YATES PETROLEUM CORPORATION
105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

September 11, 1991

State of New Mexico
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, NM 87501
ATTN: Mr. David Catanach

Dear Mr. Catanach,

Enclosed are the necessary documents for obtaining approval for the downhole commingling of the Medano VA State #2 located in E of Section 16, Township 23 South, Range 31 East.

Should you have any questions, please feel free to contact me at (505) 748-1471. Thank you.

Sincerely,

Brian Collins
Petroleum Engineer

BC/th

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

September 11, 1991

Kaiser Francis Oil & Gas Company
P. O. Box 840234
Dallas, TX 74121

Gentlemen:

Enclosed please find a copy of the application for commingling the Medano VA State #2 located in E of Section 16-T23S-R31E. This copy of the application to commingle fulfills our requirement to notify offset operators per NMOCD Rule 303 D (10).

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Petroleum Engineer

BC/th

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

September 11, 1991

Marathon Oil Company
P. O. Box 552
Midland, TX 79702

Gentlemen:

Enclosed please find a copy of the application for commingling the Medano VA State #2 located in E of Section 16-T23S-R31E. This copy of the application to commingle fulfills our requirement to notify offset operators per NMOCD Rule 303 D (10).

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Petroleum Engineer

BC/th

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

September 11, 1991

Mobil E & P
P. O. Box 84080
Dallas, TX 75284

Gentlemen:

Enclosed please find a copy of the application for commingling the Medano VA State #2 located in E of Section 16-T23S-R31E. This copy of the application to commingle fulfills our requirement to notify offset operators per NMOCD Rule 303 D (10).

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Petroleum Engineer

BC/th

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

September 11, 1991

Santa Fe Energy Company
1616 S. Voss Road
Suite 700
Houston, TX 77057

Gentlemen:

Enclosed please find a copy of the application for commingling the Medano VA State #2 located in E of Section 16-T23S-R31E. This copy of the application to commingle fulfills our requirement to notify offset operators per NMOCD Rule 303 D (10).

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Petroleum Engineer

BC/th

Application For Downhole Commingling
Medano VA State #2
Unit E Sec. 16-T23S-R31E
Eddy County, New Mexico

Reason For Application: Yates Petroleum Corporation respectfully requests approval to commingle the Morrow from 14011' to 14092' with the Atoka yet to be tested. Our intention is to maximize gas recovery from the Morrow and prevent mineral resource waste. As will be demonstrated in this application, the Morrow reservoir is limited in size and will deplete rapidly. The estimated ultimate recovery of 79-89 MMCF from the Morrow will never pay out the investment (approx. $2,000,000) required to drill and complete the captioned well.

1> Name and Address of the Operator:

Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
ATTN: Brian Collins

2> Lease Name, Well Number, Well Location, Name of the Pools to be commingled:

Medano VA State #2
Unit E Sec 16-T23S-R31E
1980' FNL & 660' FWL
Pools: West Sand Dunes Morrow
Undesignated Atoka

3> A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.

See Attachment A (map)

4> A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas, and water produced from each zone.

See attached production plot.

5> A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or no production history. However, a complete description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)

See attached production plot and completion summary. See also the attached reserve estimate derived from the DP/Q versus cumulative production technique.

Exponential decline curve analysis of the production plot results in an EUR of 79 MMCF for the Morrow. An EUR of 89 MMCF was derived using the DP/Q versus cumulative production technique of reserve estimation. Both reserve estimation techniques support our contention that the Morrow is a limited reservoir and that it will never pay the well out.

We propose to test multiple Atoka intervals until commercial production is established and commingle with the Morrow. We want to commingle the Morrow with the Atoka to maximize drainage from the Morrow and prevent the waste of mineral resources. We won't know what the Atoka will produce until we've tested it.

6> Estimated bottom-hole pressure for each artificially lifted zone. A current (within 30 days) measured bottom-hole pressure for each zone capable of flowing.

See attached BHP BU data taken when well originally completed. Last Morrow BHP was 8044 psi taken 1-17-91. BHP data within last 30 days is not available for the Morrow. Estimated BHP for the Atoka is 7960 psi from a drill stem test (Attached)

7> A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore.

Both Morrow and Atoka will produce sweet gas. Don't anticipate any compatibility problems.

8> A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams.

