DATE IN 7/24/09	SUSPENSE	ENGINEER Warnell	LOGGED IN 7/24/09	TYPE PMX	APP NO. pTGW 1920554568

ABOVE THIS LINE FOR DIVISION USE ONLY

RECEIVED
2009 JUL 24 PM 1 26

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

MCA #94

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☒ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

R-PMX 153
WFX 234 ↕ (1964)

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

JALYN N. FISKE	Jalyn N. Fiske	REGULATORY SPECIALIST	7/6/09
Print or Type Name	Signature	Title	Date

jalyn.fiske@conocophillips.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: X Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No

II. OPERATOR: CONOCOPHILLIPS COMPANY

ADDRESS: 3300 N. "A" ST. BLDG. 6, MIDLAND, TX 79705

CONTACT PARTY: JALYN N. FISKE PHONE: 432.688.6813

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____ Yes _____ No
If yes, give the Division order number authorizing the project: PMX 153 / R-6157

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including: SEE PROCEDURE

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: JALYN N. FISKE TITLE: REGULATORY SPECIALIST

SIGNATURE: Jalyn N. Fiske DATE: 7/6/09

E-MAIL ADDRESS: jalyn.fiske@conocophillips.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Side 1

INJECTION WELL DATA SHEET

OPERATOR: CONOCOPHILLIPS COMPANY

WELL NAME & NUMBER: MCA UNIT #94

WELL LOCATION:	660' FEL & 660' FSL	P	20	17S	32E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing SEE PROCEDURE

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft^3

Top of Cement: _____ Method Determined: _____

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft^3

Top of Cement: _____ Method Determined: _____

Total Depth: _____

Injection Interval

4098' feet to 4225'

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" Lining Material: _____

Type of Packer: OTIS INTER-LOCK

Packer Setting Depth: 3612'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____ Yes X No

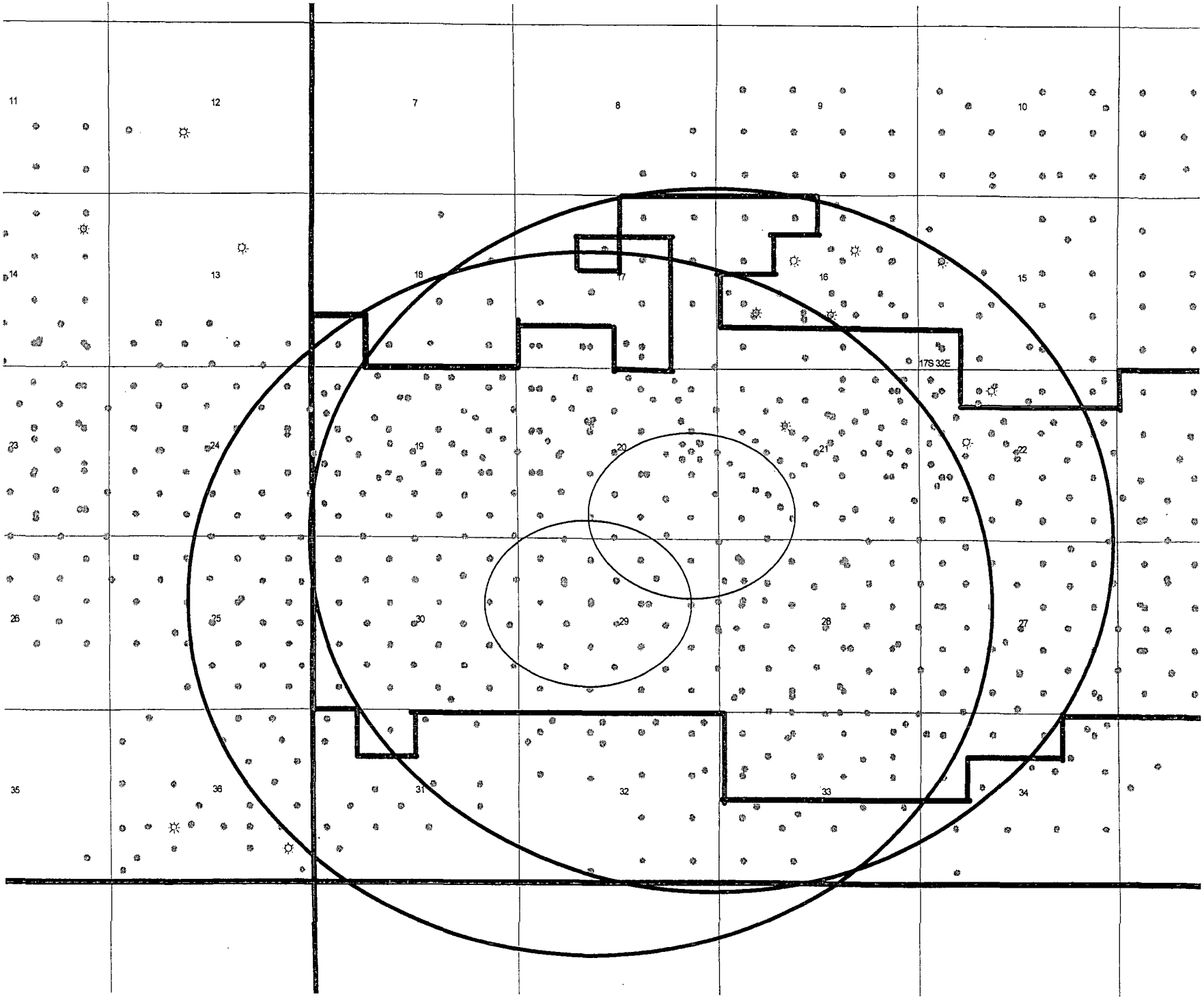
   If no, for what purpose was the well originally drilled? OIL WELL

