Submit 3 Copies To Appropriate District Office <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 South First, Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u>	Energy, Minerals OIL CONSERV 2040 So		DIVISION	WELL API NO. 30-025-34909 5. Indicate Type of STATE 6. State Oil & G	🖌 FEE 🗆
	ES AND REPORTS O			7. Lease Name or	Unit Agreement Name:
(DO NOT USE THIS FORM FOR PROPOSA DIFFERENT RESERVOIR. USE "APPLICA PROPOSALS.)				Vaca Draw 16 Sta	te
1. Type of Well: Oil Well 🔲 Gas Well 🔀	Other				
2. Name of Operator Matador Operating Company				7. Well No. #3	
3. Address of Operator				8. Pool name or	Wildcat
310 W. Wall, Ste 906 Midland, Tx	79703			Draper, Mill Wo	lfcamp (Gas)
4. Well Location					
Unit Letter <u>H</u> :	<u>1650</u> feet from the	North	line and66	0feet from th	e <u>East</u> line
Section <u>16</u>	Township	25S	Range <u>33E</u>	NMPM	Lea County
	10. Elevation (Show 3384'			c.)	
11. Check Ap	propriate Box to In	dicate Na	ature of Notice,	Report or Other	Data
NOTICE OF INT				SEQUENT REI	
	PLUG AND ABANDON	N 🗆	REMEDIAL WOR	к 🗆	
	CHANGE PLANS		COMMENCE DR	LLING OPNS. 🗌	
	MULTIPLE COMPLETION		CASING TEST AN CEMENT JOB		
OTHER:			OTHER: Comp	letion	×

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 Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

See attachment

I hereby certify that the	information above is true and comp	lete to the best of	of my knowledge and belief.	
SIGNATURE	un Mathin	_TITLE	Production Manager	DATEJ_00
	Russ Mathis			Telephone No. 915-687-5955
(This space for State use				2.20
APPPROVED BY Conditions of approval,	if any:	_TITLE		DATE

Vaca Draw 16 State #3 Lea Co., NM

30-025-34909

4/12/00 MIRUPU.

- 4/13/00Received 459 joints 2-3/8 PH-6 5.95#/ft P-110 work string. Set 4 frac tanks. Filled 2
with 600 bbls 10# brine. Removed 7-1/16 10K flange and valve. Installed 7-1/16 10K
BOP. Test blinds and casing to 4650 psi. RIH with 3.6875 cone buster mill, 4-1/2 casing
scrapper, x-over 2-3/8 R 2-3/8 PH-6 and 200 joints tubing. SWI, SDON.
- 4/14/00 RU Kill truck. Reversed 230 bbls 10# brine recovering mud in frac tank at 6350'. Pumped 2 BPM at 2000 psi. RIH with total of 389 joints of tubing to 12329'. Reversed mud to frac tank with 10# brine at 2 BPM with 2700 psi. POH with 3 stands. SWI, SDON.
- 4/15/00 RIH with 3 stands. Pick up 84000 slack off 76000. Tagged up with 10' out on #393 at 12447. Turned 1 rotation and fell through. RIH and tagged up with 3.5' in on #396 a 12524' KB. Unable to work through spot. PU swivel and stripper. Start circulating at 1.5 BPM at 1000 psi. Worked mill for 30 minutes without any success. Circulated hole clean. RD tools. POH with tubing and tools. Found bottom pad on 4-1/2" casing scrapper marked. Suspect scraper blades unable to retract into casing pin. Mill had rotation marks but no up and down marks. SWI, SDON.
- 4/16/00 Test replacement scraper on surface. Decided to leave scraper out of string. RIH with 3.6875" mill with full 3.6875 OD for 6" above end of mill and 3.6875 stabilizer pads 1' above mill BTTM. Ran mill on tubing to 13470'. Attempt to circulate. Observed excessive circulation pressure. Pull EOT to 13000. Circulate bottoms up. RIH to 13470'. Circulate bottoms up. RIH to 14000'. Circulate bottoms up. PU swivel and wash down to 14149'. Stripper rubber began leaking. Close BOP and circulate bottoms up plus 30 bbls. Well is completely displaced with 10 PPG brine. Did not tag PBTD at 14154 due to problem with stripper. RD swivel. POH with 30 stands. SWI, SDON. Prepared to run CBL and USI log 4/17/00. Frac day scheduled for 4/24/00.
- 4/17/00 FPOH with tubing and mill. RU Schlumberger electric line. RIH with CBL. Ran bond log from 14120' to 13300' with 0 psi. Re-ran log from 14120' to 12400' with 4000 psi applied. Had very good cement from 14120' to 13700'. Had a bond index that varied from 20 50% from 13700 to 13470. Had bond index that varied from 40 to 80% from 13470 13360'. Had bond index of approximately 70% from 13360 to 13290'. There was a noticeable difference between log with and without pressure. POH with CBL. RIH with USI logging tool. Ran USI from 14120 to 13350 with 0 psi and from 14120 to 12700 with 1000 psi. Schlumberger had problems with software and will have to reprocess log in computing center. Field interpretation indicated cement was gas cut but did not show continuous channels. POH with USI. RD Schlumberger. SWI. SDON.
- 4/18/00 TIH with 250 joints 2-3/8 PH6 tubing. TOH and LD 226 joints. SD for rig repair. SDON.

