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1936 - 1986



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May 18, 1190

New Mexico Oil Conservation Division
P. O. Box 2088
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9979

RECEIVED
MAY 21 1990
NEW MEXICO
OIL CONSERVATION DIVISION

ATTN: Michael Stogner

RE: DeSana Unit #1
1980 FNL & 1980 FEL
Sec 17-T18S-R24E
Eddy County, NM
V-1152

Gentlemen:

Wolfcamp
We hereby respectfully request that the referenced DeSana Unit #1 be granted temporary administrative approval to commingle the Wolfcamp, the Lower Canyon and the Atoka productive zones along with non-productive Cisco, Canyon, Strawn and Morrow zones. Furthermore, we request approval to dual complete the well by leaving the Yeso and the Abo zones open to the annulus. These zones are not productive but could be capable of production if stimulated.

The DeSana Unit #1 was drilled in July of 1989 to a depth of 8350' and 5-1/2" casing was run and cemented. A completion attempt was commenced Aug 1, 1989, with the Morrow being perforated and subsequently acidized and swab tested with no significant show of hydrocarbons. From that time on, the zones were tested from the Morrow to the Yeso, working from the deeper zones to the more shallow zones. No significant shows of hydrocarbons were found. The completion attempt ran continuously from August to December 1989.

After perforating and testing the Yeso zone (1675'-1739') unsuccessfully, the Retrievable Bridge Plug was unset and the well started flowing natural gas (from beneath the bridge plug) at a rate of 125-200 psi on a 3/4" choke (1.75-2.6 MMCFD). The well was killed and then the tubing and a packer were run to 5394'. The tubing was swabbed and the well resumed flowing. A temperature survey was run indicating the Wolfcamp zone at 5600 feet was the major point of entry. The Lower Canyon and the Atoka zone showed very minor contributions to the flow. Therefore, it was unintentional that all the zones below the packer have been commingled.

The temperature survey tool indicates that the primary production is from the Wolfcamp zone. These surveys are not always 100% accurate. Therefore, it is preferred not to isolate the Wolfcamp zone by squeezing the lower zones as the survey showed contributions from other zones. It is our concern that by isolating the

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Wolfcamp a productive zone in the well may be shut-off and damaged. Furthermore, to squeeze all zones that do not appear productive would be extremely expensive. If it is required that all non-productive zones should be cemented and drilled out the expense may be such that the well should be plugged and abandoned and the possible productive reserves may be abandoned prematurely.

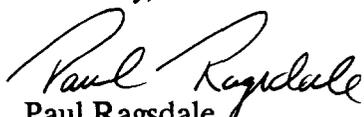
The DeSana Unit #1 was drilled as Wildcat-Morrow Prospect. There are no producing wells within a two mile area as indicated by the enclosed map. Approximately \$366,444.00 was spent to drill the well and \$116,191.00 has been spent to complete the well. An additional \$50,000 is required to lay a pipeline and connect the well to a gas gathering system. A cumulative total of \$532,635.00 will be required to drill, complete and connect the well. We are prepared at this time to connect the well to a pipeline and to begin production.

The temperature survey indicated that the primary producing zone is the Wolfcamp zone at 5600 feet. The Wolfcamp is an untested reservoir in this area. The Wolfcamp in Southeast New Mexico is generally a over pressured reservoir that will rapidly deplete during production. It is our concern that this zone will deplete to uneconomic production very rapidly. If the well does deplete it is our intention to restimulate the Abo zone from 4732-4990 and test for production. If the Wolfcamp production stabilizes at an economic rate after the 180 day test period it is our intention to run production surveys, determine the exact depth of the producing zone and abandon all other non-producing zones.

In conclusion, we request that the DeSana Unit #1 be granted temporary approval, subject to review after 180 days, to commingle the zones from 5394 (which is the packer depth) to 8183' (the lowest perf) and approval to produce the well as is for 180 days to determine if the zone is economic. We also request that the Yeso and the Abo zones be allowed to be commingled in the annulus during this testing period.

Attached is a daily drilling report, well location map and a temperature survey for your information. We appreciate your cooperation in this matter.

Sincerely,


Paul Ragsdale
Petroleum Engineer

PR/cvg

Attachments

Set for
hearing on
June 27, 1990
DRC

YATES PETROLEUM CORPORATION
CHRONOLOGICAL DRILLING REPORT
Desana Unit #1
Unit G
17-18S-24E
Eddy County, New Mexico

OG
AP
CG
LB
JK
BG
TR
BM

sent
1.3-83
L.F.