2. Name of the Injection Formation: GRAYBURG - SAN ANDRES

3. Name of Field or Pool (if applicable): MALJAMAR; GRAYBURG - SAN ANDRES

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____


11
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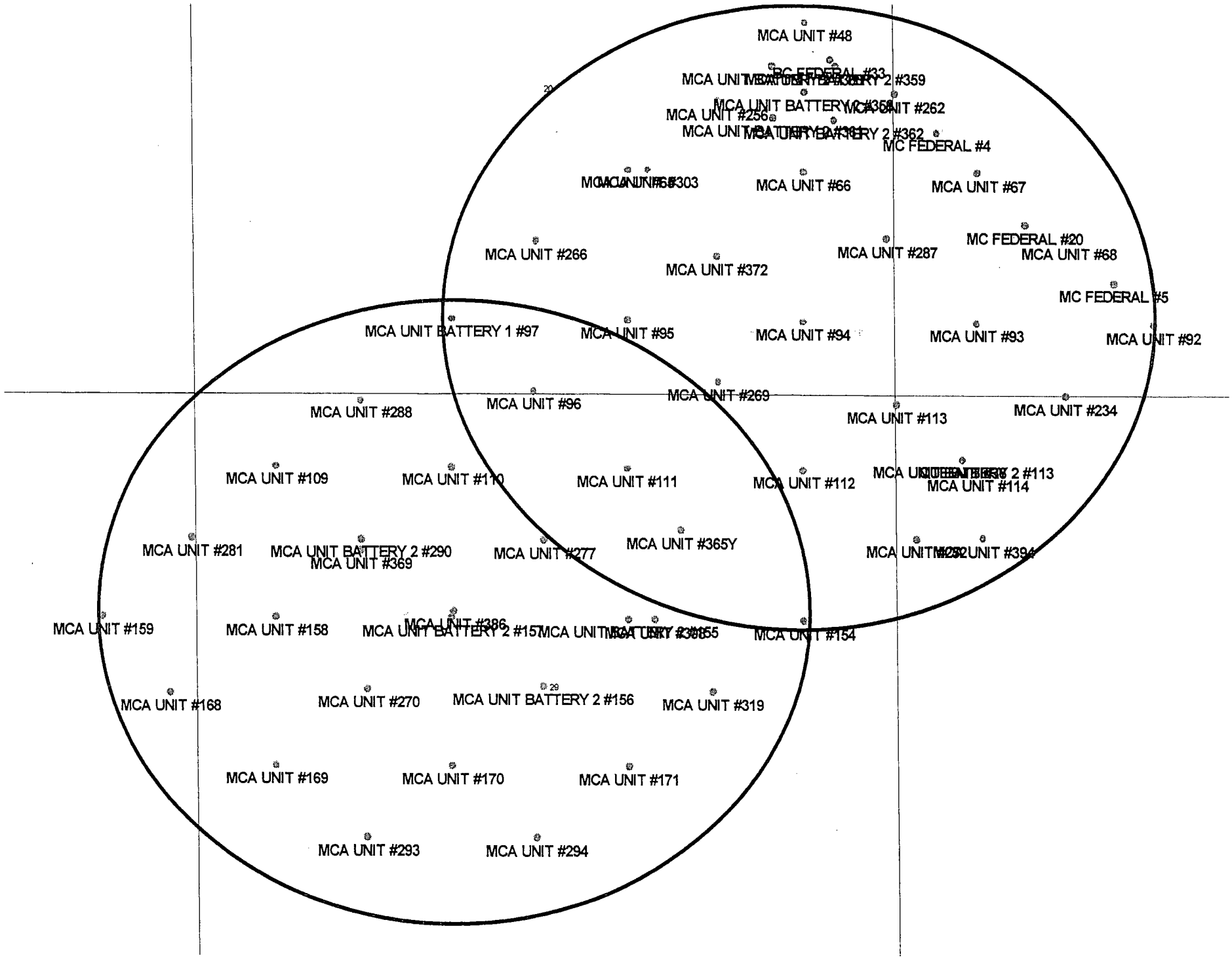
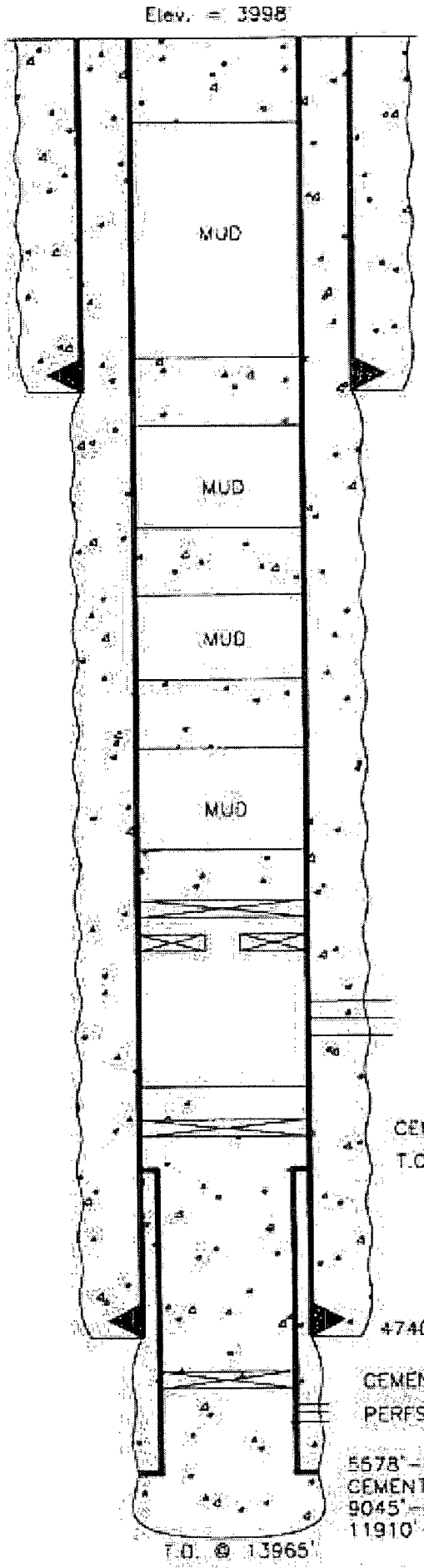

MCA UNIT #48
MCA UNIT #359
MCA UNIT #262
MCA UNIT #256
MC FEDERAL #4
MCA UNIT #66
MCA UNIT #67
MC FEDERAL #20
MCA UNIT #266
MCA UNIT #287
MCA UNIT #68
MCA UNIT #372
MC FEDERAL #5
MCA UNIT BATTERY 1 #97
MCA UNIT #95
MCA UNIT #94
MCA UNIT #93
MCA UNIT #92
MCA UNIT #269
MCA UNIT #96
MCA UNIT #288
MCA UNIT #113
MCA UNIT #234
MCA UNIT #109
MCA UNIT #111
MCA UNIT #112
MCA UNIT #114
MCA UNIT #281
MCA UNIT BATTERY 2 #290
MCA UNIT #369
MCA UNIT #277
MCA UNIT #365Y
MCA UNIT #159
MCA UNIT #158
MCA UNIT #154
MCA UNIT #168
MCA UNIT #270
MCA UNIT BATTERY 2 #156
MCA UNIT #319
MCA UNIT #169
MCA UNIT #170
MCA UNIT #171
MCA UNIT #293
MCA UNIT #294

MCA 303 P&A



444' – 13 3/8" Casing, Cemented w/350 sxs. Circulated.