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4/19/00	Finish POH LD 2-3/8 PH6. SD for further analysis of cement bond. Took delivery of 3- 1/2" rented tubing. Cleaned ROW for gas sales line.
4/20/00	Shut down to evaluate cement bond. Stand-by time.
4/24/00	RU Schlumberger. TIH with 3.625" gauge ring, junk basket, CCL and wireline to 13750. TOH with same. PU 10K lubricator, wireline, BOP and grease injector head tested to 5000# with kill truck. Release pressure from lubricator. Closed blinds. Tested blinds from below to 5000 psi. TIH with perf gun. Loaded 3 SPF 120 deg phase. Correlate open hole log. Guns misfired. TOH with guns. SDON. Began construction of gas sales line.
4/25/00	TIH with 3-1/8" perf gun loaded 3 SPF 120 deg phase (.34 entry hole, 9" penetration). Correlate to open hole log. Perf 13625 to 13626. Sqz holes. POH with guns. Pressure increased to 1100 psi while POH with guns. Pressure decreased to 840 psi due to line displacement. Attempt to pump into perfs. Kill truck pump maxed out at 5100 psi. SD to observe pressure. Pressure decreased to 4850 in 10 minutes. Bleed off pressure to 2050 psi. RIH with Halliburton EZSV cement retainer on electric line. Set retainer at 13450. Pressure increased to 3050 while preparing cement retainer and RIH with same. Pressure began to decrease and eventually decreased to 860 psi prior to setting retainer. POH with wireline. Pressure down to 500 psi. Test casing and retainer to 4725, ok. Release pressure and well dead. RIH with stinger for cement retainer of 2-3/8 tubing incomplete. 14 joints tubing in hole. SWI, SDON.
4/26/00	SICP 80#. PU and TIH with 2-3/8 5.95# P110, PH6, tubing and tools to cement retainer at 13450. Space out with 425 joints. LD 2 joints. SDFN. Continued construction of surface equipment.
4/27/00	RU Dowell cement equipment. Sting into cement retainer at 13450'. Locate test position. Test tubing to 8000 psi. Place 500 psi on annulus. Establish injection rate as follows: formation broke at 8200 psi, .5 BPM at 7750 psi, 1 BPM at 8200, 1 BPM at 8000 psi. SD pump. ISIP 5400 psi. Order out 500 gals acid. Wait on acid 2-1/2 hours. Rig-up acid truck. SITP after 2-1/2 hrs at 4100 psi. Bleed off pressure. Pull out of retainer. Spot 500 gals 15% HCL acid to within 5 bbls of EOT. Sting into retainer. Bullhead 8 bbls water ahead of acid. Pressure increased from 8000 psi to 9200 psi at 1/2 BPM. When acid reached perforations at 13625, the pressure broke back to 6100 psi at .7 BPM. Over flush acid by 10 bbls. ISIP 5400 psi. Wait on replacement pump for 3-1/2 hours. Establish injection rate at 1.5 BPM at 7165. SD to mix cement in batch mixer. Mix 100 sxs cl H cement with low fluid loss additives and dispersent. Cement mixed at 16.1 PPG (design 16.4 PPG) with 1.1 ft ³ /sk yield. Pump time 3:41 hours at 205 degrees. Pump cement to perforations by bullheading tubing/casing volume (48 bbls) ahead of cement at 1-1/2 BPM at 7100 to 6625 psi. Pumped 10 bbls cement through perforations. SD to begin hesitation. Attempt to build standing squeeze pressure in 3 hesitations over 45 minute period. Not building pressure during hesitation. Pumped total of 14.5 bbls cement through perforations. Final injection pressure 5600 psi at 1/8 BPM. Sting out of retainer. PU 6' above retainer. Reverse tubing clean with 70 bbls brine. Recovered 2 bbls cement. LD 2 joints tubing. SWI, SDON.

Vaca Draw 16 State #3 Lea Co., NM

- 4/28/00 TOH with tubing and cement retainer tool. PU and TIH with 3.625" cone buster mill, bit sub, 4 - 3" drill collars, X-over and tubing. RU pump, pit and hydraulic swivel. SDON. Continued construction of surface equipment. Take delivery of 300 bbl fiberglass and 463 bbl stock tank.
- 4/29/00 Continue drill out cement. TIH with 2 stands tubing. Tag cement at 13448. Drill 2' cement, cement retainer, and 60' cement (10 hours). Reverse circulate 1.5 BPM at 600 psi. Circulate hole clean. SWI, SDON.
- 4/30/00 RU Dowell to pressure test squeeze. Continued drill out cement at 13535. Drill to bottom of cement 13627. TIH to 13660. Circulate hole clean. RD swivel. PU and TIH with tubing to tag plugged back TD at 14070. Circulate clean. TOH and LD 2-3/8" tubing and tools. SWI, SDON.
- 5/01/00 RU Dowell to pressure test squeeze. Load casing with 23 bbls brine water. Pressure to 6000#. Hold for 25 minutes, lost 100 psi. Release pressure. RU Schlumberger. RIH w/ CBL tools & wireline. Shut down for Schlumberger repair 4 hours. Run CBL from 13800' to 13000' with 0 psi. Re-run log with 1000 psi. TOH with tools & wireline. RD Dowell. RIH with 3.71" gauge ring and wireline to 14058'. POH w/ same. RD Schlumberger. Shut in. SDFN.
- 5/02/00 Continue pick up and TIH with 3-1/2" tubing. Pick up and TIH with TCP guns, packer and tubing. TIH with 2200' tubing. Tubing and tools no longer displacing water from casing. TOH with tubing and tools. Find vent sub to be open. Install new vent sub. TIH. Fill first 2200' of tubing with 10# brine water. SWI, SDON. All tubing and connections above X nipple at 13326.89 tested to 9000# above slips.
- 5/03/00 Continue testing in hole with 3-1/2" tubing. Continue RIH with guns on 2-3/8" tubing and 3-1/2" tubing incomplete 356 joints tubing in hole. TCP guns at liner top, 12,400'.
- 5/04/00 Complete TIH with 3-1/2" tubing. RU Computalog. TIH with gamma ray, CCL and wireline. Correlate tubing depth to open hole log. TOH with wireline and tools. Pick up tubing subs, space out, set packer. (See final copy of tubing detail for true depth of packer & tools.) TIH with tools and wireline. Verified guns spotted at proper location to perforate 13642 92'. TOH with wireline and tools. RD Computalog. ND BOP. NU rented 4-1/16" 10K tree. Test final connections and tree to 9000#. Drop sleeve to open vent sub, test packer good. RU Cudd. Load tubing with 156,598 SCF N2. 10# brine FL @ 11,400'. Surface pressure 5200#. Calculated BHP 8000#. SWI, SDFN.