- 6-26-89 Location: 1980' FNL & 1980' FEL of Section: 17-18S-24E, Eddy County, New Mexico. Lease No: V-1152. Elevation: 3808' GR. PTD: 8300' Morrow. Drilling Contractor: Exeter #74. Building location.
- 6-27-89 Building location.
- 6-28-89 Building location.
- 6-29-89 Moving in rotary tools. Prep to set conductor. Spudded 26" hole 7:45 AM 6-29-89 with Frank's Rathole.
- 6-30-89 Prep to spud.
- 7-1-89 TD 260' anhydrite. WOC. Made 220' in 4 hours, 55'/hr. MW 9.0, Vis 35, pH 10, Wl NC. Survey 260' 0 deg. WOB all, RPM 120, SPM 64, PP 1200#. Resumed drilling 8:30 PM 6-30-89. Notified John Robinson with State. TD 17-1/2" hole at 12:30 PM 7-1-89. Ran 6 joints 13-3/8" 54.50# J-55 (263.76') casing, set 260'. Texas Pattern Notched guide shoe set 260'. Insert float set 214'. Cemented with 325 sacks Class "C" + 2% CaCl₂ (yield 1.32, weight 14.8). PD 4:30 AM 7-2-89. Bumped plug to 400 psi, released pressure and float held okay. Circulated 50 sacks to pit. WOC. TMC \$500; TWC \$1989; TRC \$0; DC \$29,960.70; CC \$29,960.70
- 7-2-89 Dry drilling 669' lime. Made 409' in 6-3/4 hours, 30-40'/hr. MW 8.4, Vis 28. WOB 35000#, RPM 50, SPM 50, PP 400#. Drilled out 11:15 PM 7-1-89. WOC 18 hours 45 mins. Nippled up and tested to 1000# for 30 minutes, OK. Reduced hole to 12-1/4". Resumed drilling. Lost circulation at 570'. TMC \$500; TWC \$5031; TRC \$0; DC \$8945.75; CC \$38,906.45
- 7-3-89 TD 1110' anhydrite. WOC. Made 441' in 14-3/4 hours, 29.89'/hr. MW 8.4, Vis 28. Surveys 721' 1-3/4 deg, 1110' 1-3/4 deg. WOB 60000#, RPM 70, SPM 50, PP 500#. TD 12-1/4" hole 8:30 PM 7-2-89. Ran 26 joints 8-5/8" 24# J-55 (1113.74') casing, set 1105'. Texas Pattern Notched guide shoe set 1105'. Insert float set 1063'. Cemented with 400 sacks Halliburton Lite with 10#/sx Gilsonite, 1/2#/sx Flocele + 3% CaCl₂ (yield 1.84, weight 12.7). Tailed in with 200 sacks Class "C" with 2% CaCl₂ (yield 1.32, weight 14.8). PD 1:00 AM 7-3-89. Bumped plug to 400 psi, released pressure and float held okay. Cement did not circulate. WOC 6 hours. Ran Temperature Survey and found top of cement 525'. Ran 1". Tagged cement 527'. Spotted 100 sacks Class "C" + 4% CaCl₂. PD 11:00 AM 7-3-89. WOC 1 hour. Ran 1". Tagged cement 155'. Spotted 100 sacks Class "C" + 4% CaCl₂. PD 12:30 PM 7-3-89. Circulated 5 sacks to pit. WOC. TMC \$500; TWC \$10,179; TRC \$0; DC \$24,884.25; CC \$63,790.70
- 7-4-89 Drilling 1254' lime. Made 144' in 5 hours, 28'/hr. MW 8.4, Vis 28. WOB 50000#, RPM 60, SPM 64, PP 1200#. Drilled out 12:30 AM 7-4-89. WOC 23 hours 30 minutes. Nippled up and tested to 1000 psi for 30 minutes, OK. Reduced hole to 7-7/8". Resumed drilling. TMC \$500; TWC \$11,934; TRC \$0; DC \$12,908.50; CC \$76,699.20
- 7-5-89 Drilling 1950' dolomite, anhydrite and sand. Made 705' in 23-1/2 hours, 30'/hr. MW 8.4, Vis 28, pH 10. SPM 64, PP 1300#. TMC \$500; TWC \$13,104; TRC \$0; DC \$11,423.75; CC \$88,122.95
- 7-6-89 Drilling 2480' dolomite and sand. Made 530' in 22-1/2 hours, 24'/hr. MW 8.4, Vis 28, pH 10. SPM 64, PP 1300#. Losing no fluid. DMC \$1855; TWC \$16,146; TRC \$75; DC \$12,544.50; CC \$100,667.45