MODEL "D" PERMANENT PACKER @ 3630'

PERFS 3730'–3758'

CEMENT RETAINER @ 4400' W/100 SXS BELOW AND 10 SXS ABOVE
T.O.L. @ 4595'

4740' – 9 5/8" CASING. CEMENTED W/2300 SXS CIRCULATED.

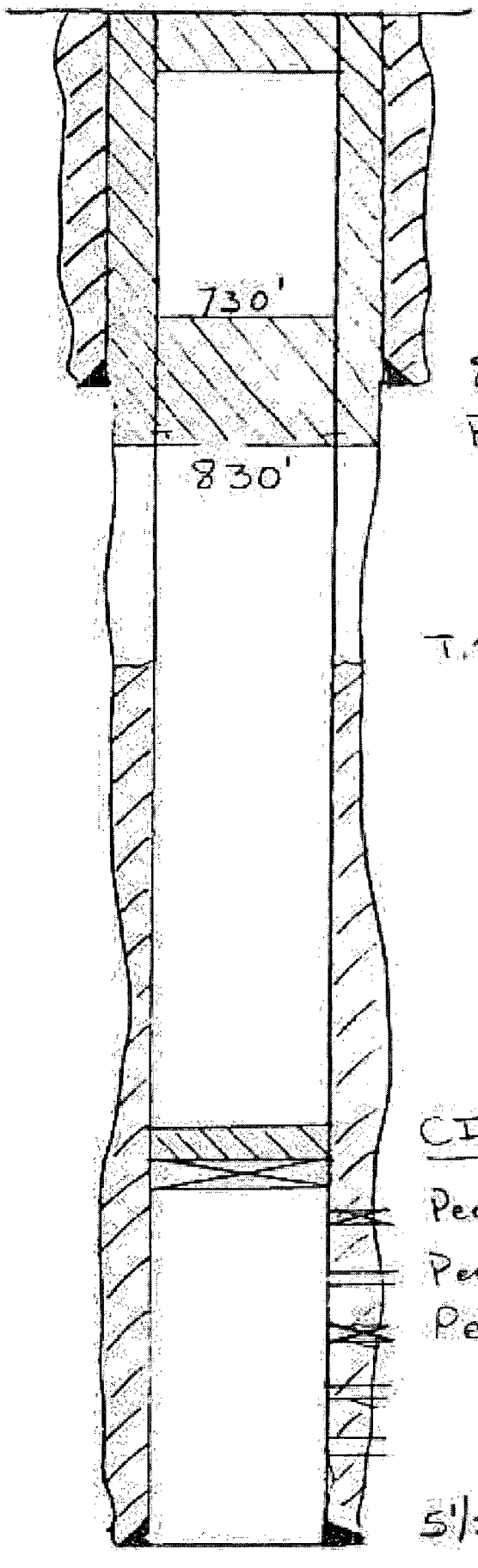
CEMENT RETAINER @ 5330'
PERFS 5366'–506' SQZ'D W/175 SXS

5578'–7" LINER 4595'–5578' W/138 SXS
CEMENT PLUGS: 6695'–750', 7500'–55',
9045'–100', 10410–65', 11605'–60',
11910'–65', 12195'–250', 13855'–965'

T.D. @ 13965'

CONOCO, INC.
M.C.A. Unit #303
1980' FSL & 1830' FEL
Sec. 20, T-17S, R-32E
Lea County, NM

MCA NO. 2162 P&A



10 sxs Surface Plug

8 5/8", @ 780' w/ 350 sxs Circulated

Perforate at 830' and circulate cement between 5½ and 8 5/8 to surface

T.O.C. 2900' Temp. Survey

✓

CIBP @ 3550' w/ 5 sxs cement

Perfs 3595'-3605' Sqz'd

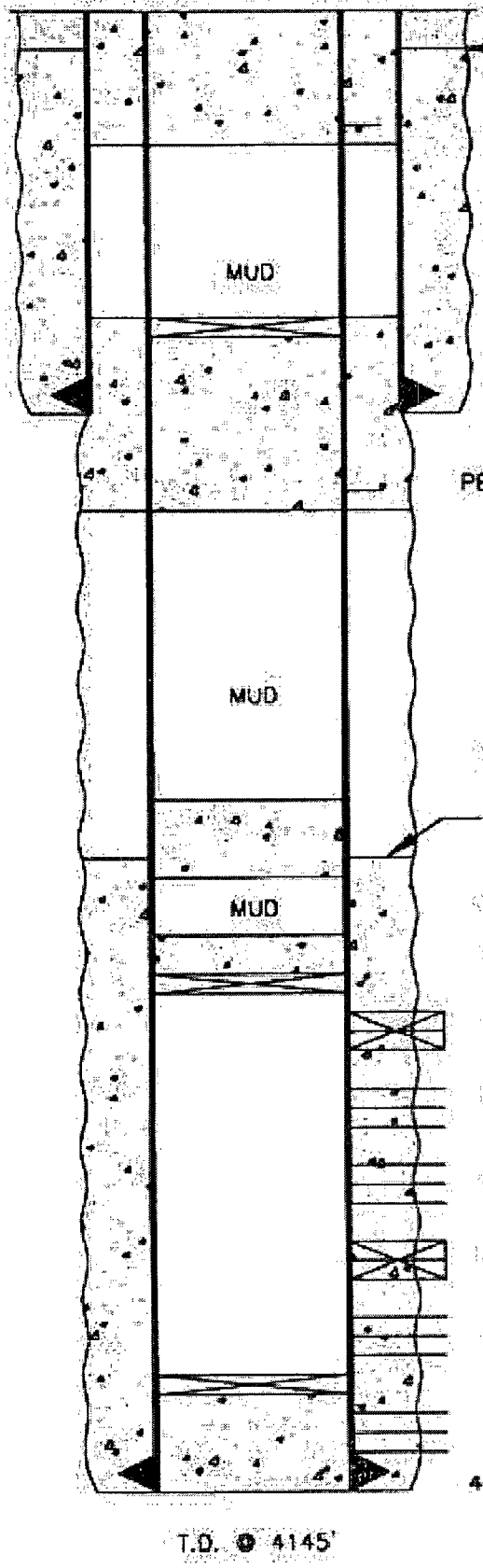
Perfs 3709'-3754'