Vaca Draw 16 State #3 Lea Co., NM

- 5/05/00 SITP 5100#, SICP 3200#. Vent casing with 12/64 choke for 1 minute. All N2. Pressure @ 1600#. Call out Kvaerner to re-test tree and flange connections. Wait on back pressure valve. Screw valve in top of BO-2 coupling to shut in tubing and isolate tree. Release pressure on tree. Release pressure on casing. Monitor casing for 3 hours. Casing would build up to 250 every 30 minutes. After 30 minutes, the casing would be bled off and monitored for 30 minutes. Casing was left shut in overnight with the tree open. The BPV in profile started leaking at about 9:00 pm. Left tree open so as to keep pressure off of tree. BPV leaked all night at approximately 40 MCFD of N2. Casing pressure increased to 2000 psi in 12 hours.
- 5/6/00 Pressure on tubing 0#. Pressure at well head flange test port 0#. 12 hour SICP 2000#. Release & remove back pressure valve. Tubing pressure 3700#. No increase in pressure at test port. Release casing pressure. Release tubing pressure. Monitor tubing for 4 hours. Had very slight blow on tubing. Blow could be stopped with hand pressure. SWI at 4:00 pm, 5/6/00. Checked well at 12:00 pm, 5/7/00. Had 30 psi on tubing and 0 on casing. Blow down tubing to 0 in 2 minutes. Shut in tubing at 12:00 pm, 5/7/00.
- 5/08/00 Attempt to release on/off tool. SITP 360#, SICP 0#. RU Pro wireline. TIH with 1.875" Otis blanking plug and wireline. Set plug in 'X' nipple @ 13287' (in on/off tool). TOH with wireline. RD Pro. Load casing with 6 bbl brine water. Load tubing with 95 bbl brine water. ND tree. NU BOP. Attempt to release on/off tool from top of packer. Work through complete range of tension, compression, and torque combinations for 3 hours. No movement. Set down 40 pts with left hand torque in tubing. SWI, SDON.
- 5/09/00 Continue attempt to release on/off tool. Start with 40 pt compression on tool. Hold in 1-1/2 rounds left torque, pick up to 10 pt above string weight. Lower tubing, repeat. On/off tool release. Pull up 10'. Lower tubing to tag tool. Pick up one foot, reverse circulate with 125 bbls brine water (less than 2 bbl returns with gas cut fluid). Lower tubing, latch onto on/off tool. Set 10 pt compression on tool, hold in left hand torque, pull to 5 pt over string weight. Tool appears to release. TOH with tubing. Lay down 151 joints (4707'), 3-1/2" N-80 tubing. Stand back remainder in derrick. Pull 9 joints 2-3/8" tubing. 20 joints 2-3/8" tubing and 1-6' pup joint left in hole. Tubing collar looking up at 12643'. Threads on 8 rd pin show very little damage. SWI, SDON. Fish top down:
 19 joints 2-3/8" 4.7# N-80 tubing 604.77 2-3/8" 4.7# N-80 pup joint

	2-3/8" 4.7# N-80 pup joint	6.00
1 joint	2-3/8" 4.7# N-80 tubing	31.83
	on/off tool	1.75
	Packer and guns below on/off tool	

Vaca Draw 16 State #3 Lea Co., NM

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Day 25 - TIH with 1.992" spear, vent sub, bumper sub, change over, 8 joints 2-3/8" 5/10/00 tubing, 242 joints 3-1/2" N-80 tubing, and 165 joints 3-1/2" P-110 tubing (all 3 1/2" tubing is 9.3#). Set spear in top of 2-3/8" fish. Pull 15 pt over string weight, set down to 10 pt compression. Hold in left torque, pick up to 12 pt over. Repeat same. On/off tool appears to release. Pull 30 stands tubing. String weight has increased 2-3 pt. Also, drag was increased until enough tubing was pulled to clear on/off from top of liner. SWI, SDON. TOH with tubing and tools. Recover all of fish. Re-dress on/off tool. TIH with on/off 5/11/00 tool and tubing, testing tubing to 9000 psi above slips. Run 125 joints. Found three collar leaks on factory side of coupling. SWI, SDON. Day 27 5/12/00 Continue TIH & test tubing. One joint fails to test. Latch on/off tool. Set down 20 pt compression. Mark tubing for space out. Unlatch on/off tool. Reverse circulate with 130 bbls brine water. Small amount of gas @ bottoms up. Install one 8' tubing sub and one 2' tubing sub below top joint for space out. ND BOP. Install wrap-around to seal annulus. Install tree on tubing. RU Cudd N2. Displace 87 bbls brine from tubing with N2 (4000 psi at surface). Latch on/off tool. Pull 25 pt over tubing weight to test latch. Final weight on packer 20 pt compression. NU tree. Test flanges and wrap-around to 10,000. Pressure tubing to 4,750 psi at surface with N2. RD Cudd. SWI, SDFN. Note: Fluid level at 10,000'. Calculated psi at fl 6,100. Pressure at perf depth 8,000 psi. **Tubing Detail:** 20.00 KB 28.77 3-1/2" P-110 9.3# AB modified tubing 1 joint 2.29 sub ditto 8.09 sub ditto 4812.31 165 joints ditto 7540.49 242 joints 3-1/2" N-80 9.3# EUE 8rd tubing .50 2-3/8" x 3-1/2" crossover 855.23 27 joints 2-3/8" L-80 4.7# EUE 8rd tubing 6.06 sub ditto 31.83 ditto 1 joint 4-1/2" x 2-3/8" XL on/off tool 1.75 13307.32 436 joints total tubing and tools

5/13/00
SITP, 4,700#. SICP, 0#. RU Pro wireline. TIH with equalizing tool & wireline. Open valve in blanking plug at 13,287'. TOH with same. TIH with pulling tool & wireline. Pull plug at 13,287', TOH with same. RU lubricator for firing bar. Drop bar. Guns fire in 3:40 (perforate 13,642' - 13692' one SPF). Pressure at 5200# after 150 minutes. Make 2 TIH with shifting tool and wireline. Guns have not moved. TOH with wireline. RD Pro. SITP, 5,400 psi. Open tubing to pit through test manifold. 75 min FTP, 200 psi. No fluid. Tester will watch overnight. Note: tubing release at 13,383'. Top of firing bar at 13,629' (slick line measure). Flow well @ estimated 50 MCFD.