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- 7-7-89 Drilling 2990' dolomite and sand. Made 510' in 23-3/4 hours, 21'/hr. MW 8.4, Vis 28, pH 10. SPM 64, PP 1250#. TMC \$2567; TWC \$17,082; TRC \$150; DC \$9305.50; CC \$109,972.95
- 7-8-89 Drilling 3496' dolomite and sand. Made 506' in 23-1/4 hours, 21.76'/hr. MW 8.4, Vis 28, pH 10. Survey 3103' 1/2 deg. WOB 50000#, RPM 65, SPM 64, PP 1250#. Losing 15-20 BPH. TMC \$2567; TWC \$18,702; TRC \$225; DC \$9222.50; CC \$119,195.45
- 7-9-89 Drilling 4090' shale and dolomite. Made 594' in 23-3/4 hours, 25.01'/hr. MW 8.9, Vis 28, pH 10, Cl 43000, Solids 1/4%, Calcium 1560, KCL 4%. Survey 3603' 1-3/4 deg. WOB 50000#, RPM 65, SPM 64, PP 1300#. TMC \$4271; TWC \$19,842; TRC \$540; DC \$10,192.50; CC \$129,387.95
- 7-10-89 TD 4460' dolomite. Tripping. Made 370' in 18-3/4 hours, 19.73'/hr. MW 8.9, Vis 28, pH 10, Cl 43000, Solids 1/4%, Calcium 1560, KCL 4%. Survey 4096' 1-1/4 deg. WOB 50000#, RPM 65, SPM 64, PP 1350#. TMC \$4271; TWC \$21,117; TRC \$855; DC \$7247.50; CC \$136,635.45
- 7-11-89 Drilling 4715' shale and dolomite. Made 255' in 12-1/2 hours, 20.4'/hr. MW 8.7, Vis 28, pH 10, Cl 50000, Solids trace, Calcium 1800, KCL 4%. Surveys 4460' 2 deg, 4658' 2-1/4 deg. WOB 45000#, RPM 65, SPM 64, PP 1300#. TOH. Tested BOP. WIH with bit #4 at 4460'. Circulated steel pits for 1 hour, lost 1 barrel. TMC \$7455; TWC \$22,281; TRC \$1170; DC \$7542.87; CC \$144,278.32
- 7-12-89 Drilling 5160' shale and lime. Made 445' in 22-1/4 hours, 18.5'/hr. MW 8.8, Vis 28, pH 10, Cl 42000, Solids 1%, Calcium 1750, KCL 4%. Circulated steel pits from 4:00 AM to 5:30 AM. Lost 2 bbls in 1-1/2 hours. BGG 3 units, no connection gas. Drilling Breaks: 4937-4940 (3'), 3 mpf to 4 mpf to 2-1/2 mpf, 10 units gas; 5081-5086' (5'), 3 mpf to 2 mpf to 3 mpf, 8 units gas. Top of Wolfcamp 4877'. TMC \$7555; TWC \$22,632; TRC \$1485; DC \$8354.75; CC \$152,633.07
- 7-13-89 Drilling 5620' lime, shale and sand. Made 460' in 22-1/2 hours, 20'/hr. MW 8.7, Vis 28, pH 11, Cl 45000, Solids 1-1/2%, Calcium 2200, KCL 40%. SPM 64, PP 1300#. BGG 3-5 units. Drilling Break: 5485-5489 (4'), 3-1/2 - 2-1/2 - 3 mpf, 60 units gas. Not losing any fluid. TMC \$11,274; TWC \$22,866; TRC \$1800; DC \$7444; CC \$160,077.07
- 7-14-89 Drilling 6047' lime and shale. Made 443' in 20-3/4 hours, 21.34'/hr. MW 8.7, Vis 28, pH 10, Cl 43000, Solids 1-1/2%, Calcium 1800, KCL 3-3/4%. Surveys 5762' 2 deg. BGG 6 units. TOH for hole in drill pipe, 53 stands down. Drilling Breaks: 5872-5877' (5'), no shows; 5987-5991' (4'), 5 units gas; 6020-6024', no shows. No conn gas or trip gas. TMC \$12,292; TWC \$23,568; TRC \$2115; DC \$8421; CC \$168,498
- 7-15-89 TD 6231' lime and shale. Trip for hole in drill pipe. Made 184' in 7-3/4 hours, 23'/hr. MW 8.7, Vis 28, pH 10, Cl 43000, Solids 1-1/2%, Calcium 1800, KCL 3-3/4%. SPM 64, PP 1350#. Repaired rotary table. No trip gas or connection gas. Had 4 units BGG/no loss. Trip for hole in drill pipe, 28 joints above drill collars. TMC \$12,292; TWC \$23,685; TRC \$2430; DC \$3532; CC \$172,030.32
- 7-16-89 TD 6360' shale and lime. Trip for hole in drill pipe. Made 129' in 5-1/2 hours, 23'/hr. MW 8.7, Vis 29, pH 10, Cl 43000, Solids 1%, Calcium 1800, KCL 4%. Survey 6331' 1 deg. SPM 64, PP 1350#. TIH, washed 80' to bottom, 40' of light fill. Repaired rotary table. Pumped soft line. Trip gas 60 units, no connection gas, no shows. Started mud up at 6350'. TMC \$13,106; TWC \$23,919; TRC \$2745;

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- DC \$3706.75; CC \$175,737.07
- 7-17-89 Drilling 6767' sand, lime and shale. Made 407' in 23 hours, 17.6'/hr. MW 8.7, Vis 30, PV 1, YP 3, Gels trace, pH 10, Wl 8, FC 2/32, Cl 40000, Solids 1%, Calcium 1800, KCL 3%. SPM 64, PP 1350#. BGG 4 units, no connection gas, 16 units trip gas. Losing 7 BPH from 4:00 AM to 5:00 AM. TMC \$17,338; TWC \$24,036; TRC \$3060; DC \$10,830.25; CC \$186,567.32
- 7-18-89 Drilling 7105' lime, shale and sand. Made 335' in 19-1/2 hours, 17'/hr. MW 8.8, Vis 30, PV tr, YP tr, Gels tr, pH 10, Wl 16, FC film, Cl 33000, Solids tr, Calcium 1600. BGG 3 units, no CG, 20 units TG. Survey 6727' 1 deg. WOB 50000#, RPM 55, SPM 64, PP 1350#. TOH for hole in drill pipe--could not find. Drilling Break: 7028-7062' (34'), 3 mpf to 1-1/2 - 1-3/4 mpf to 3-1/2 mpf, 6 units gas. Losing 8-12 BPH. TMC \$19,259; TWC \$24,615; TRC \$3375; DC \$7996; CC \$194,563
- 7-19-89 Drilling 7420' lime, shale and chert. Made 314' in 22-1/4 hours, 12'/hr. MW 8.9, Vis 31, PV 2, YP 4, Gels trace, pH 9, Wl 15, Cl 44000, Solids 2-1/4%, Calcium 130. Survey 7200' 1/2 deg. WOB 50000#, RPM 55, SPM 62, PP 1300#. BGG 4 units, CG 8 units. Drilling Break: 7177-7187' (10') 3-1/2 mpf to 1-3/4 mpf to 2-1/2 mpf, 6 units gas. Losing 12 BPH. TMC \$22,360; TWC \$25,434; TRC \$3690; DC \$9122.50; CC \$203,686.07
- 7-20-89 TD 7715' shale and lime. Trip for hole in drill pipe. Made 295' in 18-1/2 hours, 15.9'/hr. MW 8.8, Vis 30, PV 2, YP 4, Gels trace, pH 11, Wl 15, FC 1/32, Cl 32000, Solids 1-1/2%, Calcium 2900. WOB 50000#, RPM 55, SPM 64, PP 1350#. Had hole in drill pipe 13 joints above drill collars. Drilling Break: 7656-7660' (4'), 3-1/2 mpf to 1-1/2 - 1-3/4 mpf to 3-1/2 mpf, 4 units gas. Losing 30-40 BPH. TMC \$26,198; TWC \$26,481; TRC \$4005; DC \$9826.25; CC \$213,512.32
- 7-21-89 Drilling 7963' shale, sand and lime. Made 248' in 15-3/4 hours, 15.7'/hr. MW 8.7, Vis 30, PV 2, YP 4, Gels trace, pH 9, Wl 40, FC trace, Cl 32000, Solids 1-1/4%, Calcium 2900. Survey 7700' 1 deg. WOB 50000#, RPM 55, SPM 64, PP 1400#. BGG 4 units, no CG, 60 units trip gas. Drilling Breaks: 7812-7823' (11'), 3 mpf to 3/4 mpf to 3 - 10 mpf; 7928-7936' (8'), 3-1/2 mpf to 1-3/4 mpf to 3-1/2 - 4 mpf. Losing 15 BPH. After trip had 5' of light fill. TMC \$31,727; TWC \$27,177; TRC \$4320; DC \$10,520; CC \$224,032.32
- 7-22-89 Drilling 8338' lime. Made 375' in 24 hours, 16'/hour. MW 8.8, Vis 30, PV 3, YP 4, Gels 1/trace, pH 9, WL 10, FC trace, Cl 39000, Solids 1-1/2%, Calcium 3100. WOB 55000#, RPM 55, SPM 64, PP 1400#. Not losing fluid. TMC \$34,453; TWC \$27,873; TRC \$4635; DC \$9444.25; TCTD \$233,476.57
- 7-23-89 TD 8350' lime. Tripping in hole. MW 8.9, Vis 32, PV 4, YP 7, Gels 2/trace, pH 9.5, WL 10, FC 1/32, Cl 39000, Solids 2%, Calcium 2880. Survey 8350' 1 deg. WOB 50000#, RPM 55, SPM 64, PP 1400#. Losing 20-30 BPH. Reached TD 6:45 AM 7-22-89. SLM 8347.08'. Loggers TD #1 5396' after logging repeat section at 5850-4950'. Loggers TD #2 7942' (bridge). TMC \$37,057; TWC \$27,990; TRC \$4950; DC \$7333.50; TCTD \$240,810.07
- 7-24-89 TD 8350' lime. TIH, waiting on orders. MW 8.9, Vis 40, PV 11, YP 15, Gels 5/9, pH 9.5, WL 13, FC 1/32, Cl 39000, Solids 2%, Calcium 1000. SPM 64, PP 1400#. Loggers TD 8347'. Losing 20-60 bbls per hour while circulating and 5 bbls per hour while logging. TMC \$39.998; TWC \$28,107; TRC \$5265; DC \$7263;