Perfs 3823'-3839' Sqz'd

5½", 14# @ 4145' w/ 250 sxs

TD 4145'

8/7/00 MCA 256 P&A



T.O.C. @ 28' Packed w/Pea Gravel to Surface

PERFORATE 5 1/2" CASING AT 300'
CIRCULATE 80 SXS CEMENT THRU PERFS AT 300'
AND FILL HOLE TO SURFACE

SET A CEMENT RETAINER AT 675'
SQUEEZE 35 SXS CEMENT THRU PERFS AT 800'

748' – 8 5/8" Casing. Cemented w/300 sxs.

PERFORATE THE 5 1/2" CASING AT 800'

SPOT 25 SXS CEMENT 2200'–2450' (TAG PLUG)

T.O.C. @ 2400' (Temp. Survey)

SPOT 25 SXS CEMENT ON TOP OF C.I.B.P.
SET A C.I.B.P. AT 3525'

Perfs 3579'–3588' Sqz'd

Perfs 3597'–3603'

Perfs 3686'–3704'

Perfs 3808'–3821' Sqz'd

Perfs 4026'–4066'

Perfs 4084'–4087' Sqz'd w/150 sxs

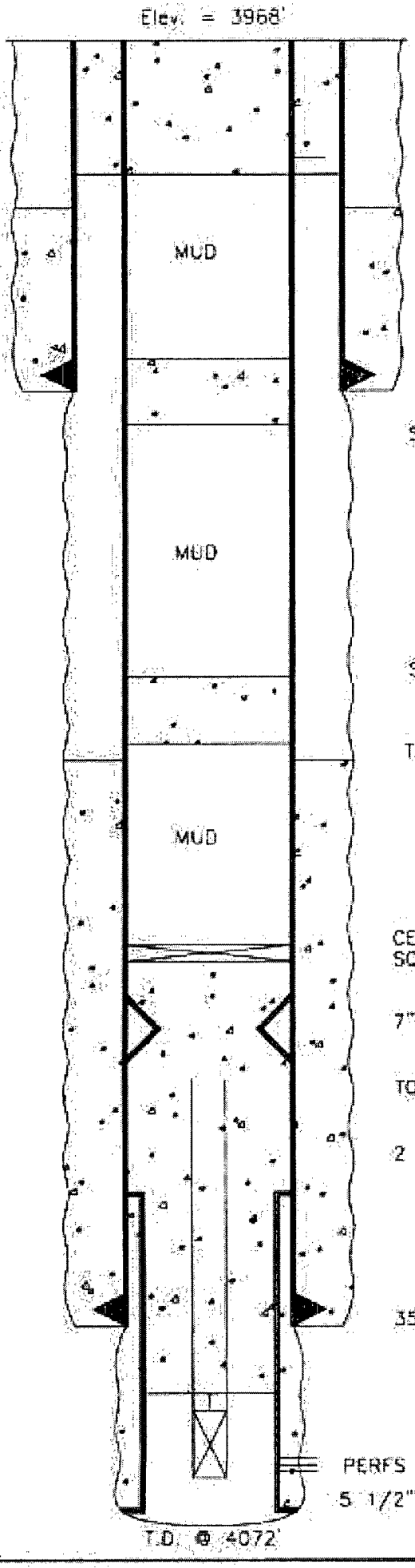
4145' – 5 1/2", 14#, Casing. Cemented w/300 sxs

T.D. @ 4145'

CONOCO, INC.
M.C.A. Unit #256
2590' FSL & 1310' FEL

1/29/96

MCA 112 #9A



PERFORATE @ 350' AND CIRCULATE HOLE FULL OF CEMENT

950' – 8 5/8" Casing. Cemented w/50 sxs.

SPOT 25 SXS 850'–1000'

SPOT 20 SXS 1780'–1900'

T.O.C. @ 2000' (EST.)

CEMENT RETAINER @ 3000'
SQUEEZE 50 SXS CEMENT BELOW RETAINER

7" CASING COLLAPSED AT 3060'

TOP OF FISH @ 3084'

2 7/8" TUBING AND PUMP STUCK IN HOLE

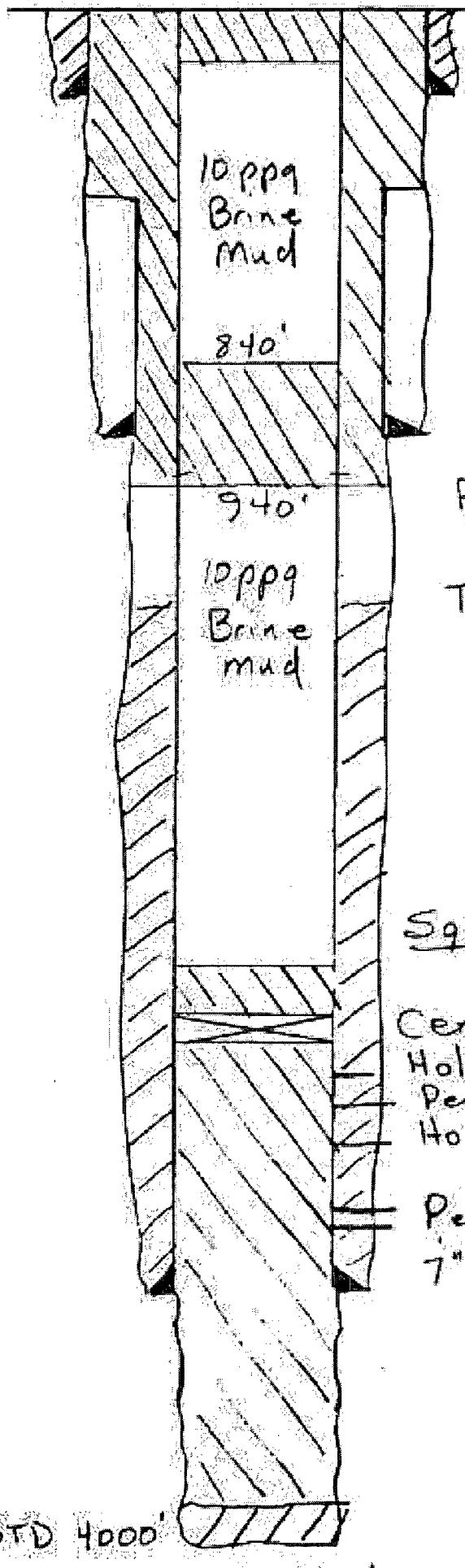
3560' – 7" , 20# Casing. Cemented w/100 Sxs