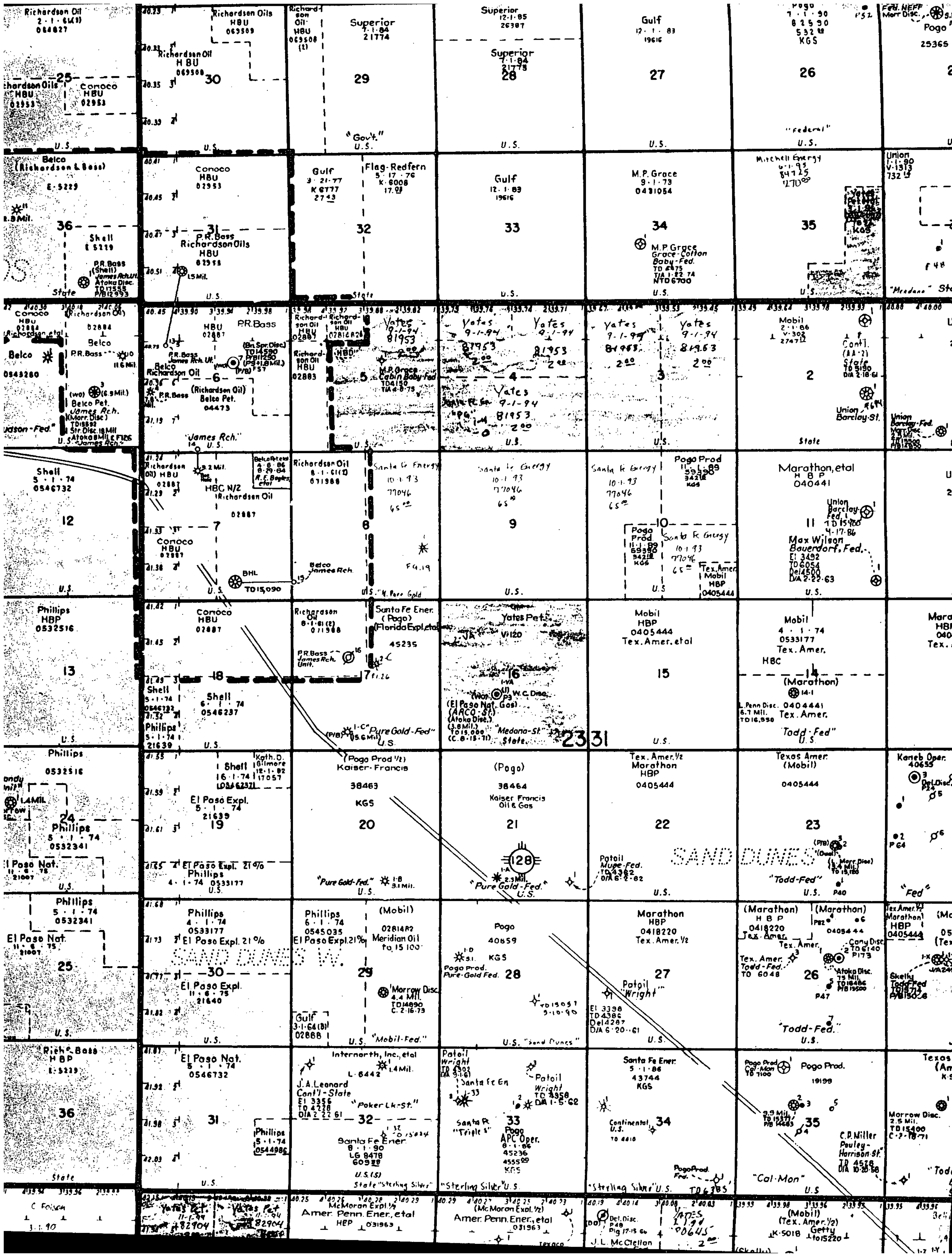
Both Morrow and Atoka will produce sweet gas. The value of the gas will not be affected by commingling.

9> A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determinging such formula.

We propose to test the Atoka before recommending an allocation formula. As soon as the Atoka has been tested, we will submit an allocation formula.

10> A statement that all offset operators and, in the case of a well on federal land, the US BLM, have been notified in writing of the proposed commingling.

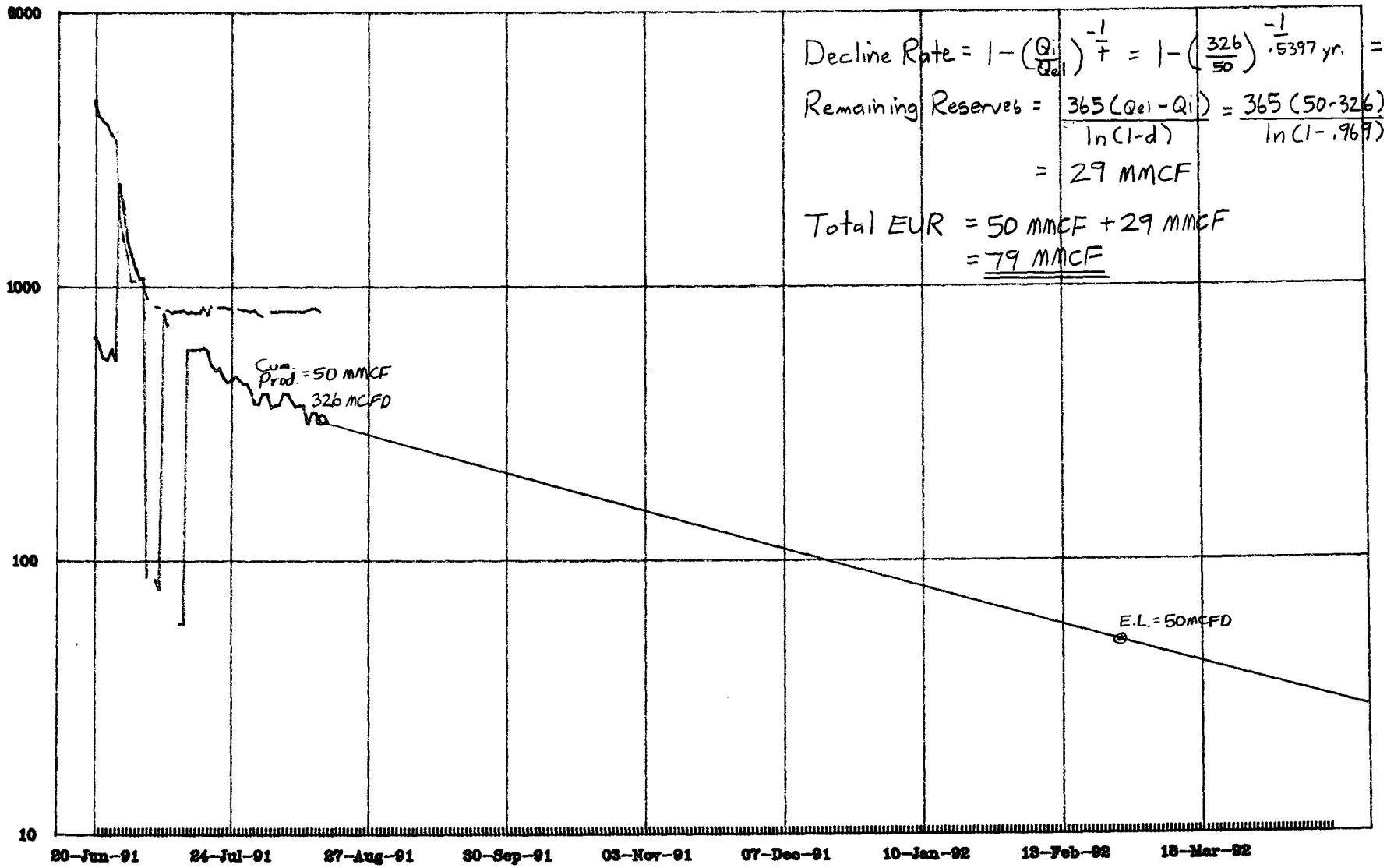
The Offset Operators for this area were notified of the proposed commingling of the Medano VA State #2.