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- TCTD \$248,073.07
- 7-25-89 TD 8350'. Running 5-1/2" casing. Made 0'. MW 8.9, Vis 40, PV 11, YP 15, Gels 5/9, pH 9.5, WL 13, FC 1/32, Cl 39,000, Solids 2%, Calcium 1000. Wait on orders 8-3/4 hours. Running 5-1/2" casing. TMC \$39,998; TWC \$28,341; TRC \$5265; DC \$81,123; TCTD \$329,196
- 7-26-89 TD 8350' lime. Released rig. Ran 198 joints 5-1/2" casing as follows: 18 joints 5-1/2" 17# J-55 (1491'); 144 joints 5-1/2" 15.50# J-55 (6104') and 36 joints 5-1/2" 17# J-55 (755') (Total 8351') casing, set 8350'. Float shoe set 8350'. Float collar set 8308'. DV tool set 4662'. Cemented in two stages as follows: Stage I - 1000 gals Flocheck-21, 1425 sacks Class "H" with 5#/sx Salt + .3% CFR-3, 4% Halad 22A and 5#/sx Gilsonite (yield 1.18, weight 15.6). PD 9:30 AM 7-25-89. Opened DV tool with 1200 psi. Circulated thru DV tool 4 hours. Stage II - 1000 gals Flocheck-21, 1200 sacks Halliburton Lite with 10#/sx Gilsonite + 1/2#/sx Flocele (yield 1.99, weight 12.4). Tailed in with 100 sacks Class "H" Neat (yield 1.18, weight 15.6). PD 1:45 PM 7-25-89. Closed DV at 2200 psi. Bumped plug to 2200 psi for 2 minutes, released pressure and casing held okay. Cement circulated both stages. Released rig 6:00 PM 7-25-89. TMC \$39,998; TWC \$28,809; TRC \$5265; DC \$37,248; CC \$366,444.07
- 7-27-89 Waiting on completion unit.
- 7-28-89 Waiting on completion unit.
- 7-29-89 Cleaned location. Cut off 5-1/2" tubing. Set anchors. Moved in and rigged up pulling unit. DC \$1780
- 8-1-89 Nippled up BOP. Picked up bit, collars and tubing. TIH at 4662'. Drilled out DV tool. TOH with tubing, bit and collar. Picked up scraper. TIH to 5000'. Shut in overnight. Prep to finish TIH, run bond log and perforate. DC \$3850
- 8-2-89 Finished TIH to 8160'. Tagged cement. Drilled out cement to 8225'. Tested to 1000 psi, OK. TOH, laid down bit and drill collars. Ran GR/CCL/CBL from 8210-1400'. Shut in overnight. Prep to perforate and acidize. DC \$2780
- 8-3-89 WIH on wireline with 4" casing gun and Perforated 8171-76' and 8181-83' with 14 holes (2 SPF). Picked up Guiberson Uni VI packer with on/off tool and 1.81" profile nipple. TIH to 8100' and ran correlation log. Set packer at 8159'. Nippled down BOP, nipped up wellhead. Acidized perms 8171-83' (14 holes) with 1500 gals 7-1/2% Morrow acid. Treating Pressures: Max 4500#, Min 3000#, Avg 3300# at 3.4 BPM. Good ball action, but did not ball out. ISDP 2300#, 10 mins 1800#. Bled down. Initial fluid level at surface. Swabbed back 64 bbls load water, 20 bbls left to recover. Final fluid level 6800'. Shut in overnight. Prep to swab. DC \$3700
- 8-4-89 SITP 650#. Bled down. Initial fluid level 6800'. Swabbed to seating nipple in 4 hours. Recovered 11 bbls fluid. Made 4 hourly runs. Recovered 2 more bbls fluid. Total recovered 13 bbls fluid for day, 7 bbls left to recover. Had constant 1-2' lazy flare with good show of gas on swab. Loaded tubing with 40 bbls 2% KCL water. Nippled down wellhead, nipped up BOP. Released packer. TOH with tubing and packer. Shut in overnight. Prep to perforate 8126-29' and acidize. DC \$1430
- 8-5-89 WIH on wireline with 4" casing gun and perforated 8126-29' with 6 - .42" holes (2 SPF). WIH with tubing and packer. Straddled perms 8126-29' and acidized with 1000 gals 7-1/2% Morrow acid. Treating Pressures: Max 3100#, Min 1900#. Avg 3000# at 4.9 BPM. ISDP 2200#. 15 mins 1600#.