PERFS 3690'–4040'

5 1/2" LINER 3332'–4067' CEMENTED W/150 SXS

CONOCO, INC.
M.C.A. Unit #112
660' FNL & 660' FWL
Sec. 29, T–17S, R–32E
Lea County, NM

MCA NO. 68 P&A



10 sxs Surface Plug

10 3/4 @ 295' w/ 50 sxs cmt.

8 5/8" @ 887' (Mudded in) (Cut & Pulled 1100'

Perforate at 940' and circulate cement to surface

T.O.C. Survey 1710' ✓

Sqz. 200 sxs below and 10 sxs above Retainer

Cement Retainer @ 3065' (Arrow)

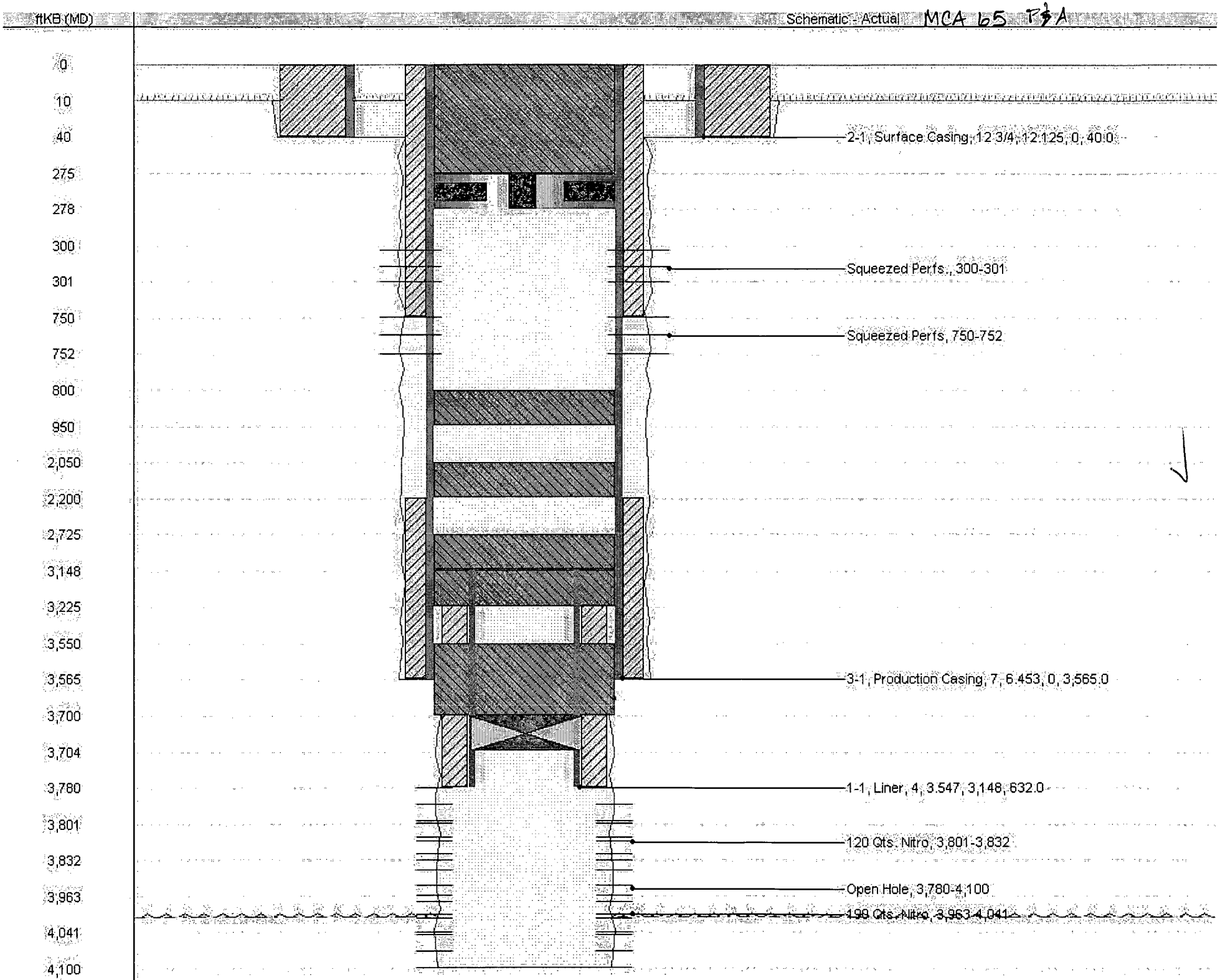
Hole in csg. @ 3100'?

