/18 hrs.

8/7/90 19 BO & 6 BW

8/8/90 22 BO & 6 BW

8/9/90 22 BO & 9 BW

Completing the Lower San Andres

8/10/90 14 BO & 0 BW.

Blow down casing in 30 mins. Unset pump, TOH w/pump & rods. NU BOP, unset anchor catcher. TOH w/tbg. PU Watson 5 1/2" SE retrievable plug & 5 1/2" test pkr. TIH to 7435' & set RBP. TOH to 7071' & set pkr. RIH w/Tandem Amerada gauges had 7238. SI lubricator & SI well for 72 hr. buildup press test. (Note: Rod had lot of parrafin & cups torn off pump).
Day Cost: $3,461 Cum Cost: $3,461

8/13/90 John West Engineering, POH w/pressure bombs.
Day Cost: $1,229 Cum Cost: $4,690

8/14/90 SITP 190 psi. Open well to atmosphere, blew dn in 15 mins. Released pkr, TIH to RBP. Released RBP, TOOH to 5452' & set RBP. TOH to 5402' set pkr. Load tbg w/32 bbls of 2% KCL wtr. Press tested pkr., plug & tbg to 3000 psi. Opened eqaulizer valve, released pkr & TOH w/pkr & tbg. RU Wedge Wireline, ran GR/CCL strip. Perf 5328'-44', 5303-22' & 5272-84' 2 SPF w/4" csg carrier gun. FL @ 4600' on all 3 runs. TIH w/pkr, SN & tbg. Worked into liner top and after several attempts, set pkr @ 5160' w/5000# compression. RU swb, RIH to 4000' found bad spot in sand line. Spent 2 hrs. cutting sand line & pouring head. Swb run #1 FL @ 4550, 20% oil on top & wtr. Swb #2 was dry. SIFN.
Day Cost: $4,880 Cum. Cost: $9,570 .,
NM

8/15/90 Acidize & Swab test.
SITP 25 psi. RIH w/swb from SN, rec. 200' (1.16 bbl) thick oil/water emulsion w/drlg mud. Swbd again in 30 mins. and rec. 90' of same (0.52 bbl). RU Charger, Inc., pumped 500 gal 15% NE FE acid w/silt suspending agents. Displaced to btm perf w/35 bbl 2% KCL water. Breakdown press 3050 psi @ 1 BPM, treated at 3000 psi @ 2 BPM. Bled press off at sfc in 15 mins (about 1 bbll) and opened equalizer valve. Pumped acid to packer and closed equalizer. Acidized w/3000 gals 15% NE FE HCL w/silt supending agent and 140 perf balls. AIP 2800 psi, max IP 2850, Min IP 2700 @ 2.0 BPM. ISIP 2750, 5 mins SIP 2700, 10 mins SIP 2700. No ball action. Dumped 70 bbl 2% KCL dn csg. Opened tbg to pit

Mobil "5" State #1
Lea Co., New Mexico

7/10/90 Pumping 36 BO & 6 BW

7/11/90 Pumping 44 BO & 12 BW/29 hrs. (eq. 36 BO & 10 BW/24 hrs)

7/12/90 Pumping 28 BO & 24 BW/17 hrs. (eq. 39 BO & 17 BW/24 hrs)

7/13/90 Pumping 30 BO & 21 BW/24 hrs.

7/14/90 19 BO & 6 BW/20 hrs. (eq. 23 BO & 7 BW/24 hrs.)

7/15/90 39 BO & 6 BW/28 hrs. (eq. 33 BO & 5 BW/24 hrs.)

7/16/90 33 BO & 5 BW/25 hrs. (eq. 32 BO & 5 BW/24 hrs.)

7/17/90 28 BO & 0 BW/24 hrs.

7/18/90 25 BO & 3 BW

7/19/90 31 BO & 15 BW

7/20/90 28 BO & 9 BW/24 hrs.

7/21/90 24 BO & 8 BW/24 hrs.

7/22/90 36 BO & 3 BW/24 hrs.

7/23/90 17 BO & 0 BW/24 hrs.

7/24/90 31 BO & 9 BW/24 hrs. (eq. 24 hr tst 29 BO & 8 BW)

7/25/90 25 BO & 9 BW/24 hrs.