Vaca Draw 16 State #3 Lea Co., NM

- 5/14/00 Flow test. FTP, 30 psi on 24/64 choke. No fluid. RU Pro wireline. TIH with 1 5/8" sinker bar and wireline. Tag top of firing bar at 13,629'. TOH with tools. RD Pro. Continue flow test @ estimated 150 MCFD.
- 5/15/00 Continue flow test. FTP 50 psi on 20/64 choke. Calculated volume 150 MCFD, 1/4 bbl oil, 0 bbl water. RU Pro wireline. TIH with shifting tool. Tag top of firing bar at 13,630'. Pull up to tubing release at 13,382'. Jar up twice, shear shifting tool. TIH with stops to pull up and check weight, tag bar at 13,994'. Calculated top of dropped TCP assembly plus tubing extension at 13,745'. TOH to 13,887'. Tools and wireline stick in fish. Work tool string up and down, lose jar action. Drop 1 1/2" line cutter. Work line, no results. Drop second cutter. Work line, pull free. Recover 13,745' slick line. TIH with 1 3/4" blind box to tag at 13,752' slick line measure. TOH with line and tools. RD Pro. 5 HR SITP 1100 psi. Continue flow test.
- 5/16/00 Open well to pit on various chokes. Flowed back 120 bbls load water. Well began flowing gas. SWI to hook up test equipment. SITP at 1400# in 30 minutes. Opened to test equipment. Flow test throughout the night. Flow rate at report time at 8:00 am, 5/17/00, at 650 MCFD with 500 # FTP. Well flowed with no change in FTP or rate in last 8 hours.
- 5/17/00 Shut well in to tie into sales line. SITP after 6 hours at 2400 psi. Put on line at 650 MCFD at 2200 psi FTP.
- 5/18/00 FTP 2400#. Current flow rate 250 MCFD (choke partially plugged). 16 hour production 290 MCF, 0 BO, 0 BW. Calibrate well head safety equipment, service production unit.
- 5/19/00 FTP 1400#. Current flow rate 430 MCFD. 24 hr production 457 MCF, 1 BO, 4 BW. Clean mud from frac tanks. Pull hatches and jet solids out with pump truck. Fill clean frac tanks with Eunice city water. Tanks treated with biocide.

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5/20/00	shut in. MI HP) and Ha 15% HCL, 8 (Note: job o BPM at 980 When pump	RU Dowell : lliburton 151 89200 gals v design callec 0 – 12800 p os began to f	frac equip K tree sava vater, 6400 I for 155 N si. Treate ail, the rat creenout. ick water essures	ment including 10 er. Frac Wolfcan 0 lbs 30/50 carboy M lbs 20/40, but v d at 26 BPM and	choke. Flow rate 450 MCFD prior to 0000 hydraulic horesepower (8-1250 ap perfs 13642-13692 with 4500 gals prop and 99467 lbs 20/40 bauxite. well screened out.) Pumped at 18-26 9800 psi until pumps began to fail. 8 BPM and possibly caused the frac ollows:
	Evaluate da	ata			
		(F140 235			
		F140 400		400 lbs 30/50	
		F140 400		000 lbs 30/50	
		7F135 400 7F135 900		000 lbs 20/40	
		(F135 900) (F135 900)		8000 lbs 20/40	
				8000 lbs 20/40 8000 lbs 20/40	
				4647 lbs 20/40	
	Screen out. through test ceramic pos (estimated 2	2230 BTLT manifold of itive chokes	R. Begin n 24/64 ch . Prop sto egin flowi	flow back at 18: oke. Prop cuts of ops after 4 hours,	30 MST. SITP - 4700 psi. Flow back ut one frac valve in manifold plus 5 continue to flow to pit until midnight Tag frac with sb 124 in pad, IR 192 in
5/21/00	recovered 4 Increase cho	50 bbls. Ga	s increases to 3/4" by	s through day. C 19:00 MST. FTI	with skim of condensate. Total fluid ontinue to recover 15-25 BPH fluid. P - 200 psi. 12-22 BPH fluid recovery.
. .	Time	<u>FTP</u>	<u>Choke</u>	BBLS Rec	Comments
Saturday	-	4700			SITP 2-1/2 hrs after frac
C 1	8:00	4700	• • • • • •		Opened well to pit - making sand
Sunday	12:00 am	1000	24/64	240	No more sand
	7:00	950 020	20/64	465	
	12:00 pm	920 010	20/64	560	
	4:00 8:00	910 260	20/64	610	
Monday		360	3/4	677 730	
Monday		190	3/4	730 765	
	4:00 7:00	190	3/4	765 786	
	7:00	175	3/4	786	1444 BLLTR

Put on-line at 9:00 am Monday, 5/22/00. Current rate, after 30 minutes on-line, 1.1 MMCFD at 200#.

Vaca Draw 16 State #3 Lea Co., NM

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5/22/00 FTP - 175 psi on 3/4 choke. Recovered 321 bbls last 24 hours. 5 - 10% oil cut. Total fluid recovered - 786 bbls. RD flow back equipment. Put well on line at 1170 MCFD rate, FTP 250 psi. RU Pro wireline. TIH with 1.75" blind box and tubing end locator. Tag bottom at 13741'. TOH to tubing disconnect at 13374'. 1 hour SITP - 1200 psi. Put on line. Pressure steady at 250 psi, flow rate of 1.3 MMCFD. TIH with electronic BHP/BHT recorders. Take gradient readings each 2000' and at mid perf (13667'). TOH with wireline and tools. RD Pro. Gradient readings as follows: Pressure Gradient Depth **PSIA** PSIA/FT <u>FT</u> 284.01000 A 0.05858 2000 401.17000 0.09234 4000 585.84000 0.09401 6000 773.86000 0.08091 8000 935.68000 0.05936 10000 1054.40000 0.05835 12000 1171.10000 0.06370 13000 1234.80000 0.05367 1270.60000 13667 5/23/00 26 oil, 1205 MCF, 115 water, 200 tbg pressure 5/24/00 42 oil, 1255 MCF, 16 water, 200 tbg pressure, 118 bbls water hauled 5/25/00 43 oil, 1201 MCF, 34 water, 150 tbg pressure 5/26/00 50 oil, 1160 MCF, 47 water, 140 tbg pressure 5/27/00 41 oil, 1125 MCF, 30 water, 140 tbg pressure 5/28/00 37 oil, 1090 MCF, 26 water, 150 tbg pressure 5/29/00 41 oil, 1058 MCF, 22 water, 150 tbg pressure, hauled 130 bbls water 5/30/00 33 oil, 1030 MCF, 23 water, 150 tbg pressure 5/30/00 RU Pro Techics. RIH with memory tools to run tracer survey log from 13200 to 13736. Sent data to processing center.