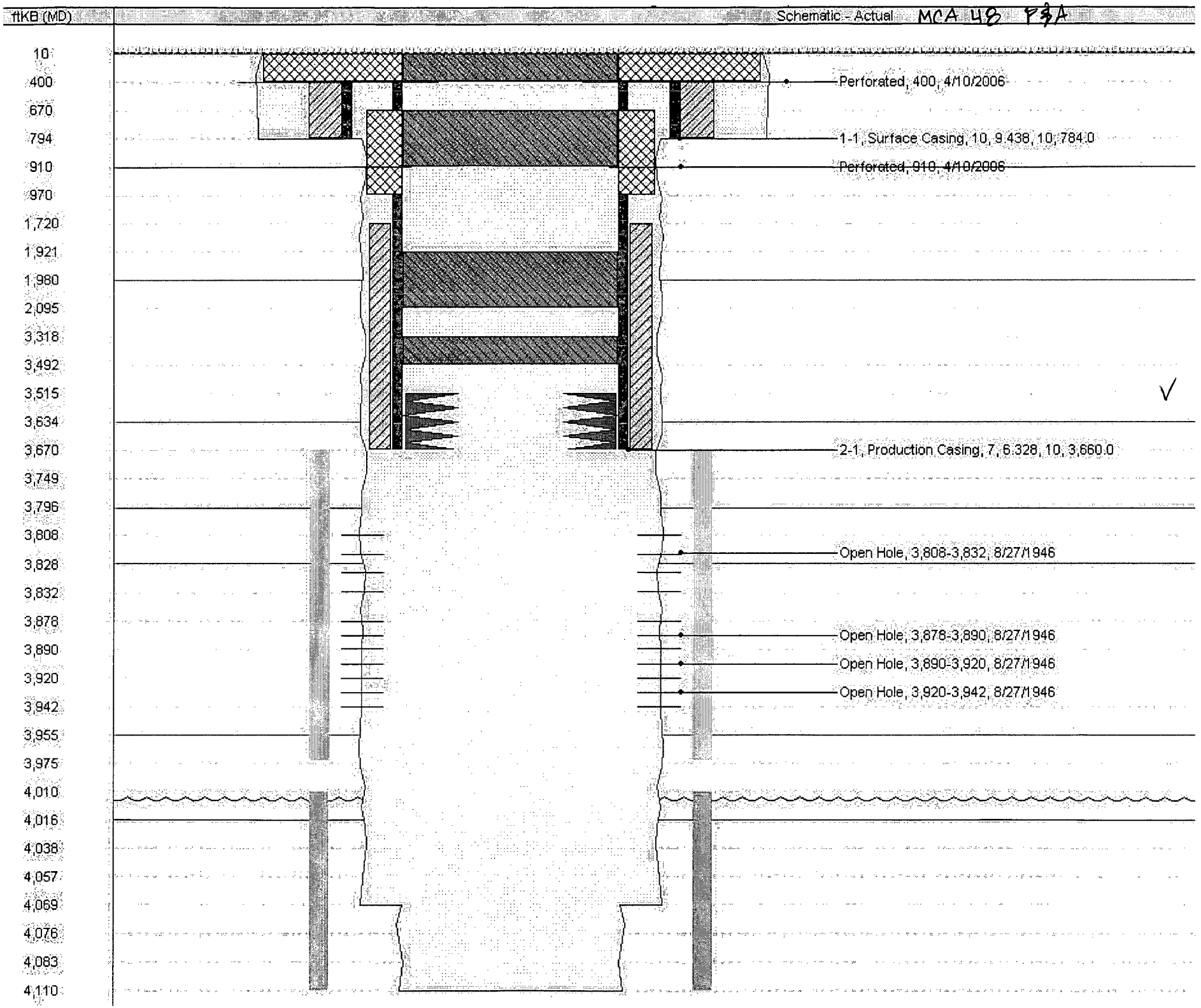
Perfs 3300' Sqzed w/ 210 sxs

Hole in csg. 3450-3481 Sqzed w/ 65 sxs

Perfs 3686'-3741' Sqzd w/ 100 sxs

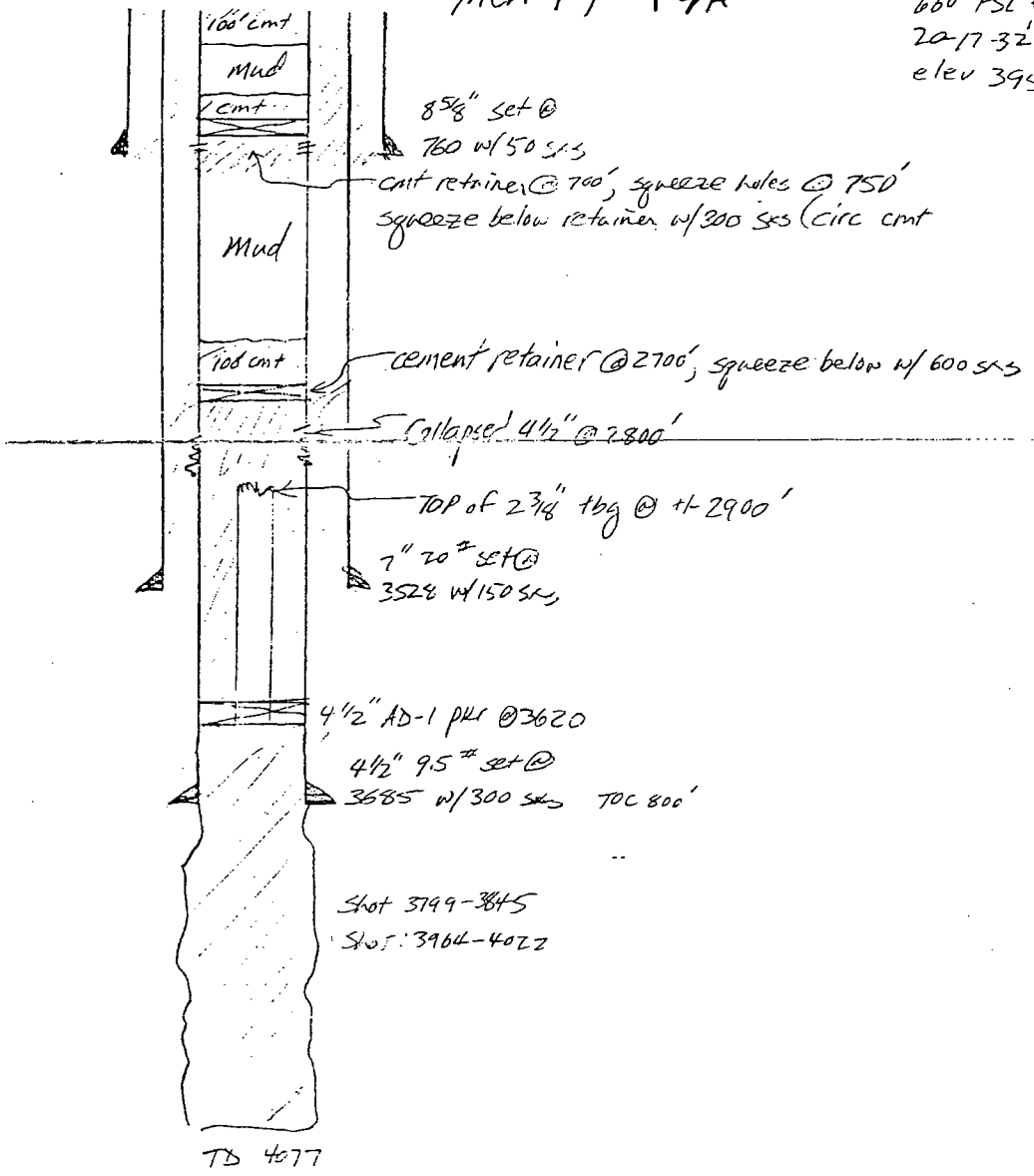
7" @ 3741' w/ 310 sxs


ftKB (MD)
Schematic - Actual
MCA 65 P&A
0
10
40
275
278
300
301
750
752
800
950
2,050
2,200
2,725
3,148
3,225
3,550
3,565
3,700
3,704
3,780
3,801
3,832
3,963
4,041
4,100
2-1, Surface Casing, 12 3/4, 12.125, 0, 40.0
Squeezed Perfs., 300-301
Squeezed Perfs, 750-752
3-1, Production Casing, 7, 6.453, 0, 3,565.0
1-1, Liner, 4, 3.547, 3,148, 632.0
120 Qts. Nitro, 3,801-3,832
Open Hole, 3,780-4,100
190 Qts. Nitro, 3,963-4,041


ftKB (MD)
Schematic - Actual
MCA 48 P&A
10
400
670
794
910
970
1,720
1,921
1,980
2,095
3,318
3,492
3,515
3,634
3,670
3,749
3,796
3,808
3,828
3,832
3,878
3,890
3,920
3,942
3,955
3,975
4,010
4,016
4,038
4,057
4,069
4,076
4,083
4,110
Perforated, 400, 4/10/2006
1-1, Surface Casing, 10, 9,438, 10, 784.0
Perforated, 910, 4/10/2006
2-1, Production Casing, 7, 6,328, 10, 3,660.0
Open Hole, 3,808-3,832, 8/27/1946
Open Hole, 3,878-3,890, 8/27/1946
Open Hole, 3,890-3,920, 8/27/1946
Open Hole, 3,920-3,942, 8/27/1946