Richardson Oil
Richardson Oils HBU 069509
Superior 7·1·84 21774
Superior 12·1·85 26387
Gulf 12·1·83 19616
Pogo KGS
Pogo 25365
25
Conoco HBU 02953
30
29
Superior 7·1·84 21773
28
27
26
"Gov't."
"Federal"
U.S.
Belco (Richardson L. Bass)
E·5229
Conoco HBU 02953
Gulf K 6777
Flag-Redfern 5·17·76 K 6008
Gulf 12·1·89 19616
M.P. Grace 9·1·73 0431054
Mitchell Energy
Union
36
Shell E 5229
31
P.R. Bass
Richardson Oils HBU 02953
32
33
34
35
M.P. Grace Grace-Cotton Baby-Fed.
State
"Medano" State
Conoco
Richardson Oil
Belco
P.R. Bass
HBU 02887
P.R. Bass James Rch. Ut.
Belco Richardson Oil
6
(Richardson Oil) Belco Pet. 04473
Belco Pet. James Rch. (Morr. Disc.)
"James Rch."
Yates 9-1-94 81953
5
M.P. Grace Cabin Baby-Fed
4
3
Mobil 2·1·86
Cont'l. State
2
Union Barclay-St.
Union Barclay-Fed.
State
Shell 5·1·74 0546732
Richardson Oil HBU 02887
HBC N/2 Richardson Oil 02887
Richardson Oil 8·1·61 071988
Santa Fe Energy 10·1·93 77046
Pogo Prod 11·1·89 59390 KGS
Marathon, etal H B P 040441
12
7
Conoco HBU 02887
8
Belco James Rch.
9
Pogo Prod. 11·1·89 59390 KGS
10
Santa Fe Energy 10·1·93 77046
Tex. Amer. Mobil HBP 0405444
11
Union Barclay-Fed.
Max Wilson Bauerdorf, Fed.
Phillips HBP 0532516
Conoco HBU 02887
Richardson Oil 8·1·61 071988
Santa Fe Ener. (Pogo) (Florida Expl. etal)
45235
P.R. Bass James Rch. Unit
Yates Pet.
Mobil HBP 0405444 Tex. Amer. etal
Mobil 4·1·74 0533177 Tex. Amer.
HBC
13
18
Shell 6·1·74 0546237
16
15
14
(Marathon)
(El Paso Nat. Gas) (ARCO-St.)
"Medano-St."
State
"Pure Gold-Fed"
"Todd-Fed"
23 31
Phillips 0532516
Shell 6·1·74
(Pogo Prod 1/2) Kaiser-Francis 38463 KGS
(Pogo) 38464 Kaiser Francis Oil & Gas
Tex. Amer. 1/2 Marathon HBP 0405444
Texas Amer. (Mobil) 0405444
Kaneb Oper. 40655
24
Phillips 5·1·74 0532341
El Paso Expl. 5·1·74 21639
19
20
21
22
23
El Paso Nat.
El Paso Expl. 21%
Phillips 4·1·74 0533177
"Pure Gold-Fed."
128
Potoil Muge-Fed.
SAND DUNES
"Todd-Fed"
"Fed"
Phillips 5·1·74 0532341
El Paso Nat.
25
Phillips 4·1·74 0533177
El Paso Expl. 21%
SAND DUNES W.
30
El Paso Expl. 11·6·75 21640
Phillips 6·1·74 0545035
El Paso Expl. 21%
(Mobil)
Meridian Oil
29
Morrow Disc
Gulf 3·1·64 02888
"Mobil-Fed."
Pogo 40659 KGS
Pogo Prod. Pure-Gold Fed.
28
"Sand Dunes"
Marathon HBP 0418220 Tex. Amer. 1/2
27
Potoil "Wright"
(Marathon) H B P 0418220 Tex. Amer.
(Marathon)
Tex. Amer. Todd-Fed.
26
"Todd-Fed."
Rich. Bass H B P E-5229
36
El Paso Nat. 5·1·74 0546732
31
Internorth, Inc., etal L-6442
J.A. Leonard Cont'l-State
"Poker Lk-St."
32
Phillips 5·1·74 0544986
Santa Fe Ener. 8·1·90 LG 8478
State "Sterling Silver"
Potoil Wright
Santa Fe En
Potoil Wright
33
Pogo APC Oper. 8·1·86 45236 KGS
"Sterling Silver" U.S.
Santa Fe Ener. 5·1·86 43744 KGS
Continental U.S.
34
Pogo Prod.
Pogo Prod. 19199
35
C.P. Miller Pauley-Harrison St.
"Cal-Mon"
Texas
Morrow Disc.
"Todd"
C. Folsom
Yates Pet.
McMoran Expl. 1/2 Amer. Penn. Ener., etal HBP 031963
(McMoran Expl. 1/2) Amer. Penn. Ener., etal 031963
J.L. McClellan
(Mobil) (Tex. Amer. 1/2) Getty