7/26/90 19 BO & 6 BW/24 hrs.

7/27/90 28 BO & 6 BW, 29 MCFG/24 hrs. (Tstd gas w/GOR Tester)

7/28/90 24 BO & 11 BW/24 hrs.

7/29/90 24 BO & 23 BW/24 hrs.

7/30/90 17 BO & 3 BW

7/31/90 2 BO & 6 BW (Adjusted gauge to reflect cone btm in tnk)

8/1/90 17 BO & 3 BW

8/2/90 28 BO & 3 BW

8/3/90 19 BO & 6 BW.

8/4/90 22 BO & 5 BW

8/5/90 30 BO & 9 BW

Drilling Report
Mobil "5" State #1
Lea County, New Mexico

06/22/90 MIRU Pride Well Service. Release TST pkr & well flowed 30 BO to tank. TOH w/pkr and tbg. LD pkr. GIH w/tbg, SN, & anchor/catcher. End of tbg @ 7400', SN @ 7148', & anchor/catcher w/12K tension. Install pumping tee and GIH w/ 2 1/2" X 1 1/4" X 20' steel chrome barrel pmp w/cup type hold down, double ball & seats on valves. (Trico Industries-- Lovington.). Run 200 3/4" rods, (5000') 83 7/8" rods, (2075'), run 20' of 7/8" subs, & 22' polish rod. Seat pump, SDFN. Set 500 bbls tnks for tnk btry & start tieing together. Set heater treater. Start plumbing tnk btry together.
Day Cost: $14,200 Acc. Comp. Cost: $123,840
Acc. Well Cost: $528,684

06/23-25/90 Setting pumping unit & building Btry.

06/26/90 Started pumping @ 10:30 AM (310 BLTR).

06/27/90 Pumping load water (packer fluid) to pit.

06/28/90 Pumping load water w/5-20% oil cut early in day. Pump "gas locked" and made no liquid 08:00 - 14:00, held back pressure and began moving load water remainder of day.

06/29/90 Pumping 13 BO & 50 BW.

06/30/90 Pumping 73 BO & 35 BW; 20% oil cut at report time (68% for day).

07/1/90 Pumping 73 BO & 35 BW; 95% oil cut at report time (68% for day)

07/02/90 Pumping 69 BO & 23 BW (90% oil cut at report time). Results from yesterdays fluid level shots (top of liner @ 162 jts, liquid @ 178 jts (5518') SI one hour and re-shot, top liquid at 160 jts (4960'). Measured 1 psi surface increase. (Calculated Rate 75 BOPD & 25 BWPD 75% oil).

07/03/90 Pumping 72 BO & 24 BW (24 hr); 90% oil cut at report time (75% oil). Pump efficiency 66%.

07/04/90 Pumping 58 BO & 23 BW (24 hr); slowed unit to 7 1/2 SPM from 8 SPM to alleviate fluid pound.

07/05/90 Pumping 50 BO & 18 BW (24 hr). Fluid level shot showed liquid @ 216 jts. (approx 6700'), SI 24 min., FL @ 216 jts.

07/06/90 Pumping 47 BO & 23 BW (67% oil).

07/07/90 Pumping 42 BO & 12 BW (78% oil).

07/08/90 Pumping 52 BO & 12 BW (81% oil).

07/09/90 Pumping 33 BO & 14 BW (70% oil).

Drilling Report
Mobil "5" State #1
Lea County, New Mexico

06/17/90 Well not making any fluid this AM. Flowing gas on 14/64" choke w/50# FTP. Did not make any more fluid since 7:00 PM 6/16/90. Est gas volume 100 Mcf/d. MIRU Reeco Swab Unit. GIH w/swb. IFL @ 1200' & scattered. Swb back total of 111 bbls fluid w/approx 5% oil cut. Pull swb from 5200' and FL holding at 3800' from sfc on last 8 runs. Very strong blow of gas during and after each swb run.
Day Cost: $600
Acc. Comp. Cost: $106,615
Acc. Well Cost: $511,159