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- Bled down. Initial fluid level at surface. Recovered 55 bbls load water. Final fluid level 6600'. Total load to recover 18 bbls. Shut in overnight. DC \$4350
- 8-6-7-89 SITP 550#. Bled down, good gas. Initial fluid level 6800' and scattered. Swabbed dry at 10:00 AM. Recovered 13 bbls load water. Last 3 swab runs dry. Had constant 1-2' lazy flare with good show of gas on swab. DC \$1280
- 8-8-89 SITP 1500#. Bled down. Set well on 1/8" positive choke. At 5:00 PM well was flowing 65#, no water with 3-4' flare. Left well flowing overnight on 1/8" choke. At 7:00 AM, FTP 65# = 27 mcf/d, no water. Shut in. Rigged down pulling unit. DC \$1350
- 8-9-89 Shut in.
- 8-10-89 Shut in.
- 8-11-89 Shut in.
- 8-12-14-89 Bennett-Cathey ran static build-up on 8-14-89.
- 8-15-89 Shut in.
- 8-16-89 Shut in.
- 8-17-89 Shut in.
- 8-18-89 Shut in.
- 8-19-21-89 Bennett-Cathey ran static build-up on 8-20-89.
- 8-22-89 Shut in.
- 8-23-89 Shut in.
- 8-24-89 Shut in.
- 8-25-89 Shut in.
- 8-26-28-89 Shut in.
- 8-29-89 Shut in.
- 8-30-89 Shut in.
- 8-31-89 Shut in.
- 9-1-89 Shut in.
- 9-2-5-89 Bennett-Cathey ran static build-up on 9-2-89. Zone apparently depleted.
- 9-6-89 Shut in.
- 9-7-89 Shut in.
- 9-8-89 Rigged up pulling unit. Prep to perforate Atoka.
- 9-9-89 Bled down. Loaded tubing with 2% KCL water. Nippled down wellhead, nipped up BOP. Released packer. WIH and retrieved RBP. Set RBP at 8094'. Tested to 1500#. TOH with tubing and packer. WIH on wireline and perforated 8061-65', 7963-67', 7812-18' with 17 - .42" holes (1 SPF). WIH with tubing and packer. Set packer at 7715'. Shut in overnight. Prep to swab. DC \$2800
- 9-10-11-89 SITP 0#. Initial fluid level 500'. Swabbed to seating nipple in 7 runs. Made hourly runs thereafter. Did not recover any fluid on hourly runs. Recovered 45 bbls fluid for day. Final fluid level at seating nipple. Had show of gas on last 2 swab runs. Shut in for weekend. Prep to acidize. DC \$800
- 9-12-89 SITP 1300#. Bled down. Loaded tubing with 2% KCL water. Released packer. WIH and straddled perfs 8061-65' (5 holes) and acidized with 1000 gals 7-1/2% Morrow Type acid + 3 ball sealers. Avg pressure 2600# at 3 BPM. ISDP 2300#, 5 mins 2000#. Released pressure and moved tools. Straddled perfs 7963-67' (5 holes) and acidized with 1000 gals 7-1/2% Morrow Type acid + 3 ball sealers. Avg pressure 2100# at 3 BPM. ISDP 1600#, 5 mins 1300#. Moved tools. Straddled perfs 7963-8065'. Initial fluid level 500'. Made 12 swab runs. Recovered 50 bbls load water, 50 bbls left to recover. Final fluid level at seating nipple. Had trace of gas on last run. Shut in overnight. Prep to swab. DC \$2950
- 9-13-89 SITP 1300#. Bled down in 15 minutes on 1/2" choke. Initial fluid level 5000'. Made 4 swab runs. Had well swabbed to seating nipple. Made hourly run thereafter.