MEDANO VA STATE #2

RATE & FLOWING TUBING PRESSURE VS. TIME



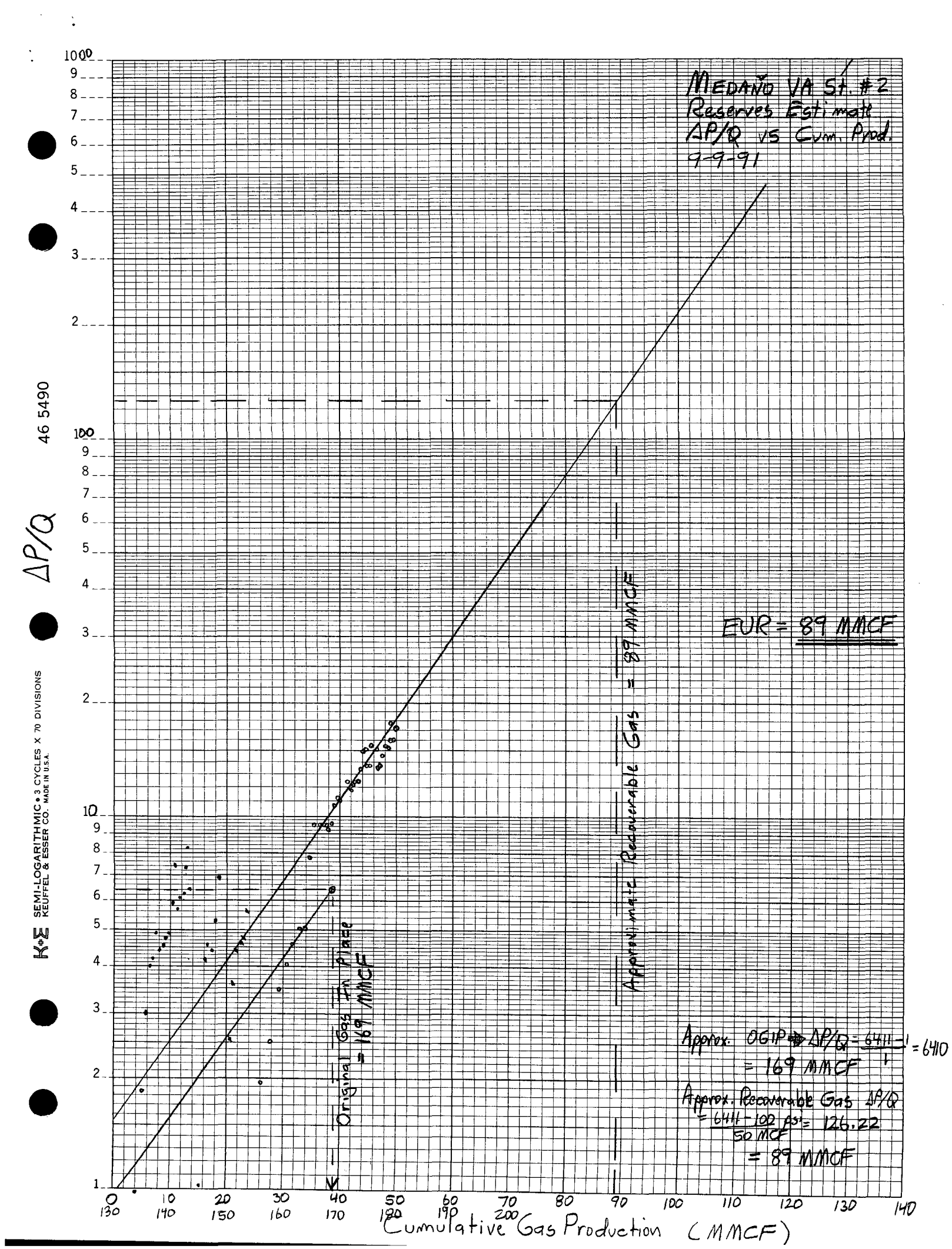
$$\text{Decline Rate} = 1-\left(\frac{Q_i}{Q_{el}}\right)^{\frac{-1}{t}} = 1-\left(\frac{326}{50}\right)^{\frac{-1}{.5397\ yr.}} = 96.9\%/yr.$$

$$\text{Remaining Reserves} = \frac{365(Q_{el}-Q_i)}{\ln(1-d)} = \frac{365(50-326)}{\ln(1-.969)}$$

$$= 29\ MMCF$$

$$\text{Total EUR} = 50\ MMCF + 29\ MMCF$$

$$= \underline{\underline{79\ MMCF}}$$


MEDANO VA St. #2
Reserves Estimate
ΔP/Q vs Cum. Prod.
9-9-91
EUR = 89 MMCF
Approximately Recoverable Gas = 89 MMCF
Original Gas In Place = 169 MMCF
Approx. OGIP ⇒ ΔP/Q = 6411 - 1 / 1 = 6410
= 169 MMCF
Approx. Recoverable Gas ΔP/Q
= 6411 - 100 psi / 50 MCF = 126.22
= 89 MMCF
ΔP/Q
Cumulative Gas Production (MMCF)
46 5490
KE SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

