Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

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

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, NM 87505

WELL API NO.	30-025-09225
5 Indicate Type of Lease	STATE [X] FEE [ ]
6 State Oil & Gas Lease No.	B-1327

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1 Type of Well: OIL WELL [ ] GAS WELL [X] OTHER	7 Lease Name or Unit Agreement Name: Mexico "E" Com
2 Name of Operator: Doyle Hartman	8 Well No.: 2
3 Address of Operator: 500 N. Main St., Midland, TX 79701	9 Pool name or Wildcat: Jalmat / Langlie Mattix

4 Well Location

Unit Letter N : 660' Feet From The South Line and 1980' Feet From The West Line

Section 2 Township 23S Range 36E NMPM Lea County

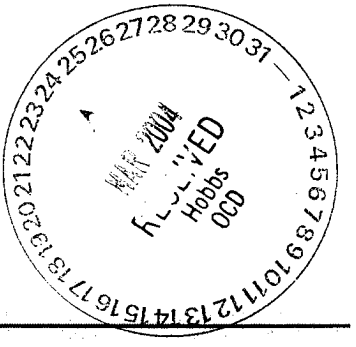
10 Elevation (*Show whether DF, RKB, RT, GR, etc.*): 3457' RKB

11 Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[ ]	COMMENCE DRILLING OPNS.	[ ]	PLUG AND ANBANDONMENT	[ ]
PULL OR ALTER CASING	[ ]			Casing & Cement Repair	[X]		
OTHER:	[ ]			OTHER: Reperforate & Reacidize Y-7R-Qn			[X]

12 Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

For details of completed wellbore repair and reserve enhancement operations, and review of upper long-string cementing and bond log results, please refer to pages 2 of 8 thru 8 of 8 attached hereto, and made a part hereof.



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

SIGNATURE [signature] TITLE Engineer DATE 03/22/2004

TYPE OR PRINT NAME Steve Hartman TELEPHONE NO. (432) 684-4011

(This space for State Use)

APPROVED BY [signature] TITLE PETROLEUM ENGINEER DATE JUN 25 2004

CONDITIONS OF APPROVAL, IF ANY:

Details of Completed Wellbore Repair and Reserve Enhancement Operations

In a three-day period, between 1-15-02 and 1-18-02, gas production dropped from 8 MCFPD to 0 MCFPD, and water production substantially increased, from 2 BWPD to 120 BWPD. A produced-water sample taken on 1-19-02 indicated a total dissolved solids of 2303 ppm, as compared to a total dissolved solids of 10,385 ppm, for a produced-water sample taken 2-27-01. The Stiff water diagrams, for the two (2) water samples, were also significantly different, with the 1-19-02 sample being much fresher.

Moved in well service unit, on 2-1-02. Pulled rods and pump. Pulled 2 3/8" O.D. tubing.

Ran and set 5 1/2" Model "C" RBP at 2700'. Poured 3 sx of frac sand on top of 5 1/2" Model "C" RBP.

Tested 5 1/2" O.D. casing, from 1102' to 2700', to 650 psi, for 10 minutes. Pressure held okay. Tested 5 1/2" O.D. casing, from 0' to 407', to 550 psi, for 10 minutes. Pressure held okay.

Pumped into interval between 1072' and 1102', at a rate of 2 BPM, at 300 psi. Pressure tested 5 1/2" O.D. casing, from 0' to 705', to 550 psi (1.22 psi/ft). Lost 200 psi, in 4 minutes.

Removed BOP and tubinghead. Installed Halliburton 5 1/2" cementing head. Established injection down 5 1/2" casing, at a rate of 10 BPM, at 1760 psi.

Squeeze cemented defective portion of 5 1/2" O.D. long-string, above 1102', with **2650 cu. ft. (2000 sx)** of cement slurry, consisting of 200 sx of API Class "C" cement containing 3% $CaCl_2$, followed by 1300 sx of API Class "C" cement containing 3% $CaCl_2$, 5 lb/sx Gilsonite, and 0.5 lb/sx Flocele, followed by 500 sx of API Class "C" cement containing 3% $CaCl_2$. Mixed and pumped first 270 bbls of slurry at an average pump rate of 8 BPM, and average pump pressure of 1250 psi. Mixed and pumped final 200 bbls of slurry at an average pump rate of 4 BPM. Pump pressure increased from 920 psi to 1200 psi. Displaced cement with 5 bbls of water, in 5 stages. Pumped final 1-bbl stage at a rate of 0.25 BPM, at 1650 psi. 5-min SIP = 1495 psi.