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- Recovered 1-2 bbls fluid per run. Had good show of gas on swab with constant 3-4' flare between swabs. Lost swab in hole (decided to move up hole with RBP and packer and straddle perfs 7812-18' and acidize). Nippled down wellhead, nipped up BOP. Released packer. TIH and moved RBP to 7870'. TOH with tubing and packer. Recovered swab mandrel. TIH with packer to 7700'. Shut in overnight. Prep to acidize. DC \$1450
- 9-14-89 Acidized perfs 7812-18' with 1500 gals 15% MCA acid, N2 + ball sealers. Avg inj rate on acid and N2 3.8 BPM at 3100#. ISDP 3000#, 10 mins 3000#. Opened well on 1/2" choke. Flowed 1-1/2 hours and died. Initial fluid level 5000'. Made 8 swab runs. Final fluid level 6800'. Recovered 40 bbls fluid swabbing and flowing. Total load to recover 20 bbls. Had show of gas on last 2 swab runs. Shut in overnight. Prep to swab. DC \$3900
- 9-15-89 SITP 475#. Bled down in 10 minutes. Initial fluid level 5000'. Swabbed to seating nipple in 4 runs. Made hourly run thereafter recovering 1-2 bbls fluid per run with show of gas on swab. At 12:00 Noon, moved RBP to 8094' and set packer at 7737'. Initial fluid level at 2000'. Made 7 swab runs. Recovered 28 bbls water. Had good show of gas on swab and between swab runs. Had constant 3-4' flare. Final fluid level at 6900'. Shut in overnight. Prep to swab. DC \$1250
- 9-16-18-89 SITP 1700#. Bled down on 1/2" choke in 45 minutes. Initial fluid level at surface and scattered to 6300'. Well swabbed dry in 3 runs. Made 3 hourly runs recovering 1 bbl fluid per run. Set well on 1/8" choke with FTP 290#. Opened well to 1/4" choke at 6:00 PM, FTP 70#. Left flowing overnight. At 7:00 AM (9-16), FTP 30#. Shut in for 72-hour pressure buildup. DC \$950
- 9-19-89 Shut in for pressure buildup.
- 9-20-89 Pulled pressure bomb.
- 9-21-89 Shut in. Reviewed 72-hour Bottom Hole Pressure Bomb. Prep to move up hole and test Strawn.
- 9-22-89 Bled down. Loaded tubing with 2" KCL water. Released packer. Moved RBP to 7750'. Tested to 1500#. TOH with tubing and packer. WIH on wireline with 4" casing gun and perforated 7643-47', 7654-58' (10 holes - 1 SPF) and 7558-62' (8 holes - 2 SPF). TIH with packer. Straddled perfs 7643-58' and acidized with 1000 gals 15% NEFE acid and ball sealers. Avg inj rate 3 BPM at 2600#. ISDP 1800#, 5 mins 1800#. Bled down. Moved tools and straddled perfs 7558-62' and acidized with 1000 gals 15% NEFE acid and ball sealers. Avg inj rate 5 BPM at 2800#. ISDP 1900#, 5 mins 1900#. Bled down. Moved tools and straddled perfs 7558-7658'. Nippled down BOP, nipped up wellhead. Swabbed back 20 bbls load water, 74 bbls left to recover. Shut in overnight. Prep to swab. DC \$4100
- 9-23-89 SITP 25#. Bled down (acid gas). Initial fluid level 800'. Made 10 runs. Swabbed dry. Recovered 40 bbls load water, 34 bbls left to recover. Had show of gas on swab. Made hourly runs thereafter. Recovered less than 1 barrel fluid per run. Shut in overnight. Prep to swab. DC \$1200
- 9-24-25-89 SITP 25#. Bled down, would not burn. Initial fluid level 6000'. Made 2 swab runs. Well swabbed dry. Made 3 hourly runs, recovering trace of water on swab with small show of gas on swab. Shut in for weekend. Prep to come up hole to Canyon. DC \$500
- 9-26-89 Loaded tubing. Nippled down wellhead, nipped up BOP. Released packer. TIH. Moved RBP to 7287' and tested to 1500 psi, OK. TOH with tubing and packer. Rig up

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- wireline. WIH with 4" casing gun and perforated 12 .42" holes at 7178-84' (2 SPF). Rigged down wireline. WIH with tubing and packer. Shut in overnight. Prep to acidize. DC \$2200
- 9-27-89 Acidized perforations 7178-84' with 1500 gals 15% MCA and N2 with ball sealers. Avg injection rate 4 BPM at 3000 psi. ISDP 2400#, 15 min 2200#. Opened well on 1/2" choke. Well died at 12:00 noon. Rig up swab. Initial fluid level 3000'. Made 6 swab runs, recovered 40 bbls fluid with constant flare between runs. Place on 1/8" choke at 5:00 PM. Left well flowing overnight. At 7:00 AM 9-27-89, FTP 60 psi on 1/8" choke. DC \$4800
- WATER ANALYSIS: 9-26-89
- | | | | |
|-------------|--------|-------------|--------|
| Sp. Gravity | 1.0905 | Resistivity | 0.070 |
| pH | 1.0 | Chloride | 78,000 |
| Calcium | 25,093 | Sulfate | 71,800 |
| Magnesium | 2,648 | Bicarbonate | 0 |
| Sol. Iron | 7,500 | | |
- 9-28-89 FTP 60 psi on 1/8" choke at 7:00 AM. Opened well and bled down. Rig up swab. Fluid level 6800'. Swabbed dry in 2 runs. Recovered 1-1/2 bbls water. Made 3 hourly runs thereafter with no fluid recovery. Set well on 1/8" choke at 12:00 noon. Left flowing overnight. At 8:00 AM 9-28-89, flowing 50# on 1/8" choke. Prep to move up hole and test Wolfcamp. DC \$780
- 9-29-89 Bled down. Loaded tubing. Nipped down wellhead, nipped up BOP. Released packer. TIH and moved RBP to 7105'. Tested RBP to 1500 psi, OK. TOH with tubing and packer. Shut in overnight. Prep to perforate and acidize. DC \$1100
- 9-30-89 RIH on wireline with 4" casing gun and perforate 6907'-4932' with 48 .42" holes as follows: 6894', 95', 96', 97', 98', 6900', 02', 04', 06', 07' (10 holes); 6532', 33', 34', 35', 36', 37' (6 holes); 5874', 75', 76', 77', 78', 79' (6 holes); 5597', 98', 99', 5600', 01', 02' (6 holes); 5436', 37', 38', 39' (4 holes); 4932', 35', 36', 37', 38', 39', 42', 43', 46', 47', 52', 53', 71', 73', 87' and 4990' (16 holes). Rig down wireline. WIH with tubing and packer to 6810'. Set packer. Acidized perforations 6894-6907' (10 holes) with 1500 gals 15% MCA and ball sealers. Avg injection rate 3 BPM @ 1500 psi. ISDP 1100#, 15 min 1000#. Bled down. Rigged up swab. Initial fluid level surface. Made 7 swab runs, recovered 35 bbls load water. Swabbed and flowed a total of 60 bbls load water for day. Load to recover 47 bbls. Final fluid level 4500'. Shut in overnight. Prep to swab. DC \$5200
- 10-1-2-89 SITP 120 psi. Bled down. Rigged up swab. Initial fluid level 4500'. Made 8 swab runs. Swabbed well to 6900'. Made hourly runs thereafter, recovering 1-2 bbls fluid per run. Final fluid level seating nipple. Recovered 30 bbls water for day. Load left to recover 17 bbls. Had constant 2-3' lazy flare. Shut in for weekend. DC \$750
- 10-3-89 SITP 1200#. Bled down in 30 minutes on 1/2" choke. Rig up swab. Initial fluid level 6500'. Swabbed dry in 2 runs. Made 3 hourly runs, recovered 1/2 - 1 bbl fluid per hour. Set well on 1/8" choke at 10:00 AM. At 12:30 PM, FTP 30 psi (15 MCF). Bled down. Load tubing. Unset packer. Moved RBP to 6700' and tested to 1500 psi, OK. Moved packer to 6470'. Acidized perforations 6532-37' (6 holes) with 1000 gals 15% NEFE acid and ball sealers. Avg injection rate 4 BPM @ 1300 psi. ISDP 900 psi, 15 min 600