MEDANO VA STATE 2
DELTA P/Q VERSUS CUMULATIVE PRODUCTION TECHNIQUE OF RESERVE ESTIMATION
ORIGINAL WELLHEAD SHUT IN PRESSURE = 6411 PSI
DELTA P/Q = (ORIG. WH SHUT IN PRESS. - FLOWING TUBING PRESSURE)/PROD. RATE
9-5-91

Flowing Tubing Pressure (psi)	Production Rate (mcfpd)	Cumulative Production (mmcf)	Delta P/Q
4700	1752	3.952	0.98
4500	1031	4.983	1.85
4200	733	5.716	3.02
4000	598	6.314	4.03
3900	598	6.912	4.20
3800	531	7.443	4.92
3725	613	8.056	4.38
3650	609	8.665	4.53
3580	598	9.263	4.73
3575	580	9.843	4.89
3425	509	10.352	5.87
3450	398	10.75	7.44
3500	516	11.266	5.64
3450	487	11.753	6.08
3510	465	12.218	6.24
3390	411	12.629	7.35
3250	382	13.011	8.27
3420	468	13.479	6.39
4200	2163	15.642	1.02
4125	550	16.192	4.16
3825	565	16.757	4.58
3500	665	17.422	4.38
3400	569	17.991	5.29
3300	451	18.442	6.90
4750	656	20.713	2.53
4200	610	21.323	3.62
4000	551	21.874	4.38
3900	543	22.417	4.62
3600	593	23.01	4.74
3400	539	23.549	5.59
1800	2380	25.929	1.94
1500	1955	27.884	2.51
1300	1470	29.354	3.48
1050	1323	30.677	4.05
1050	1161	31.838	4.62
1000	1068	32.906	5.07
1000	1068	33.974	5.07
820	720	34.694	7.77
800	588	35.651	9.54
810	591	36.242	9.48
800	588	36.83	9.54
800	588	37.418	9.54
840	602	38.02	9.25
790	584	38.604	9.63
850	517	39.121	10.76

840	494	39.615	11.28
840	504	40.119	11.05
840	463	40.582	12.03
830	447	41.029	12.49
830	455	41.484	12.27
830	471	41.955	11.85
830	460	42.415	12.13
820	444	42.859	12.59
820	442	43.301	12.65
810	419	43.72	13.37
820	374	44.094	14.95
790	372	44.466	15.11
780	407	44.873	13.84
780	407	45.28	13.84
810	363	45.643	15.43
810	369	46.012	15.18
810	372	46.384	15.06
810	408	46.792	13.73
810	405	47.197	13.83
810	382	47.579	14.66
810	365	47.944	15.35
810	369	48.313	15.18
810	369	48.682	15.18
820	316	48.998	17.69
830	346	49.344	16.13
830	346	49.69	16.13
810	326	50.016	17.18

JARREL SERVICES. INC.
Box 1230
Hobbs, New Mexico 88240

<<Static Gradient Survey>>

Date: 01/17/91 @ 12:30 pm

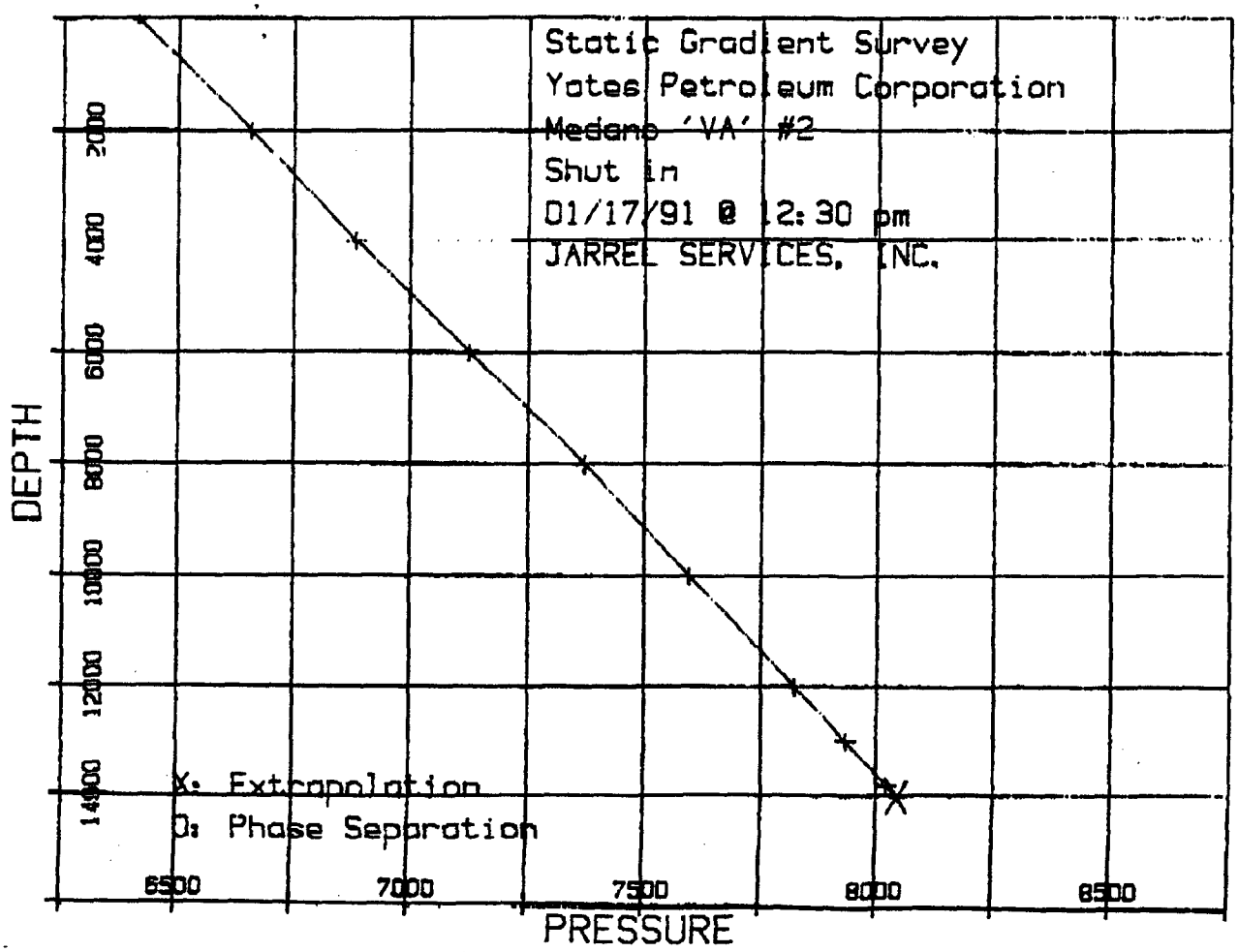
COMPANY: Yates Petroleum Corporation
LEASE: Medano 'VA'
FIELD: West Sand Dunes
COUNTY: Eddy
STATUS: Shut in
PERFORATIONS FROM: 14011 ft
DEPTH: 13800 ft