Ran 183.4' bottom-hole drilling assembly. Tagged top of cement at 193'. Drilled hard cement from 193' to 487'. Circulated hole clean. Pulled 183.4' bottom-hole drilling assembly.

Added six (6) 3 1/2" O.D. drill collars. Ran 359.52' bottom-hole drilling assembly. Drilled hard cement to 1125', and junk cement from 1125' to 1204'. Fell out of cement at 1204'. Lowered drill string to 2685'. Circulated out 5' of sand. Pulled and laid down bottom-hole drilling assembly.

Circulated frac sand off of 5 1/2" Model "C" RBP. Unloaded water from hole, to blowdown tank. Blew hole dry. Recovered 5 1/2" Model "C" RBP.

Ran 359.52' bottom-hole drilling and cleanout assembly to 3535'. Circulated hole clean and dry. Pulled and laid down bottom-hole drilling assembly.

Ran 2 3/8" O.D. production string. Landed bottom of 2 3/8" O.D. tubing at 3487' RKB (113 jts @ 30.63'/jt + 1.1'SN + 18'MA - 3'AGL + 10'KBC = 3487.3'). Ran 2" x 1 1/4" x 12' RHAC insert pump and 3/4" API Class "KD" rod string. Started pumping well at 5:30 P.M., CST, 2-12-02. 17-hr SICP = 30 psi (2.5-hr SICP = 16 psig). Opened casing to sales line, at a rate of 3.5 MCFPD, on 2-13-02. Evaluated well performance for the next 18 days.

On 3-3-02, well tested at a rate of 4 MCFPD + 1 BWPD (indicating a successful casing repair, but no material increase in gas production). On 12-6-00, well tested 33 MCFPD + 0 BWPD. FCP = 14 psi. LP = 14 psig.

Moved in and rigged up well service unit, on 3-4-02. Pulled rods and pump. Pulled 2 3/8" O.D. tubing.

Ran 2 7/8" O.D., 6.5 lb/ft, N-80 work string and 355' bottom-hole drilling and cleanout assembly. Tagged CIBP at 3535' (no cement on top of 5 1/2" CIBP).

Drilled on 5 1/2" CIBP, for 5.5 hrs. Encountered a good show of gas, from below 3535', when 5 1/2" CIBP turned loose. Pushed remainder of 5 1/2" CIBP to 3549'. Circulated hole clean and dry. Shut down for night. 11.5-hr SICP = 63 psig (before drilling 5 1/2" CIBP, SICP = 30 psig).

Pushed 5 1/2" CIBP down hole. Cleaned out wellbore to 3690'. Drilled up remainder of 5 1/2" CIBP. Drilled float shoe, at 3690'. Drilled 4' of new hole, to 3694'. Circulated hole clean. Pulled bottom-hole drilling assembly.

Installed 4 3/4" button bit. Ran 353.97' bottom-hole drilling assembly. Drilled 4 3/4" hole to 3714'. Pulled bottom-hole drilling assembly.

Picked up six (6) additional drill collars. Ran 542.83' bottom-hole drilling assembly. Drilled 4 3/4" hole, from 3714' to 3800', in 7 hrs, with 11,000 lb bit weight, at 58 RPM. While drilling, accumulated an estimated 60 bbls of water, with a trace of oil, in blowdown tank. Circulated hole clean. Pulled bottom-hole drilling assembly.

Rigged up Schlumberger. Logged well with SAS-CNL-GR-CCL log and VDCBL-GR-CCL log. Bond log indicated that cement had been pushed down to 1564', on outside of 5 1/2" O.D. long string, during 2000 sx casing-repair squeeze job.

Ran 542.83' bottom-hole drilling assembly. Pumped air. Unloaded water from hole, to blowdown tank. Recovered 84 bbls of water, with a trace of oil. Shut down for weekend.

Hooked up air unit. Unloaded water from wellbore, to blowdown tank. Blew hole dry. Pulled bottom-hole drilling assembly.

Ran and landed 4 1/2" O.D., 11.6 lb/ft, J-55, FJ liner, from 2885' to 3800'. Ran and set 5 1/2" Model "C" packer at 2778'. Established injection down 2 7/8" O.D. work string, with 35 bbls of 2% KCl water, at a rate of 12.6 BPM, at 1600 psi.