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- psi. Bled down. Rig up swab. Fluid level at surface. Made 7 swab runs. Recovered 28 bbls load water. Load to recover 35 bbls. Final fluid level 2800'. No show oil or gas. DC \$3100
- 10-4-89 SITP 110#. Bled down. Initial fluid level 2500'. Swabbed back 26 bbls load water. Load to recover 9 bbls. Set well on 1/8" choke at 1:00 PM. At 5:00 PM, FTP 50 psi. Left well flowing overnight on 1/8" choke. At 7:00 AM 10-4-89, FTP 40 psi on 1/8" choke = 19 MCFD. Prep to come up hole to Wolfcamp. DC \$950
- 10-5-89 Loaded tubing with 2% KCL water. Released packer. Moved RBP to 5963'. Tested RBP to 1500 psi, OK. Set packer 5800'. Acidized perforations 5874-79' with 750 gals 15% MCA and ball sealers. Avg injection rate 3 BPM at 2600#. ISDP 1800#, 15 min 1500#. Bled down. Rig up swab. Initial fluid level surface. Recovered 28 bbls load water. Final fluid level seating nipple. Had show of gas on swab. Load to recover 25 bbls. Shut in overnight. Prep to swab. DC \$3150
- 10-6-89 SITP 90 psi. Bled down. Rigged up swab. Initial fluid level 4500'. Swabbed dry in 3 runs. Made hourly runs thereafter, recovering less than 1/2 bbl fluid per run. Recovered 10 bbls fluid total for day. Set well on 1/8" choke at 5:00 PM. Left flowing overnight on 1/8" choke. At 7:00 AM 10-6-89, FTP 10 psi on 1/8" choke. Prep to come up hole to next zone. DC \$950
- 10-7-89 Bled down. Loaded tubing with 2% KCL water. Released packer. Moved RBP to 5669' and tested to 1500 psi, OK. Set packer 5507'. Acidized perforations 5597-5602' (6 holes) with 750 gals 15% MCA and ball sealers. Avg injection rate 4 BPM @ 900 psi. ISDP 300#, vacuum in 30 seconds. Rig up swab. Made 4 swab runs. Well kicked off flowing. At 12:00 PM (noon) well flowing at 600 psi and unloading water with occasional 10-15' flare. At 2:00 PM well died. Rig up swab. Went to seating nipple on 1st swab run, no fluid. Wait 1 hour. Second swab run - 0 fluid. Set well on 1/8" choke at 5:00 PM. Left flowing overnight. DC \$3750
- 10-8-89 At 7:00 AM FTP 0 psi on 1/8" choke. Rig up swab. Made 3 hourly runs, did not recover any fluid. Had show of gas on swab. Shut in for weekend. DC \$450
- 10-9-89 Shut in.
- 10-10-89 SITP 275 psi. Bled down. Loaded tubing with 2% KCL water. Released packer. Moved RBP to 5574' and tested to 1500 psi, OK. Moved packer to 5312'. Acidized perforations 5436-39' (4 holes) with 750 gals 20% NEFE acid. Avg injection rate 3 BPM @ 2000 psi. ISDP 1700#, 15 min 1500#. Bled down. Rig up swab. Initial fluid level surface. Made 7 swab runs. Swabbed well to seating nipple. Recovered 30 bbls load water on swab. Load water left to recover 20 bbls. Set well on 1/8" choke at 5:00 PM. Left well flowing overnight. DC \$2800
- 10-11-89 At 7:00 AM, FTP 20 psi on 1/8" choke. Bled down. Rig up swab. Initial fluid level 4200'. Made 7 swab runs. Swabbed well dry. Made hourly runs thereafter, recovering less than 1 bbl fluid per run. Recovered 12 bbls water total for day with show of gas. Set well on 1/8" choke at 3:00 PM. Left well flowing overnight. Prep to move up hole. DC \$750
- 10-12-89 FTP 30# on 1/8" choke. Bled well down. Load tubing with 2% KCL water. Released packer. WIH and moved bridge plug to 5052', test to 1500 psi - OK. Set packer 4824'. Nippled down BOP, nipped up wellhead. Acidized perforations 4932-4990' (16 holes) with 2250 gals 20% NEFE

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acid and N2 with ball sealers. Avg injection rate (acid and N2) 4 BPM @ 3400 psi. ISDP 2200#. Opened well on 1/2" choke. Flowed well 1-1/2 hours and died. Rig up swab. Fluid level 2800'. Made 7 swab runs. Swabbed to seating nipple. Had show of gas on swab. Swabbed and flowed 50 bbls load water. Load to recover 30 bbls. Left flowing overnight on 1/8" choke. At 7:00 AM FTP 20 psi. DC \$4800

10-13-89 At 7:00 AM FTP 20 psi on 1/8" choke. Bled down. Rig up swab. Initial fluid level 4500'. Swabbed dry in 3 runs. Made hourly runs, recovered less than 1 bbl per run. Recovered 7 bbls fluid total for day. Had show of gas on swab and lazy 2' flare after each run. Shut in at 2:00 PM. Rigged down pulling unit. DC \$880

10-14-16-89 Shut in.