MCA 97 P&A

660' FSL & 1980' FWL
20-17-32
elev 3957



Proposed P&A Wellbore

PDB

9/24/85

														SURFACE					INTERMEDIATE					PRODUCTION					LINER				
API	LEASE NAME	WELL #	SPUD DATE	TD DEPTH	STATUS	SEC	TWP	RANGE	DOTAG	N/S FOOTAGE	E/W	SIZE	SET DEPTH	SKS CEMENT	CEMENT TOP	METHOD	SIZE	SET DEPTH	SKS CEMENT	CEMENT TOP	METHOD	SIZE	SET DEPTH	SKS CEMENT	CEMENT TOP	METHOD	SIZE	SET DEPTH	SKS CEMENT	CEMENT TOP	METHOD
30025006080000	MCA UNIT	93	5/12/1940	4018	ACT	21	17S	32E		660 FSL	660 FWL	8 1/4 IN	889	UNKOWN	UNKOWN	UNKOWN	NA	NA	NA	NA	NA	7 IN	3560	150	1950	EST	5-1/2 IN	4078	150	3229	TOP OF LINER
30025006090000	MCA UNIT	92	9/30/1940	4062	ACT	21	17S	32E		660 FSL	1980 FWL	8 5/8 IN	888	50	SURFACE	CIRC	NA	NA	NA	NA	NA	7 IN	3552	100	2000	EST	NA	NA	NA	NA	NA
30025006100000	MCA UNIT	67	1/31/1941	4125	ACT	21	17S	32E		1980 FSL	660 FWL	12 1/2 IN	40	15	SURFACE	CIRC	7 IN	3594	830	2000	EST	5-1/2 IN	3842	300	3500	EST	NA	NA	NA	NA	NA
30025006150001	MCA UNIT	68	8/30/1956	4098	PA	21	17S	32E		1395 FSL	1347 FWL	10-3/4 IN	95	50	SURFACE	CIRC	8-5/8 IN	887	NA	NA	NA	7 IN	3741	310	1710	TEMP	NA	NA	NA	NA	NA
30025007330001	MCA UNIT	114	11/18/1980	4071	ACT	28	17S	32E		660 FNL	660 FWL	12-1/2"	20	23	SURFACE	CIRC	5-1/2"	3551	150	2400	TEMP	4"	4075	200	SURFACE	CIRC	NA	NA	NA	NA	
30025007510001	MCA UNIT	113	11/16/1946	10747	ACT	28	17S	32E		554 FNL	554 FWL	13 IN	825	175	SURFACE	CIRC	8-5/8 IN	4183	200	3391	TEMP	5-1/2 IN	10745	1100	5890	TEMP	NA	NA	NA	NA	NA
30025007520000	MCA UNIT	112	3/21/1939	3759	PA	29	17S	32E		660 FNL	660 FEL	8-5/8 IN	950	50	UNKOWN	UNKOWN	NA	NA	NA	NA	NA	7 IN	3560	100	2000	EST	5-1/2 IN	4067	150	3332	TOP OF LINER
30025007530000	MCA UNIT	154	6/8/1940	3810	ACT	29	17S	32E		1980 FNL	660 FEL	5-5/8"	985	50	SURFACE	CIRC	7"	3560	100	NR	NR	4-1/2"	3703	300	2400	TEMP	NA	NA	NA	NA	NA
30025007540000	MCA UNIT	170	12/10/1940	3964	ACT	29	17S	32E		1980 FSL	1980 FWL	8 1/4 IN	990	50	SURFACE	EST	NA	NA	NA	NA	NA	7 IN	3482	100	2000	EST	5-1/2 IN	4157	150	3263	TOP OF LINER
30025007550000	MCA UNIT	169	2/11/1941	3935	ACT	29	17S	32E		1980 FSL	660 FWL	8 5/8 IN	1006	50	630	TEMP	7"	3488	100	2270	TEMP	4-1/2"	3735	325	SURFACE	CIRC	NA	NA	NA	NA	NA
30025007580000	MCA UNIT	110	7/6/1940	3747	PA	29	17S	32E		660 FNL	1980 FWL	8-5/8 IN	920	50	UNKOWN	UNKOWN	NA	NA	NA	NA	NA	7 IN	3479	100	2000	EST	5-1/2 IN	4071	125	3221	TOP OF LINER
30025007590000	MCA UNIT	109	8/4/1940	3716	ACT	29	17S	32E		660 FNL	660 FWL	8 1/4 IN	873	75	SURFACE	CIRC	7"	3493	100	2830	CALC	4-1/2"	3631	175	1100	CALC	NA	NA	NA	NA	NA
30025007600000	MCA UNIT	157	8/13/1940	3789	PA	29	17S	32E		1980 FNL	1980 FWL	8 1/4 IN	910	50	SURFACE	CIRC	7"	3492	100	2192	TEMP	4-1/2"	4020	65	3377	TEMP	NA	NA	NA	NA	NA