Squeeze cemented liner into place, with 1300 cu. ft. (1100 sx) of cement slurry, consisting of 850 sx of API Class "C" cement, followed by 100 sx of API Class "C" cement containing 2% $CaCl_2$, 3 lb/sx Gilsonite, and 0.25 lb/sx Flocele, followed by 150 sx of API Class "C" cement. Mixed and pumped first 850 sx of cement at an average rate of 12.0 BPM, at 3550 psi. Mixed and pumped the next 100 sx at 8.1 BPM, at an average pump pressure of 1350 psi. Mixed and pumped remaining 150 sx of cement at an average rate of 3.3 BPM. Displaced cement with 17 bbls of water, at 1.0 BPM. Final displacement pressure = 1730 psi. ISIP = 1550 psi. 1-hr SIP = 514 psi. Pulled and laid down 5 1/2" Model "C" packer.

Ran 188.06' bottom-hole drilling assembly consisting of 4 3/4" bit and (6) 3 1/2" O.D. drill collars. Tagged top of cement at 2791'. Drilled cement to 2885' (top of 4 1/2" O.D. liner). Pulled and laid down large-bore bottom-hole drilling assembly.

Ran 246.01' small-bore bottom-hole drilling assembly consisting of 3 7/8" blade bit and (8) 3 1/8" O.D. drill collars. Drilled hard cement from 2885' to 3786'. Circulated hole clean. Pulled small-bore bottom-hole drilling assembly.

Ran 3 7/8" blade bit, 4 1/2" casing scraper, and (8) 3 1/8" drill collars, to 3786'. Circulated hole with 75 bbls of clean 2% KCl water. Pulled and laid down 3 7/8" blade bit and 4 1/2" casing scraper.

Rigged up Schlumberger. Re-logged well with SAS-CNL-GR-CCL log and VDCBL-GR-CCL log. Second (2^{nd}) bond log also revealed the placement of cement, on outside of 5 1/2" O.D. casing (from 0' to 1564)'.

Laid down 2 7/8" work string and 3 1/8" O.D. drill collars.

Ran 2 3/8" O.D. tubing to 3688'. Dropped standing valve. Rigged up kill truck. Pressure tested 2 3/8" O.D. tubing, to 4750 psi, for 10 minutes. Pressure held okay. Fished standing valve. Rigged up air unit. Unloaded water from wellbore, to blowdown tank.

Select-fire perforated lower portion of Y-7R-Qn gas interval (good gas show interval), with (8) 0.38" x 17" holes, with one shot each at:

3500	3540	3572
3503	3557	3578
3507	3569	

Ran 4 1/2" Model "C" packer to 3599'. Pumped 150 gal of 15% MCA acid down 2 3/8" O.D. tubing, followed by 0.5 gal of 2% KCl water. Allowed acid to fall and equalize. Raised and set 4 1/2" Model "C" packer at 3446'.

Acidized perfs, from 3500' to 3578' (8 holes), with an additional 1200 gal (total of 1350 gal) of 15% MCA acid and 11 ball sealers, at an average treating rate of 4.0 BPM, and average treating pressure of 1803 psi. Formation broke at 2000 psi. Minimum treating pressure = 1060 psi. Maximum treating pressure = 3500 psi (at ballout, on 10th ball). Released 4 1/2" Model "C" packer. Lowered tubing and knocked off balls. Pulled 4 1/2" Model "C" packer.

Select-fire perforated middle and upper portion of Y-7R-Qn gas interval, with (31) 0.38" x 17" holes, with one shot each at:

3023	3056	3108	3170	3330	3387	3434
3027	3062	3146	3173	3350	3412	
3031	3077	3151	3217	3352	3415	
3039	3088	3157	3222	3371	3418	
3052	3101	3164	3326	3384	3429	

Ran 4 1/2" Model "C" RBP and 4 1/2" Model "C" packer. Set 4 1/2" Model "C" RBP at 3464'. Raised 4 1/2" Model "C" packer to 3419'. Pumped 200 gal of 15% MCA acid down 2 3/8" O.D. tubing, followed by 0.5 bbls of 2% KCl water. Allowed acid to fall and equalize. Raised and set 4 1/2" Model "C" packer at 3263'.