06/18/90 SITP 150#. Open up and blow down well. GIH w/swb. IFL @ 3000' from sfc. Oil cut beginning to increase. FL holding steady from 4200-4500'. Make total of 39 BW & 62 BO. Oil cut increased on last 3 runs to 55% oil. Beginning to make more gas again. 13 BLWTR. Will swb again tomorrow.
Day Cost: $875
Acc. Comp. Cost: $107,490
Acc. Well Cost: $512,034

06/19/90 SITP 250#. Open up well and blow down. GIH w/swb. FL @ 3000' from sfc. Make 3 swb runs and well started flowing. Flowed total of 22 bbls. Flowed on 32/64" choke with 50# FTP. Died after 1 hr. Continued swbg and final fluid level was at 4500' from sfc. Today recovered 98 bbls fluid. 79 BO & 19 BW. Total load wtr has been recovered. Last 6 runs were 100% oil. Leave well open to tanks on 32/64" choke. Approx. gas volume is 100 - 150 MCFPD. Will release swab unit tomorrow and prepare well to pump.
Day Cost: $850
Acc. Comp. Cost: $108,340
Acc. Well Cost: $512,884

06/20/90 Did not make any fluid overnight. FL @ 3000' from Sfc. Swb back 45 bbls oil with ending FL @ 4200'. RD & release swb unit. Will set well up to pump. Start building pad for tank battery and for pumping unit.
Day Cost: $800
Acc. Comp. Cost: $109,140
Acc. Well Cost: $513,684

006/21/90 Finish pad for tank battery & pumping unit. Will pull packer tomorrow and run anchor, pump & rods. Pumping unit wil be set Saturday AM 6/22/90.
Day Cost: $500
Acc. Comp. Cost: $109,640
Acc. Well Cost: $514,484

Drilling Report
Mobil "5" State #1
Lea County, New Mexico

06/11/90 SITP 425# IN 64 HRS. Blow well down & started flowing oil. Flow for 1 hr & died. Go in w/swb & FL @ 1900' from sfc. Make one swb run & was 100% oil. RD swb & released pkr. TOH w/pkr & RBP. Exchange pkr and GOH. w/TST pkr testing tbg back in hole to 9500#. Burst 4 jts. Circ hole with 2% KCL from 7055'. Set pkr w/15K compression. ND BOP. Flange up wellhead & test pkr & csg to 1000#. Held OK. GIH w/swb & swb back KCL in tbg. Swb back 50 bbls fluid & last 3 runs cutting oil from 20% to 60%. Last swb run FL @ 6500' from sfc. Fluid entry was 800' between last 3 runs. SION. Dowell cancelled frac due to lack of equip. for tomorrow AM.
Day Cost: $3,875
Acc. Comp. Cost: $70,765
Acc. Well Cost: $475,309

06/12/90 SITP 110# in 11 hrs. GIH w/swb and FL was @ 3000' FS. Swbd from SN in 4 runs w/800' fluid entry between runs. Well gassing strong and cutting 75% oil and 25% KCL wtr. SWI. RD pullling unit. Will frac well as soon as equipment available.
Day Cost: $800
Acc. Comp. Cost: $71,565
Acc. Well Cost: $476,109

06/15/90 SITP 283#. MIRU Halliburton Services. Test lines to 8800#. Frac interval 7122' to 7350' w/26,656 gals foam (30%) + 41,500# 20/40 Ottawa frac sd in the following stages: 1. Pad 6007 gal, 2. 1# 20/40 9951 gal; 3. 2# 20/40 4414 gal; 4. 3# 20/40 2256 gal; 5. 4# 20/40 3452 gal; 6. 5# 20/40 1828 gal & 7. Flush 2000 gal. Avg pump rate 21 bbls/min. Avg presssure 790#. Started trying to screen out when 5# sd hit fm. Cut sd and cut rate and flushed completely to top perfs. ISIP 2556#, 5 min. 2419#, 10 mins. 2319#, 15 min. 2251#. Total fluid volume to recover 456 bbls. SWI from 10:30 AM until 5:00 PM. Laid line to frac tanks and opened well up w/2650#. Open up on 10/64" choke. Flow back well to tank & flowed back 116 bbls load wtr in 5 hrs. After 5 hrs. the TP 900#. Open up on 12/64" choke and continue flowing well overnight. 340 BLWTR.
Day Cost: $34,200
Acc. Comp Cost: $105,765
Acc. Well Cost: $510,309