5/31/00 42 oil, 1001 MCF, 25 water, 145 tbg pressure

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6/01/00	34 oil, 964 MCF, 18 water, 125 tbg pressure
6/02/00	31 oil, 935 MCF, 19 water, 125 tbg pressure
6/03/00	33 oil, 920 MCF, 19 water, 125 tbg pressure, hauled 137 bbls water
6/04/00	30 oil, 899 MCF, 17 water, 125 tbg pressure
6/05/00	29 oil, 883 MCF, 16 water, 125 tbg pressure, Oil run 192
6/06/00	31 oil, 867 MCF, 13 water, 125 tbg pressure
6/06/00	31 oil, 867 MCF, 13 water, 125 tbg pressure
6/07/00	30 oil, 852 MCF, 15 water, 125 tbg pressure
6/08/00	32 oil, 841 MCF, 15 water, 125 tbg pressure
6/09/00	25 oil, 827 MCF, 14 water, 125 tbg pressure
6/10/00	26 oil, 812 MCF, 6 water, 115 tbg pressure
6/11/00	18 oil, 805 MCF, 15 water, 115 tbg pressure
6/12/00	23 oil, 793 MCF, 13 water, 115 tbg pressure
6/13/00	23 oil, 783 MCF, 8 water RU Schlumberger. RIH with 1-11/16" sinker bars to 13736'. Tag top of TCP assembly. RIH with 4-1/2" pedal basket and set at 13730'. Top of basket at 13724'. Set 6' of cement on top of pedal basket with positive displacement cementing barrel. TOC should be at approximately 13724'. SWI.
6/14/00	5 oil, 251 MCF, 1 water, shut in SITP - 3000#. RU Dowell. Pump 2 bbls gel, 2 BPM at 2900 psi. Pump 14 bbls gel with 1 PPG 20/40 sand (600 lb). Pump 9.5 bbls gel with 1/2 lb 20/40 sand and 1/2 lb 100 mesh (400 lb). Flush with 3 bbls gel, 2 BPM at 3000#. ISIP 2957#, 5 min 2824#, 10 min 2746#, 15 min 2692#. RD Dowell. SWI, SDFN.
6/15/00	0 oil, 0 MCF, 0 water, doing work over SITP - 3200 psi. RU Schlumberger. RIH with 1-11/16" sinker bar. Tag sand plug at 13621 KB. POH. Change out flow tube on grease injector. RIH with 1-11/16" strip gun with enerjet III charges loaded 2 shots per ft at 0° phasing. Perforate Wolfcamp through 4-1/2" casing from 13532.4 to 13558, 52 holes, .23 inch entry hole. TP prior to perforating at 3500 psi (11 hrs since previous pressure reading at 3200). No change in pressure when gun fired. POH with guns. Pressure increased to 3900 psi while POH. Left well shut in, SDON.

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- SITP at 4600 psi. RU Schlumberger. RIH with 1-11/16" strip gun loaded with Enerjet 6/16/00 III charges at 2 SPF and 0 degree phasing. Perforate Wolfcamp through 4-1/2" casing from 13506 to 13532, 52 holes, .23 inch entry hole. No change in TP when gun fired. POH. RD Schlumberger. RU Dowell. Test lines to 11000 psi. TP at 5050 psi. Acidize Wolfcamp perfs 13506 to 13558 as follows: pump 10 bbls 2% KCL. Follow with 5000 gals 15% HCL with NEFE and LST agents with double inhibitor to 185 degrees and 150 bio BS. Pressure increased to 10000 psi at 9 BPM. Reduced rate to 5 BPM and pressure decreased to 9500 psi. Pressure came down so rate was increased to 10.4 BPM. Pump 100 bbls of acid into formation at 10.4 BPM at 9050 psi. No ball action. No breakback from acid. SD pump. ISIP 6180, 5 min 6007, 10 min 5897, 15 min 5783. Pump additional 19 bbls acid into formation at 10.4 BPM at 9050 psi. Over flush by 20 bbls with 2% KCL. Slow down pump to 5.1 BPM at 7120 psi prior to SD. ISIP at 6265, 5 min 6186, 10 min 6080, 15 min 5995 psi. RD Dowell. RU flowback equipment. SI pressure after 1-1/2 hours at 4950 psi. OWTT on 15/64 choke. Pressure declined to 25 psi after flowing back 80 BW with final choke on 48/64. Pressure began to increase for additional 35 bbls (bttms up). Well started unloading acid and gas. Flow well to pit when acid hit. Unloaded very hard for 1 hour. Light flare after 5 hours. Flow well overnight. Flow rate at 7:00 am, 6/17/00 at 75 psi on 48/64 choke. Still making fluid.
- 6/17/00 Turn well to sales at 8:00 am, 6/17/00. Flow rate 380 MCFD at 90 psi on 48/64 choke.
- 6/18/00 Flowed to sales. Flow increased to 800 MCFD but decreased throughout the day. Flow rate at 7:00 am 6/18/00 at 495 MCFD at 105 psi FTP on 48/64 choke. Making 1.26 BOPH and 2.73 BWPH. Cumulative 25 BO + 34 BW in 36 hours. Estimate all of load from acid recovered. Turn over to pumper.

22 oil, 545 MCF, 19 water, 130 tbg presure 6/19/00 RU Pro Wireline. RIH with EOT locator. Tag top of sand plug at 13637 SLM. PU to EOT. Located EOT at 13380 SLM. EOT is at 13374 KB so depths should be adjusted by 6 ft. Sand plug is at 13631 KB (11 ft of sand above lower perfs from 13642-92). RIH with pressure gauges making gradient stops as follows: Temp Gradient Depth Press 98.399 0.03141 139.02 0 0.04243 82.884 2000 201.84 0.07088 4000 286.69 91.418 6000 106.93 0.10071 428.44 125.94 0.07014 629.85 8000 85

10000	770.12	150.20	0.05685
12000	883.82	173.86	0.05506
13000	938.88	181.57	0.05376
13635	973.02	174.53	