Hooked up Halliburton, to acidize middle set of perfs (3326'-3429'). Pumped 756 gal of 15% MCA acid, at 4 BPM, at 28 psi. Released packer and pulled 2 3/8" O.D. tubing.

Rigged up tubing testers. Tested 2 3/8" O.D. tubing to 5000 psi, while going back into hole. Found 3 bad joints.

Set 4 1/2" Model "C" packer at 3455'. Pressure tested 4 1/2" Model "C" RBP to 3000 psi. Pressure dropped to 1660 psi, in 4 minutes. Released and raised packer to 2953'. Removed split tubing joint. Shut in well for night. 11.5-hr SICP = 48 psi.

Set 4 1/2" Model "C" packer at 2953'. Acidized perforations, from 3023' to 3434' (31 holes), with an additional 5344 gal (total of 6300 gal) of 15% MCA and 50 ball sealers, at an average treating rate of 4 BPM. Balled out on 40th ball (at 3150 psi), and again on the 45th ball. Had good ball action throughout acid job.

Ball sealers would not surge off. Released packer. Lowered tubing. Knocked off ball sealers. Raised and set 4 1/2" Model "C" packer at 2953'.

Pumped away remaining 609 gal of 15% MCA acid, at 4 BPM, at 20 psi. Flushed with 20 bbls of 2% KCl water.

Lowered 4 1/2" Model "C" packer. Unsuccessfully attempted to latch onto 4 1/2" Model "C" RBP. Pulled and laid down 4 1/2" Model "C" packer.

Ran 3 3/4" overshot (with 1 7/8" grapple) and 3 1/8" bumper sub. Latched onto 4 1/2" Model "C" RBP fishing neck. Pulled out of hole with fishing assembly and 4 1/2" Model "C" RBP.

Ran and landed bottom of 2 3/8" O.D. tubing at 3755' RKB (121 jts @ 30.8'/jt + 1.1'SN + 18'MA - 3AGL + 10'KBC = 3755.4'). Ran 2" x 1 1/4" x 12' RHAC insert pump and 3/4" API Class "KD" rod string (without rod guides). Started pumping well at 6:45 P.M., CST, 3-20-02, at 9 Spm x 64" x 1 1/4" (SICP = 21 psig, at 6:30 P.M., CST, 3-20-02).

Overnight SICP = 47 psig. Turned well to gas sales line, on 3-21-02.

Since returning well to production, produced-water rate has continued to hyperbolically decline, as previously accumulated water (below 3535') is recovered.

Test Date	Gas Rate MCFPD	Water Rate BWPD		FCP (psig)	LP (psig)
3-28-02	100	58	(1)	18	18
6-1-02	107	25		17	16
10-15-02	111	13		15	14
12-31-02	105	12		18	16
7-30-03	88	8		14	13
2-19-04	99	8		1	14

(1) The dissolved solids to chlorides ratio, of the 3-27-02 after-repair Mexico "E" Com No. 2 water sample, fell within the published Paleozoic oil-producing zone range (for Southern Lea County, New Mexico waters), which was a large shift from the pre-repair 1-19-02 water sample.

Total wellbore repair and reserve enhancement cost = $234,260.

Mexico "E" Com No. 2
Upper Long-String
Cementing and Bond Log Results

A review of the VDCBL cement bond log, that was run in the Mexico "E" Com No. 2 well, on 3-15-02, after a 2000-sx squeeze job was performed down the 5 1/2" O.D. casing, on 2-5-02, documents the placement of cement, on the outside of the 5 1/2" O.D. casing, from 0' to 1564'. After the cement set, hard cement was drilled from 193' to 1125', and junk cement was drilled from 1125' to 1204'. By finding the bottom of the hard cement at 1125', when coupled with the results of the VDCBL cement bond log, indicates that a major cement slurry exit point, during the 2000-sx cement job, was the previously confirmed casing hole, between 1072' and 1102'.

After performing the 2000-sx cement job, (1) Mexico "E" Com No. 2 water production dropped from a rate of 120 BPD, on 1-18-02, to 1 BWPD, on 3-3-02, and (2) the dissolved solids to chlorides ratio, of the 3-27-02 after-repair Mexico "E" Com No. 2 water sample, shifted into the published Paleozoic oil-producing zone range (for Southern Lea County, New Mexico waters), further confirming a successful repair of the upper portion of the long string.

The 3-15-02 VDCBL cement bond log found the top of the original long-string cement job at 2700'.