CONTACT: Ed Perry
WELL: #2
ZONE: Upper Morrow
STATE: New Mexico
OPERATOR: Standefer
TO: 14021 ft
TEMPERATURE: 192°F

TABULAR DATA

DEPTH (ft)	PRESSURE (psi)	GRADIENT (psi/ft)	EXPLANATIONS
0	6411		
2000	6657	0.123	
4000	6883	0.113	
6000	7124	0.121	
8000	7370	0.123	
10000	7596	0.113	
12000	7821	0.113	
13000	7932	0.111	
13800	8020	0.110	
14016	8044	0.110	<=Extrapolated BHP

NOTE: Explanations are included to clarify calculated data points.



WELL TEST INTERPRETATION REPORT #:123735 CLIENT : YATES PETROLEUM CORPORATION		PAGE: 2, 26 JUL-80
REGION :WTD DISTRICT:HOBBS BASE :MDS ENGINEER:G.D. BROOKS	SEQUENCE OF EVENTS	FIELD:W.SAND DUNES ZONE :ATOKA WELL :MEDANO VA ST#2 LOCATION:S16T23S31E

DATE	TIME (HR:MIN)	DESCRIPTION	ET (MINS)	BHP (PSIA)	WHP (PSIG)
24-JUL	11:13	SET PACKER	-2		
	11:15	START FLOW CLOSED CHAMBER	0	4792	0
	11:18	END FLOW & START SHUTIN	3	4792	8
	12:04	END SHUTIN	49	7960	8
	12:05	START FLOW CLOSED CHAMBER	50	5093	8
	12:18	LEAVE SHUT IN TILL 1000# AT SURFACE .OPEN TO SEP.			836
		PTS REPORT ON NEXT PAGE			
	14:05	END FLOW & START SHUTIN BLEED GAS AND WATER FROM DRILL PIPE.	170	5818	1387
	17:45	END SHUTIN	390	7939	
	17:49	Pulled Loose	394	9020	

FORM# 11.00-112588

SCHLUMBERGER

****

Laying down drill pipe. DMC $0; CMC $127,484; DC $7043; CC $1,466,250

9-5-90 TD 14886'. Lay down drill pipe and drill collars. Ran cement bond log. Clean pits. The 3-5/8" tool would not go past 14222'. Logged back to top of liner. Ran 1 1.6" tool and logged from 14450' to 14200'. Tagged bottom at 14780' (wireline). Nippled down BOP, nippled up X-mas tree. Rig released 5:00 AM 9-5-90.

9-6-90 Waiting on completion unit.

9-7-90 Waiting on completion unit.

9-8-10-90 Waiting on completion unit.

9-11-90 Moved in and rigged up pulling unit. Unload tubing. Nippled down tree. Nippled up 7-1/16" 1000# Hydrolic BOP. No pressure on well. DC $800

9-12-90 Pick up 3-3/4" bit and scraper. Pick up 2-3/8" tubing (4000'), crossover, 1 joint 2-7/8" tubing. Displace mud with well at 4000'. Pick up 2-7/8" tubing. Displacing mud every 2000'. Final depth 11,000'. Displace mud. Shut in. (9.8 brine to displace mud). DC $3500

9-13-90 No pressure on well. TIh to 14640'. Stranded tubing line. Displaced mud out of liner. Change tubing line on unit. TOH with tubing. Shut down. Prep to run tubing conveyed guns to perforate Lower Morrow perforations.

9-14-90 TIH with Vann System tubing conveyed perforating guns to perforate Morrow 14352-62', 14389-14402' (4 JSPF). Rigged up Jarrel Services to run GR/CCL to position guns. Spaced out. Set packer. Nippled down BOP, nippled up tree. Pumped 15 bbls fluid down tubing to acidize vent device, slight blow on tubing, unsure if vent opened. Pumped additional 10 bbls. Drop detonating bar at 6;40 PM, no indication guns fired. Watched for 40 minutes, blow on tubing. Shut in. THIS AM - 140# on gauge. Bled off to 25#. Started burning. Bled to 0 psi. Prep to fish detonating bar.