10-17-89 Shut in.

10-18-89 Shut in.

10-19-89 Shut in.

10-20-89 Shut in.

10-21-23-89 Shut in.

10-24-89 Shut in.

10-25-89 Shut in.

10-26-89 Shut in.

10-27-89 Shut in.

10-28-30-89 Shut in.

10-31-89 Shut in.

11-1-89 Shut in.

11-2-89 Shut in.

11-3-89 SITP 1400#. Flow test 3 hours on 1/2" choke. Final flow pressure 3#.

11-4-6-89 Shut in.

11-7-89 Shut in.

11-8-89 Shut in.

11-9-89 Shut in.

11-10-89 Shut in,

11-11-13-89 Shut in.

11-14-89 Shut in.

11-15-89 Shut in.

11-16-89 Prep to plug and abandon.

11-17-89 Prep to plug and abandon.

11-18-20-89 Prep to plug and abandon.

11-21-89 SITP 1510# at 12:00 AM. FTP 2# at 2:00 PM. Opened 2 hours and 10 minutes on 32/64" choke. Prep to test Yeso.

11-22-89 Shut in.

11-23-27-89 Shut in.

11-28-89 Moved in and rigged up. Released pressure on well. Prep to install BOP. DC \$1213

11-29-89 Blew down. Installed BOP. POH with RBP from 4953' and packer from 4824'. WIH with packer and RBP. Tested RBP to 2000#. Straddled perforated interval 4932-4990'. Set packer above. Started to swab. Fluid level 200'. Made 1 swab run. Shut in. DC \$1735

11-30-89 SITP 150#. Initial fluid level 700'. Swabbed to seating nipple. Recovered 18 bbls. Installed 1/8" positive choke. After two hours had GTS, TSTM, but would burn. Made swab run. Had 200' fluid in hole. Swabbed dry. Shut in for pressure buildup. Total fluid recovered 23

12-1-89 SITP 25#. Had 200' of fluid in hole. Loaded hole. Pulled packer and RBP. WIH on wireline and perforated teh Yeso with 15 holes as follows: 1675', 76', 80', 92', 95', 97', 1700', 1719', 21', 23', 25', 32', 35', 37' and 1739'. WIH with packer and RBP. Straddled perforations. Swabbed dry after recovering 8 bbls with no show of gas.

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Shut in. DC \$4005

12-2-89 Acidized Yeso perforations 1675-1739' (15 holes) with 2500 gals 20% NEFE acid and 21 ball sealers. Spotted acid through perforations. Broke down with ball sealers. Swabbed back. Broke down. Broke at 2400#. Treating pressures: Max 2960#, Avg 2540#. ISDP 1550#, 5 min 1350#. Good ball acidtion. Load to recover 72 bbls. Recovered 37 bbls. DC \$5477.59

12-3-89 SITP 100#. Recovered 4-1/2 bbls with no show of gas.

12-4-89 SITP 50#. Recovered 2-1/2 bbls with no show of gas. Would not burn. Total load recovered 44 bbls. DC \$751.50

12-5-89 SITP 70#. Recovered 2-1/2 bbls. Waited 2 hours. Recovered 1/2 bbl. WATER ANALYSIS: 12-3-89

Sp. Gravity	1.110	Resistivity	0.054 @ 70 deg
pH	4.0	Chlorides	98,000
Calcium	24,784	Sulfates	600
Magnesium	10,280	Bicarbonates	0

Soluble Iron Greater than 500

12-6-89 SITP 60#. Swabbed 2 bbls, dry. Unset packer. Installed BOP. Went down 6 joints. Unset RBP. Well started to unload water. Unloaded water with 200# on 3/4" positive choke. After 6 hours, flowing 125# on 3/4" choke, almost dry. DC \$1551.50

12-7-89 Opened well. Flow rate 200# on 3/4" choke. Pulled packer and RBP. WIH with packer to 5394', set dry. Swabbed to seating nipple. Kicked well off. In process of cleaning up. DC \$3189.50

12-8-89 SITP 750#. Flowed, unloading fluid. Flowed down to 25# on 3/4" choke after 8 hours. Shut in for pressure buildup. Prep to survey. DC \$1099

12-9-11-89 Shut in for pressure buildup.

12-12-89 Shut in.

12-13-89 SITP 1050#. Ran Cardinal Survey. DC \$3431

12-14-89 Rigged down. Released equipment. DC \$656

12-15-89 Shut in.

12-16-18-89 Shut in.

12-19-89 Shut in.

12-20-89 Shut in.

12-21-89 Shut in.

12-22-26-89 Shut in.

12-27-89 Shut in.

12-28-89 TD 8350'; PBTD 8308'. On a 24 hour official potential test taken 12-8-89, flowed 150 psi on 1/2" choke = 925 MCFGPD and 18 BWPD thru perforations 5597-5602' Wolfcamp. SIWOPLC. FINAL REPORT.

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YATES Petroleum Corp.
DESANA Unit #1
1980 FOL & 1980 FEL
Sec 17-T185-R24E
Eddy County, NM