6/20/00

15 oil, 576 MCF, 15 water, 125 tbg pressure

Vaca Draw 16 State #3 Lea Co., NM

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6/21/00 14 oil, 587 MCF, 8 water, 125 tbg pressure Well is flowing 560 MCFD. RU BJ 1.25 coil tubing. SWI due to swab valve leaking. Build blow down pit. After 1 hour, 45 minutes, tubing pressure was 800 psi. Start in hole with coil tubing and 200 SCF/min N2. Flowing to pit on a 30/64" choke nipple. Started pumping 2% KCL at .6BPM at 12,400. Tagged fill at 13639 with 200# drag. Washed to 13720 while pumping .6 BPM 2% KCL with surfactant in the water. Pumped total of 10 bbls water. Increased N2 to 600 SCF/min. Displace hole 2 times and on last circulation started off bottom. Pulled coil to 12000. SD pumping N2. RIH and tagged at 13715' without N2 flowing. POH with coil tubing and RD BJ. Well SI for 1 hour and pressure built to 660 psi. Opened well to sales line at 1500 MCFD. At 7:00 am, 6/22/00, well is flowing 611 MCFD. 6/22/00 5 oil, 360 MCF, 3 water, 125 tbg pressure 6/23/00 15 oil, 606 MCF, 10 water, 115 tbg pressure RU Pro slickline and ran sinker bars and tagged top of sand at 13718 without KB correction. POH and rig down unit. 6/24/00 14 oil, 597 MCF, 5 water, 110 tbg pressure 6/25/00 14 oil, 590 MCF, 8 water, 110 tbg pressure 6/26/00 13 oil, 590 MCF, 7 water 13 oil, 586 MCF, 7 water, 110 tbg pressure 6/27/00 6/28/00 13 oil, 587 MCF, 7 water, 110 tbg pressure 13 oil, 579 MCF, 6 water, 110 tbg prressure 6/29/00 6/30/00 10 oil, 578 MCF, 7 water, 110 tbg prressure 6 oil, 576 MCF, 7 water, 110 tbg prressure, hauled 190 bbls oil 7/01/00 7/02/00 12 oil, 576 MCF, 8 water, 110 tbg prressure 27 oil, 572 MCF, 3 water, 110 tbg prressure 7/03/00 7/04/00 12 oil, 573 MCF, 5 water, 110 tbg prressure 7/05/00 10 oil, 569 MCF, 12 water, 110 tbg pressure 7/06/00 11 oil, 569 MCF, 9 water, 110 tbg pressure 7/07/00 9 oil, 562 MCF, 5 water, 110 tbg pressure 7/08/00 12 oil, 558 MCF, 34 water, 110 tbg pressure 7/09/00 8 oil, 557 MCF, 5 water, 110 tbg pressure 25 oil, 553 MCF, 0 water, 110 tbg pressure, hauled 166 bbls oil 7/10/00 7/11/00 13 oil, 554 MCF, 5 water, 110 tbg pressure 7/12/00 10 oil, 547 MCF, 5 water, 110 tbg pressure 7/13/00 15 oil, 547 MCF, 5 water, 110 tbg pressure 7/14/00 15 oil, 546 MCF, 5 water, 110 tbg pressure 7/15/00 10 oil, 547 MCF, 3 water, 110 tbg pressure 7/16/00 6 oil, 534 MCF, 5 water, 110 tbg pressure 7/17/00 9 oil, 542 MCF, 5 water, 110 tbg pressure 12 oil, 542 MCF, 4 water, 110 tbg pressure 7/18/00 7/19/00 12 oil, 541 MCF, 5 water, 110 tbg pressure 7/20/00 9 oil, 540 MCF, 5 water, 110 tbg pressure 7/21/00 18 oil, 516 MCF, 2 water, 105 tbg pressure 7/22/00 13 oil, 506 MCF, 3 water, 105 tbg pressure 13 oil, 502 MCF, 4 water, 105 tbg pressure 7/23/00

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Vaca Draw 16 State #3 Lea Co., NM

7/25/00 7 oil, 502 MCF, 6 water, 100 tbg pressure 7/26/00 7 oil, 502 MCF, 7 water, 100 tbg pressure 7/27/00 5 oil, 494 MCF, 5 water, 100 tbg pressure 7/28/00 10 oil, 502 MCF, 7 water, 100 tbg pressure	
7/26/00 7 oil, 502 MCF, 7 water, 100 tbg pressure 7/27/00 5 oil, 494 MCF, 5 water, 100 tbg pressure	
· · · · · · · · · · · · · · · · · · ·	
7/28/00 10 oil 502 MCF. 7 water, 100 tbg pressure	
······································	
7/29/00 10 oil, 503 MCF, 7 water, 100 tbg pressure	
7/30/00 9 oil, 494 MCF, 5 water, 100 tbg pressure	
7/31/00 5 oil, 494 MCF, 6 water, 100 tbg pressure	
8/01/00 5 oil, 502 MCF, 3 water, 100 tbg pressure	
8/02/00 36 oil, 478 MCF, 0 water, 100 tbg pressure	
8/03/00 11 oil, 485 MCF, 3 water, 100 tbg pressure	
8/04/00 16 oil, 497 MCF, 3 water, 100 tbg pressure	
8/05/00 14 oil, 495 MCF, 3 water, 100 tbg pressure	
8/06/00 13 oil, 495 MCF, 4 water, 100 tbg pressure	
8/07/00 2 oil, 458 MCF, 3 water, 100 tbg pressure	
8/08/00 5 oil, 459 MCF, 0 water, 100 tbg pressure	
8/09/00 6 oil, 470 MCF, 0 water, 100 tbg pressure	
RU Pro slickline. RIH with $1-3/4$ " gauge ring and tagged bottom at $13672 + KB$ correction. RD slickline. Ran gauge ring in preparation for a production log on $8/1$)/00.
 8/10/00 32 oil, 465 MCF, 12 water, 100 tbg pressure, 100 csg pressure RU Baker Atlas mast truck, 10 K lubricator, and logging truck. TIH with productio logging tools and wireline while well is flowing. Pull tools through all perfs to check flow. Shut well in to check for cross flow between perfs. 2 HR SITP at 650 psi. TO 	k
with same. RD Baker Atlas. Put well on line.	
8/11/00 13 oil, 486 MCF, 6 water, 100 tbg pressure, 100 csg pressure	
8/12/00 13 oil, 475 MCF, 5 water, 100 tbg pressure, 100 csg pressure	
8/13/00 13 oil, 480 MCF, 3 water, 100 tbg pressure, 100 csg pressure	
8/14/00 5 oil, 460 MCF, 1 water, 100 tbg pressure, 100 csg pressure	
8/15/00 5 oil, 465 MCF, 2 water, 100 tbg pressure, 100 csg pressure	
8/16/00 21 oil, 460 MCF, 2 water, 75 tbg pressure, 100 csg pressure	
8/17/00 0 oil, 105 MCF, 0 water, 2300 tbg pressure, 100 csg pressure, shut in	
8/18/00 0 oil, 0 MCF, 0 water, 2600 tbg pressure, 50 csg pressure, shut in	
8/19/00 0 oil, 0 MCF, 0 water, 2800 tbg pressure, 50 csg pressure, shut in	
8/20/00 15 oil, 669 MCF, 5 water, 250 tbg pressure, 50 csg pressure	
8/21/00 15 oil, 559 MCF, 8 water, 100 tbg pressure, 110 csg pressure	
Put rig on 6 lines. Load rig to location. RU with matting boards. Set 3 sets of pipe racks.	