06/16/90 Well flowing on 10/64" choke w/300# FTP. Total recovery at 6:00 AM 236 bbls. 220 BLWTR. At 7:00 PM well flowing on 14/64" choke w/50#. Sli skim of oil. Total load recovery 293 bbls. 163 BLWTR.
Day Cost: $250
Acc. Comp. Cost: $106,015
Acc. Well Cost: $510,559

Drilling Report
Mobil "5" State #1
Lea County, New Mexico

06/06/90 SITP 75#. Blow well down to 0 in 5 min. GIH w/swb & had 400' oil on top of first run. RD swb & set RBP @ 7302'. Tst RBP to 3500# and held OK. Spot acid to pkr & close bypasss. Set TST pkr @ 7186' & acidize perfs 7242-46' & 7260-75' w/2750 gals 15% MSR 100 acid. Break @ 3300#. Increase rate to 3 BPM @ 2350#. Dropped total of 80 RCN ball sealers and had good ball action. Did not ball out. Increase rate to 4 BPM w/press increasing to 3230# as more ball sealers sealed. ISIP 2600#, 5 mins 2350#,10 mins 2310#, 15 mins 2270#. Avg injection rate 3.46 BPM & avg injection press 2900#. Open up & flow back. Open bypass on pkr & let equalize. Release pkr, go down and latch onto RBP. Release RBP & move up to 7185'. Set RBP @ 7185'. Set pkr & tst RBP to 3600#. Move pkr up to 7055'. Open bypass & spot acid to pkr. Close bypass & acidize perfs 7122' to 7242' w/2750 gals 15% MSR-100 and 80 RCN ball sealers. Started taking acid @ 2700#. Increase injection rate to 3 BPM @ 2000#. Increased rate to 4 BPM & started seeing slight amount of ball action. Increase rate on flush up to 5 BPM w/pressure increasing to 3500# as ball sealers sealed. Did not ball out. ISIP 2700#, 5 mins 2460#, 10 mins 2390#, 15 mins 2300#. Open up & flow back, release pkr, go down and release RBP & pull back up & set pkr @ 7055'. Swb all zones together. Flow & swb back total of 55 bbls wtr. RU swb & started swbg. Initial FL @ 75' from sfc. Swb back 10 bbls & started getting oil cut w/good blow of gas. Drain wtr from tst tank & swbd 77 bbls total fluid w/42 bbls oil & 35 bbls spent acid wtr. Last swb run was 60% oil & 40% wtr. Gassing strong w/each swb run. SION.

Day Cost: $11,025
Acc. Comp. Cost: $65,045
Acc. Well Cost: $468,589

06/07/90 SITP 300#. SI for 11.5 hrs. Blow well down to 0 in 30 min. GIH w/swb & tag fluid @ 2400' from Sfc. First swb run was 80% oil then swbd wtr on next 3 runs. 5th swb run started cutting oil at 20% with oil cut continuing to increase w/each run. Swb back total of 48 bbs oil and 25 bbls slightly acidic wtr. Swb for total of 9 hrs. Had approx. 800' fluid entry between each swb run. Take sample of last swb run & was 90% oil & 10% wtr. Take wtr in for analysis. SION.

Day Cost: $1,725
Acc. Comp. Cost: $66,770
Acc. Well Cost: $470,314

06/08/90 SITP 250# in 12.5 hrs. Blow well down to 0 in 25 min. RU swb & GIH. IFL @ 3400' from sfc. Swb from SN on 5th run. Swb back total of 20 bbls oil. Fluid entry approx. 800' between runs. Cut on last run was 95% oil & 5% wtr. SIFW.