9-14-90 Overnight SITP 140#. Bled off. Flared gas at 25#. Bled to 0 psi. Rig up Jarrel Services to fish detonating bar. Fluid level 3400' from surface. Fish bar. Start swabbing. Recovered 77 bbls brine and mud. Final fluid level 8600'. DMC $18,000

9-15-90 Overnight SITP 150#. Flared gas. On first swab run, fluid level 4500'. Made 14 runs, recovered 57 bbls. Swabbed down to 2-7/8" x 2-3/8" x-over at 2:30. Made hourly runs until 6:30. Had 500' entry per hour. Recovered 69 bbls. Total recovered since swabbing 146 bbls. Shut in. DC $1600

9-16-90 Overnight SITP 40#. Flared gas. Initial fluid level 6500'. Swabbed dry to 2-7/8" x 2-3/8" x-over. Made 2 hourly runs. Total recovered 60 bbls, 206 bbls total recovered since perforating zones. DC $1400

WATER ANALYSIS:	9-15-90 last run	9-16-90 first run	9-16-90 last run
Sp. Gravity	1.060 @ 74	1.060 @ 74	1.065 @ 74
pH	6.4	6.6	6.5
Iron	Faint trace	fair trace	strong trace
H2S	N/D	N/D	N/D
Calcium	1774	1509	1577
Magnesium	206	321	319
Sod & Pot	36,053	35,168	37,137
Sulfate	717	731	732
Bicarbonate	529	529	596
Chloride	58,491	56,981	60,094

9-18-90 Overnight SITP 80#. Flared. Initial fluid level 5400'. Swabbed to X-over at 1:30. Recovered 58 bbls. Made hourly runs until 4:00. Shut in. Sample to Halliburton, Chlorides 60,000. This AM overnight SITP 60#, Flared. Initial fluid level 5500' (Grayish water). DC $1400

9-19-90 Overnight SITP 60#. Flared to pit. Initial fluid level 5500', water. Loaded tubing. Established pump in rate 3 BPM @ 4200#. Put on BOP. Tried to unset packer. After 4 hours got packer unset. Pulled out of liner with packer and guns. Shut in. DC $2500

9-20-90 TOH with remaining tubing. Lay down Vann Guns (all guns fired) and packer. TIH with 4-1/2" Halliburton S.V. EZ drill retainer. Did not feel top of liner. Retainer stacked out. Could not pull loose with retainer at 13722', would not test. Prep to TOH and drill retainer. DC $2480

9-21-90 TOH with stinger. TIH with 3-3/4" OD bit, casing scraper and 6 - 3-1/8" OD drill collars. Tagged retainer at 13722'. Drill top slips. Push down hole to 14620'. Attempt to circulate, bit plugged. Pulled 50 stands. Shut in. DC $3250

9-22-90 TOH with 3-3/4" bit and scraper. Rig up Schlumberger. TIH with 3.625" OD guage ring and junk basket to 14250'. TOH. TIH with 3.56" OD Baker 1-AA cement retainer and set at 14200'. TIH with stinger. Tag retainer and space out. Establish pump in rate 2.5 BPM @ 3700#. Sting out of retainer. Mix 75 sacks Class "H" cement with .2% CF-2 and .8% CF-9 and 75 sacks Class "H" cement with .4% WR-15 retarder. Spot within 5 bbls of retainer. Sting into retainer. Pump cement 2.5 BPM @ 3300#. With 130 sacks in formation, got 6300# squeeze, 10 sacks between retainer and perforations at 14352-402'. Stung out of retainer. Reversed 10 sacks cement to pit. Pulled 30 stands. Shut down. DC $3100

9-23-90 TOH with stinger. Pick up tubing conveyed perf assembly to perforate 14011-21' with 4 JSPF. TIH with tubing. Changing seals in modified couplings. Rig up Wedge Wireline. Logged GR/CCL (thru tubing) to position Vann guns. Spaced out. Set packer. Nippled down BOP. Nippled up tree. Tested to 8700#. Drop tube to open vent assembly. Good indication of vent opening. Shut in. DC $4100

9-24-90 Hook up 10000# flow line to test unit. Drop detonating bar to fire Vann guns. No indication of guns firing. Rig up Jarrel Wireline. Fished bar and drop tube. Fired guns with slick line bailer, small blow on tubing. Waited on bottom with bailer 30 minutes. TOH with bailer. Watched well 1-1/2 hour, no pressure. This AM overnight SITP 1675#, flow well. DC $7900

9-25-90 Overnight SITP 1675#. Flowed well down, did not unload any fluid. Rig up swab. Initial fluid level 7000', black water with solids. Pulled swab from x-over. Third run pulled 100'. Made 2 hourly runs, no fluid entry, good mist after each run then died off. Constant 10-15' flare. Shut in. This AM overnight SIP 2150#. DC $2550

9-26-90 OVernight SITP 2150#. Flowed to pit. Pressure bled to 10#. First swab run to x-over at 11000', no fluid. Load tubing with 69 bbls. Unset packer. Nippled down tree, nippled up BOP. Reverse tubing capacity. TOH with Vann gun (all shot). TIH with 4-1/2" Uni VI packer with knock out plug and 1.81XL, on/off tool. Set packer at 13916'. Nippled down BOP. Nippled up tree. Tested 8700#. Drop bar and knocked out plug. Strong blow up tubing. Backside stable. Shut in. This AM 9-26-90 overnight SITP 1900#. DC $3500