Vaca Draw 16 State #3 Lea Co., NM

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8/22/00 11 oil, 535 MCF, 5 water, 100 tbg pressure, 110 csg pressure
Pumped 25 bbls 10# brine in tubing to kill well. ND tree. Received 3-1/2" subs.
Pumped 95 bbls 10# brine. Removed tubing hanger and BO2 bushing. NU 7-1/16"
5000 Hyd BOP. Attempted to released TOSSD. Pumped 37 more bbls 10# brine and tubing loaded up. This is a total of 157 bbls of 10# brine. Attempted to release packer and TOSSD. Tools would not release. After pumping fluid each time, the tubing was on a strong vacuum. LWOTT, SDON. Sent complete tree to National in Odessa for repair and to store.

- 8/23/00 Well is open to sales line. Sold 4.8 MCF overnight. Recovered zero fluid in stock tanks. Open well to pit with fluid unloading. Loaded tubing with 20 bbls 10# brine. Worked pipe from 65,000 to 160,000. Unable to see any on/off tool movement. Loaded tubing/casing annulus with 38 bbls brine. Worked pipe without success. Bled tubing off with water pockets and gas blowing 30'. Loaded tubing with 25 bbls and started pumping with pressure. Pumped a total of 37 bbls at 800 psi. SD with pressure bleeding to 300 psi. Pump additional 32 bbls with pressure gradually increasing to 2500 psi at .6 BPM. SD with 2400 psi, 2 minutes 2000 psi, 4 minutes 1850 psi, 10 minutes 1650 psi, 15 minutes 1500 psi, 20 minutes 1350 psi, 25 minutes 1300 psi, 30 minutes 1220 psi, 35 minutes 1160 psi. RD pump truck. Install gauge in tubing with pressure at 1200 psi. SDON.
- 8/24/00 Tubing pressure 2000 psi. This is an 800 psi increase in 18 hours. RU Kuykendall slickline and run BHP gauges stopping at surface, 1000, 3000, 6000, 9000, 11000, 12000, 13300, and 13599. The clock malfunctioned on this run. Replace clock and re-run gauges as above. BHP is 7003 at mid perf. RIH with 1.875 blanking plug and attempted to set in on/off tool profile. Plug would not set. Re-dress and re-run tool attempting to set in middle X nipple. Plug would not set in middle or top X nipple. RIH with 1.875 XN plug and attempted to set in bottom nipple. Plug would not set in XN nipple RD slickline. Installed choke and started bleeding down tubing. Tubing pressure is 2200 psi. Bled pressure to 1400 psi and fluid to surface in 50 minutes. Switched to flow condensate to production vessel and sell gas. As of 6:00 am, 8/25/00, tbg pressure at 70, flow rate at 500-740 MCF. Production for 9 hours, 9 oil, 96 water. Well loaded up several times during night with flowrate of 145 MCF. Open to pit. Unloading fluid at 6-9 BPH rate. After fluid unloaded, pressure increased. Return to sales line with rate over 500 MCF on a 48/64 choke.

8/25/00	Shut in
8/26/00	Shut in
8/27/00	Shut in

Vaca Draw 16 State #3 Lea Co., NM

- 8/28/00 Well was left open over weekend with a tester on location. The well is flowing to pit. Pumped 100 bbls in tubing to kill well. PU power swivel and start working torque to packer. Worked tubing from 40,000-160,000 with 9 rounds of torque. Pump additional 60 bbls for a total of 160 bbls. Could not see any movement in on/off tool. RD swivel and RU Rotary wireline to run free point. Pulling from 125,000-145,000 free point showed tubing free to TOSSD. Torque is being transferred to TOSSD. RD wireline. Started working packer with torque and higher weights. Tubing showed some free travel at 190,000 while pulling to 203,000. Worked tubing from 180,000-95,000. Pulled to 203,000 and on slack off tubing showed a solid lick at 145,000. Worked tubing from 130,000-180,000 with free point showing at 140,000 each time. Applied torque and worked packer. Pulled to 170,000 and packer pulled free. Slowly pulled packer with drag while laying down 3-1/2" tubing. Keeping hole full while pulling tubing. Laid down a total of 32 joints pulling packer into the 7" casing. SWI, SDON.
- 8/29/00 SITP 1000#, SICP 950#. Release pressure. Pump 15 bbls brine water down tubing, well circulates. TOH to 9700'. Circulate hole capacity with brine water (fluid cut with scattered gas). Continue TOH and lay down 3-1/2" tubing. Bull Dog Services loads and hauls 407 joints 3-1/2" tubing to their yard in Hobbs. Take delivery of 13,000' of 2-3/8" L-80 tubing. Complete TOH with tubing and packer. SDFN.
- 8/30/00 CP 300#. Release pressure. Pick up and TIH with 3.635" bit, bit sub, and tubing. Must stop from time to time to pump brine water down tubing for control. RU tubing stripper. Continue TIH with blow down line from casing to pit. TIH to 13380'. Leave casing open to pit through 20/64" choke. (390 joints tubing in hole.) SDON.
- 8/31/00 SITP 1000#, casing open to pit. Release pressure. Pump 60 bbls brine water down tubing. Pick up and TIH with tubing. Tag liner at 12390' KB (tubing measure). TIH to tag fill at 13,690'. RU swivel. Change stripper rubber. Wash down 50' to 13,740'. Tag solid. Circulate capacity of hole with brine water. Lay down 15 joints tubing. TOH and stand back 378 joints (40 joints in hole). Leave casing open to pit through 20/64 choke. SDON.
- 9/01/00 SITP 300#. Casing open to pit. Release pressure. Pump 20 bbls brine water down tubing. TOH with remainder of tubing. Pick up and TIH with pump out plug (1840 psi), XN nipple, 1 joint tubing, X nipple, 1 joint tubing, packer, on/off tool with X nipple, and 418 joints tubing. Testing at 9000 psi above slips. Set packer at 13,269'. Get off on/off tool. Pump 450 bbls brine water with packer fluid down tubing, circulate up casing. Shut well in.