Day Cost: $1,120
Acc. Comp. Cost: $67,890
Acc. Well Cost: $471,434

Drilling Report
Mobil "5" State #1
Lea County, New Mexico

06/03/90
Con't RD Western Atlas and make up Lok-Set RBP & test treating pkr and GIH. Make 3 runs and had approx. 200' fluid in hole that could not be swbd out. SION.
Day Cost: $8,425
Acc. Comp. Cost: $42,670
Acc. Well Cost: $403,544

06/04/90 SITP 50#. GIH w/swb & had 500' fluid in hole w/300' oil on top of first run. Had good show of gas while swbg. Swb dry in 3 runs. Wait one hr and had 100' of fluid entry w/good show of oil through run. Release pkr and go down to 7355'. Wait on Dowell for acid. RU Dowell Schlumberger and spot 2 bbls acid across perf 7310'-7350'. PU and set TST pkr at 7302'. Acidize perfs w/3000 gal 15% MSR-100. Load tbg w/acid and pressure up to 3750# and started taking fluid @ .75 BPM. Break back to 3160# and increase rate. Increased rate to 4 BPM and 3360#. Dropped total of 30 balls & had good ball action. Pressure increased to 3900# and broke back to 3200#, then increased again as balls seated on perfs. Pressure increased to 4000# as flushed to btm perf w/2% KCL. ISDP 3900#. Would not bleed off. Surge balls off of perfs. ISDP 3900 15 min 3660#. Open well up and flowed back. Total load to recover 103.3 bbls. Well flowed back for 2 1/4 hrs. RU swb & started swbg. Swb and flow back total of 100 bbls fluid with good show of gas and cutting 6% oil. Final 4 runs were from seating nipple. Approximately 400-500' fluid entry between each run. SION.
Day Cost: $7,125
Acc. Comp. Cost: $48,795
Acc. Well Cost: $452,339

06/05/90 SITP 90#. Blow down to 0 in 15 min. RU swb and GIH. Tag FL @ 5100' from sfc. Pull 1st run and had 2.5 bbls oil on top. Swb dry in 3 runs w/6 - 8% oil cut on each run. Water still appears to be cut w/spent acid wtr. Release pkr and go downhole. Tag RBP @ 7400'. Release RBP and pull up to 7302'. Set RBP, set in 20K compression then pull 15K over. Set RBP in neutral position. Get off RBP, pull up & spot acid across perfs from 7275' - 7242'. Set TST pkr @ 7185'. Start downhole w/acid & pressured up to 4000# and started taking fluid. Pressure dropped and treated at same pressure and rate as lower zone. Shut acid off @ 2500 gal. Dropped 80 balls & never saw any ball action. RD Dowell & release TST. Go down to check RBP. RBP gone downhole to top of btm zone @ 7311'. Ball catcher caught all balls. Start swbg back acid from lower zone. Swb back 100 bbls acid wtr and fluid. TOH & change out pkrs. TIH w/TST pkr and Lok+Set RBP. SDFN.
Day Cost: $5,225
Acc. Comp. Cost: $54,020
Acc. Well Cost: $457,564

Drilling Report
Mobil "5" State #1
Lea County, New Mexico

05/22/90 Total Depth 9100'. Running 5 1/2" Casing liner.

TD 9100'. Runing 5 1/2" Casing liner. MW 8.7, Vis 40, PV 5, YP 3, pH 9.5, WL 9, FC 1/32, Chl 6000, Solids 2.6%.

6 3/4 hrs. Trips, 11 Running E-Logs, 2 RU & run 5 1/2" casing, 1 1/2 Circ. hole & 2 3/4 LD 96 Jts DP & DC.
Day Cost: $17,057 Acc. Costs: $302,046

05/23/90 Total Depth 9100'. Rigging down rotary. Released rig @ 6:00 PM MDT 5/22/90.

5 1/2" LINER DETAILS:

V-type casing shoe	2.06
1 Jt. 5 1/2" 17# N-80 Csg.	42.70
Baker Landing Collar	.88
99 Jts 5 1/2" 17# K-55 Csg. (5 Jts N-80)	4037.22
Baker CMC Liner hanger w/6' tie back ext.	13.95
Total Liner Length	4096.81

Top of 5 1/2" Casing liner @	4996.00
Float Landing Collar (PTD) @	9056.00
Bottom of 5 1/2" Liner shoe @	9092.00

Cmtd liner with 1300 sx Class "H" containing .6% Halad-9, + .4% CFR-3, + 1.3#/sx KCL. Yield 1.28 cu.ft../sx. Weight 15.6#/gal. Drop plug and displace casing and drill pipe with 164 bbls fresh water. Bumped plug and seated plug in landing collar w/ 3000#. Release pressure and float, held OK. Sting out of liner hanger with setting tool and pulled 4 jts drill pipe. Close BOP rams and reverse circulated out 15 bbls cement to pit. Circ. 8 5/8" casing with fresh water. TOH laying down drill pipe. Released ZiaDrill Rig #7 at 6:00 PM MDT 5/22/90.