9-27-90 Overnight SITP 1900#. Flared to pit. Pressure to 10#. TIH with swab to 1100' x-over, no fluid. Rig up Halliburton. Acidized Morrow perforations 14011-14021' with 4000 gals MCA 7-1/2% acid with 500 SDF/N2 per bbl with 45 ball sealers. Max pressure 6900#. Broke to 6400# @ 3 BPM fluid. Avg pressure 6350#, avg rate 3 BPM fluid (4.3

BPM with N/2). ISDP 4910#, 5 min 4700#, 10 min 4650#, 15 min 4580#. Flowed 2 hours on 24/64" choke with 1100#. Opened to 32/64" choke and had 500# intermittent gas burning heavy mist. At 9:00 PM had 425# on 32/64" choke with constant flare with slight mist. Pinched back to 24/64" choke. Hourly pressure readings as follows:

10:00 PM	650#	3:00 AM	600#
11:00 PM	650#	4:00 AM	600#
12:00 AM	650#	5:00 AM	600#
1:00 AM	650#	6:00 AM	575#
2:00 AM	625#	7:00 AM	575# (2000 MCF)

9-28-90 FTP 575# on 24/64" choke = 1.9 MMCFGPD. Pressure remained until 1:00 PM - 560#, 2:00 - 560#. Rig up Jarrel. Ran 72 hour pressure bomb. DC $2400

9-29/10-1-90 Shut in.

10-2-90 Shut in.

10-3-90 Shut in.

10-4-90 Shut in.

10-5-90 Shut in.

10-6-8-90 Shut in.10-9-90 Shut in.

10-10-90 Rigged up Halliburton. SITP 6000#. Pumped 30,000 gals frac with 25% CO2, 10% methanol with 25000# 20/40 sand. Treating Pressures: Max 9000#, Avg 8500# at 10 BPM. ISDP 5150#, 5 mins 4900#, 10 mins 4850#, 15 mins 4800#. Shut in at 1:15 PM. Opened well to flow to pit at 8:15 PM, SITP 3800#. After flowing 2 hours opened to 32/64" with 1000#. Unloading CO2 and H2O. Flowing load back all night. Total load to recover 595 bbls. DC $36000; CC $36000

10-11-90 Flowing to pit on 32/64" choke, flaring intermittently heavy mist. Put 1/2" positive choke in at 5:00 PM. Burning continuously with 3' heavy mist at end of flowline. Heavy slug of fluid periodically putting out flare then re-igniting. Stabilized on 500# on 32/64" positive choke. DC $528; CC $36,528

10-12-90 TD 14886', PBTD 11400'. On a 24 hour official potential test taken 9-28-90, FTP 500# on 32/64" choke - 3200 MCFGPD thru perforations 14011-14021' Morrow. FINAL REPORT.

Yates Petroleum Corp. - Medano "VA" State #2 (Unit E) 16-23S-31E
**********Eddy County, New Mexico**

10-19-90 SITP 4750#. Opened well to 30/64" at 11:30 AM. Flowing 650# at 12:30 PM. Shut in at 8:30 PM with 600# on 30/64" choke. Rigged up Schlumberger mast truck and 10,000 psi lubricator. Perforated 14,068-14,092' with 2 SPF with thru tubing guns in 2 runs. First run shot at 4:00 AM with 3000 psi on tubing. No pressure increase. Second run shot at 7:00 AM with 3500 psi on tubing. No pressure increase. Rigging down perforters. Prep to flow this AM. DC $7500

10-20-22-90 Rigged down Schlumberger. SITP 4300#. Opened on 32/64" positive choke at 10:00 AM. Stabilized 480# at 5:00 PM. Flowed until 6:00 PM. Shut in. DC $7653

10-23-90 Shut in.

10-24-90 Shut in.

10-25-90 Shut in.

10-26-90 SITP 5400#. Rigged up Western 15000# tree saver. Acidized (via tubing) Morrow Lime perfs 14,068-14,092' with 6000 gals 15% acid with BAF + 8 ball sealers. Good break with first block 6400-5200#, no indications of ball action. Last block pressure climbing 6800#. Flush contained 1000 SCF/bbl. Treating Pressures: Max 7750#, Avg 6400# at 6 BPM. Flush 8.3 BPM with N2. ISDP 5500#, 5 mins 5150#, 10 mins 5000#, 15 mins 4950#. Opened well on 32/64" positive choke at 12:30 PM. At 4:00 PM stabilized 500# on 32/64" with heavy mist, constant flare. AT 6:00 PM, constant flare with occasional slug water. Hourly readings as follows:

TIME	CHOKE	PSI
7:00 PM	32/64	450
8:00 PM	32/64	450
9:00 PM	32/64	425
10:00 PM	32/64	450
11:00 PM	32/64	450
12:00 AM	32/64	425
1:00 AM	32/64	400
2:00 AM	32/64	400
3:00 AM	32/64	375
4:00 AM	32/64	350
5:00 AM	32/64	350
6:00 AM	32/64	350
7:00 AM	32/64	350

DC $12,200

10-27-90 ~~Pumped 72 bbls oil and 40 bbls water.~~ Disregard, wrong well.

10-28-90 ~~Pumped 77 bbls oil and 30 bbls water.~~

10-29-90 ~~Pumped 62 bbls oil and 40 bbls water.~~

10-30-90 No report.

10-31-90 No report.

11-1-90 Shut in.

11-2-90 Shut in.

11-3-5-90 Shut in.

11-6-90 Shut in.

11-7-90 Shut in.

11-8-90 Shut in.

11-9-90 Shut in. FINAL REPORT.