Vaca Draw 16 State #3 Lea Co., NM

9/2/00	couplin annulus water. (perfora 2 coupl	0, SICP - 0. ND BOP. Latch on/off tool. NU g, and wrap around to 10,000 psi. Pump out s and packer to 1100# for 30 min. RU flow lin Gas to surface in 1 hr 40 min. Put on line. Let tions 9/5/00. Note: Tree is 2-9/16, 10K with 2 ing and 2-3/8 wrap around.	plug in tubing at 18 ie. Open to pit, beg ft flowing over wee	50#. Test ins to unload kend. Will add
	I joint	2-3/8 L80 4.7# EUE tubing new	31.50	
		ditto sub	6.06	
	417 jts	ditto tubing	13216.40	
	-	on/off tool with 1.875 X nipple	1 75	@ 13267.96
		Guiberson 4-1/2 x 2-3/8 UNI VI packer	6.88	
	1 ioint	ditto tubing	31.78	15205.71
	- J	1.875 X nipple	1.18	@ 13308.37
	1 ioint	ditto tubing	30.88	W 15508.57
	- joint	1.875 X nipple with 1.791 no-go	1.38	@13340.43
		Pump out plug/wireline re-entry guide		@13340.43
	420 :+=		0.55	
	420 JIS	total tubing and tools	13328.36	
		Slack off on packer for 12 pts compression	<u>-6.00</u>	
			13322.36	
		KB adjustment	<u>20.00</u>	
		EOT KB	13342.36	
9/05/00	CCL an Release sinker t 1.83" g TIH win further same. 1	b) psi. RU Baker Atlas with 5K lubricator and d sinker bars. Tag at XN nipple at 13,338' (E crew for day. Wait on Pro Wireline 3 hours. bar, and jars. Tag at 13,397' (slick line measur auge ring and tools. Tag no-go at 13,339' (slic th 1.687" bailer. Work same at 13,397'. Obsti progress. TOH with same. TIH with 1.79" lea Block shows single mark, possibly edge of pur SDON.	- line measure). To RU Pro. TIH with e). TOH with same k line measure). T ruction moves to 13 ad impression block	OH with same. 1.75 gauge ring, e. TIH with OH with same. 5,446'. No c. TOH with
9/06/00	RD Bal	er Atlas Belease rig grow for day BUDro W	Vigaling TIL with	1 75 start blind

9/06/00 RD Baker Atlas. Release rig crew for day. RU Pro Wireline. TIH with 1.75 steel blind box, sinker bar, jars, 2 sinker bars, and wireline. Tag at 13,446'. Jar down one hour, and pushed obstruction to 13,456'. Jar down for 45 minutes more, no movement. TOH with same. Find that blind box has 'mushroomed' to 1.77". RD Pro. Leave well on line. SDON.

9/07/00

RD Basic well service. Will evaluate economics of further attempts to clear casing.

Vaca Draw 16 State #3 Lea Co., NM

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0/09/00	
9/08/00	0 oil, 361 MCF, 11 water, 80 tbg pressure
9/09/00	0 oil, 384 MCF, 10 water, 41 tbg pressure
9/10/00	5 oil, 392 MCF, 2 water, 37 tbg pressure
9/11/00	0 oil, 404 MCF, 12 water, 80 tbg pressure
9/12/00	0 oil, 413 MCF, 12 water, 80 tbg pressure
9/13/00	0 oil, 419 MCF, 11 water, 80 tbg pressure
9/14/00	0 oil, 434 MCF, 0 water, 110 tbg pressure
9/15/00	0 oil, 434 MCF, 0 water, 110 tbg pressure
9/16/00	0 oil, 441 MCF, 0 water, 110 tbg pressure
9/17/00	0 oil, 445 MCF, 15 water, 110 tbg pressure
9/18/00	0 oil, 448 MCF, 5 water, 110 tbg pressure
9/19/00	0 oil, 453 MCF, 0 water, 110 tbg pressure
9/20/00	0 oil, 454 MCF, 0 water, 110 tbg pressure
9/21/00	0 oil, 455 MCF, 0 water, 110 tbg pressure

Gas Component Analysis - Date Sampled: 09/21/00

		Mol %	GPM
Carbon Dioxide	CO2	0.1496	
Nitrogen	N2	0.6640	
Methane	C1	86.9474	
Ethane	C2	7.4330	1.9868
Propane	C3	2.4463	0.6736
Iso-Butane	IC4	0.4518	0.1478
Nor-Butane	NC4	0.7097	0.2237
Iso-Pentane	IC5	0.2446	0.0895
Nor-Pentane	NC5	0.2398	0.0868
Hexanes Plus	C6+	<u>0.7138</u>	<u>0.3114</u>
TOTAL		100.0000	3.5196

Remarks:

H2S on location: None detected

Pressure Base: 14.7300
Real BTU Dry: 1167.82
Real BTU Wet: 1147.50
Real Calc. Specific Gravity: 0.6647

9/22/00	16 oil, 455 MCF, 10 water, 110 tbg pressure
9/23/00	16 oil, 448 MCF, 10 water, 110 tbg pressure
9/24/00	10 oil, 448 MCF, 10 water, 160 tbg pressure
9/25/00	10 oil, 444 MCF, 0 water, 110 tbg pressure
9/28/00	16 oil, 451 MCF, 2 water, 110 tbg pressure
09/29/00	12 oil, 451 MCF, 5 water, 100 tbg pressure
09/30/00	12 oil, 450 MCF, 3 water, 110 tbg pressure
10/01/00	11 oil, 450 MCF, 3 water, 110 tbg pressure