1 1/2 hrs. Running 5 1/2" liner, 2 1/2 Run liner in hole on DP, 1 1/2 Cmt 5 1/2" liner, 3 LD remaining DP, ND BOP, jet pits., 1/2 RD csg crew, 1 Set liner hanger & 2 hrs. reverse hole w/FW.
Day Cost: $59,828 Acc.Cost: $361,874

05/24-28, 1990 WOCT.

05/29/90 Install anchors and test to safety specifications. Start moving in some of the reverse equipment and racks.
Day Cost: $570 Acc. Comp. Cost: $570
Acc. Well Cost: $362,444

Submit 2 copies to Appropriate
District Office.
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator	Pool	County
Mallon Oil Company	Undesignated - Blinebry	Lea

Address	TYPE OF TEST - (X)	Scheduled	Completion	Special
1099 18th St., Ste. 2750, Denver, CO. 80202		[ ]	[X]	[ ]

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL.
Mobil "5" State	1	0	5	17S	36E	7/27/90	P	N/A	N/A	187	24	6	35.3	28	29	1036

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Signature

Joe H. Cox, Jr. - Production Manager
Printed name and title

8-31-90 (303) 293-2333
Date Telephone No.

Submit 2 copies to Appropriate
District Office.
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator	Pool	County
Mallon Oil Company	Undesignated - Lower San Andres	Lea

Address: 1099 18th St., Ste. 2750, Denver, CO. 80202

TYPE OF TEST - (X): Scheduled [ ] Completion [X] Special [ ]

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL.
Mobil "5" State	1	O	5	17S	36E	8/21/90	P	N/A	N/A	107	24	0	28.9	7.6	9	1184

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Joe H. Cox, Jr.
Signature

Joe H. Cox, Jr. - Production Manager
Printed name and title

8-31-90 (303) 293-2333
Date Telephone No.

Champion Chemicals, Inc.

P.O.BOX 2187
HOBBS, N.M. 88240

PHONE: (505) 393-7726

WATER ANALYSIS REPORT

Report for: JOE COX
cc:
cc:
cc:
Company: MALLON
Address:
Service Engineer: OWEN ROBERTS

Date sampled: 7-11-90
Date reported: 7-12-90
Lease or well # : MOBIL 5 ST 1
County: State:
Formation:
Depth:
Submitted by: OWEN ROBERTS

CHEMICAL COMPOSITION :	mg/L	meq/L
Chloride (Cl)	162000	4570
Iron (Fe) (total)	59.0	
Total hardness	95500	
Calcium (Ca)	27669	1381
Magnesium (Mg)	6439	517
Bicarbonates (HCO3)	183	3
Carbonates (CO3)	n/a	
Sulfates (SO4)	322	7
Hydrogen sulfide (H2S)	17	
Carbon dioxide (CO2)	878	
Sodium (Na)	61682	2682
Total dissolved solids	258296	
Barium (Ba)	n/a	
Strontium (Sr)	n/a	

Specific Gravity	1.184
Density (#/gal.)	9.867
pH	6.500
IONIC STRENGTH	5.53

Stiff-Davis (CaCO3) Stability Index :
SI = pH - pCa - pAlk - K

SI @ 86 F = +2.01
104 F = +2.24
122 F = +2.50
140 F = +2.79
158 F = +3.11

This water is 361 mg/l (-44.19%) under ITS CALCULATED CaSO4 saturation value at 82 F.
SATURATION= 817 mg/L PRESENT= 456 mg/L

REPORTED BY RANDOLPH SCOTT

CHEMIST