30025007610000	MCA UNIT	158	10/8/1940	3779	PA	29	17S	32E		1980 FNL	660 FWL	8-5/8 IN	903	50	UNKOWN	UNKOWN	NA	NA	NA	NA	NA	7 IN	3447	100	2147	SURVEY	5-1/2 IN	3970	200	3195	TOP OF LINER
30025007640000	MCA UNIT	171	2/21/1941	3940	ACT	29	17S	32E		1980 FSL	1980 FEL	8 1/4 IN	1010	50	SURFACE	CIRC	7"	3505	100	2500	TEMP	4-1/2"	3784	300	500	CALC	NA	NA	NA	NA	NA
30025007670001	MCA UNIT	111	3/19/1949	4020	ACT	29	17S	32E		660 FNL	1980 FEL	8-5/8"	1922	100	SURFACE	CIRC	7"	3541	150	2540	CALC	4-1/2"	3660	300	1600	CALC	NA	NA	NA	NA	NA
30025007680000	MCA UNIT	155	2/24/1940	3782	PA	29	17S	32E		1980 FNL	1980 FEL	8-5/8 IN	880	50	640	EST	NA	NA	NA	NA	NA	7 IN	3539	150	2000	EST	NA	NA	NA	NA	NA
30025007840000	MCA UNIT	159	8/2/1940	3757	PA	30	17S	32E		1980 FNL	660 FEL	8 5/8 IN	912	50	UNKOWN	UNKOWN	NA	NA	NA	NA	NA	7 IN	3405	150	2000	EST	4-1/2 IN	3647	325	800	SURVEY
30025080530000	MCA UNIT	303	3/13/1959	13965	PA	20	17S	32E		1980 FSL	1830 FEL	13-3/8 IN	444	350	SURFACE	CIRC	NA	NA	NA	NA	NA	9-5/8 IN	4740	2300	SURFACE	CIRC	7 IN	5578	110	4595	TOP OF LINER
30025080540001	MCA UNIT	48	6/29/1956	4070	PA	20	17S	32E		1980 FNL	660 FEL	10 IN	794	25	SURFACE	CIRC	NA	NA	NA	NA	NA	6-5/8 IN	3670	150	1720	EST	NA	NA	NA	NA	NA
30025080620000	MCA UNIT	66	12/7/1938	3721	ACT	20	17S	32E		1980 FSL	660 FEL	12 1/2 IN	21	16	SURFACE	CIRC	NA	NA	NA	NA	NA	7 IN	3561	1285	2000	EST	NA	NA	NA	NA	NA
30025080630000	MCA UNIT	94	7/29/1939	3760	ACT	20	17S	32E		660 FSL	660 FEL	12 1/2 IN	20	NA	NA	NA	NA	NA	NA	NA	NA	7 IN	3600	360	NR	NR	5-1/2"	4050	350	3110	TOP OF LINER
30025080640000	MCA UNIT	65	10/28/1939	3723	PA	20	17S	32E		1980 FSL	1980 FEL	12-3/4 IN	40	32	SURFACE	CIRC	NA	NA	NA	NA	NA	7 IN	3565	375	2200	EST	4 IN	3780	125	2148	TOP OF LINER
30025080650000	MCA UNIT	95	5/7/1940	3744	ACT	20	17S	32E		660 FSL	1980 FEL	8-5/8 IN	880	UNKOWN	UNKOWN	UNKOWN	NA	NA	NA	NA	NA	7 IN	3550	150	2500	EST	5-1/2 IN	4055	135	3318	TOP OF LINER
30025080670000	MCA UNIT	97	1/7/1941	3848	PA	20	17S	32E		660 FSL	1980 FWL	8 5/8 IN	770	50	UNKOWN	UNKOWN	NA	NA	NA	NA	NA	7 IN	3528	150	UNKNOWN	UNKNOWN	NA	NA	NA	NA	NA
30025127550001	MCA UNIT	96	8/10/1969	4048	ACT	20	17S	32E		25 FSL	2590 FWL	10-3/4 IN	60	22	SURFACE	CIRC	NA	NA	NA	NA	NA	5-1/2 IN	3653	110	1850	EST	NA	NA	NA	NA	NA
30025127560003	MCA UNIT	156	8/1/1988	4136	PA	29	17S	32E		2580 FNL	2595 FWL	10-3/4 IN	59	50	SURFACE	CIRC	8-5/8 IN	939	50	SURFACE	CIRC	7 IN	3698	240	2000	SURVEY	5-1/2 IN	4136	240	3369	TOP OF LINER
30025127980001	MCA UNIT	168	4/23/1970	3995	ACT	30	17S	32E		2615 FSL	140 FEL	8-5/8 IN	973	50	SURFACE	EST	NA	NA	NA	NA	NA	7 IN	3676	350	1800	EST	5-1/2 IN	4059	135	3379	TOP OF LINER
30025205220000	MCA UNIT	234	6/10/1963	4100	ACT	21	17S	32E		25 FSL	1325 FWL	8 5/8 IN	846	680	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	3721	350	1800	SURVEY	NA	NA	NA	NA	NA
30025234820000	MCA UNIT	252	4/11/1970	4080	ACT	28	17S	32E		1250 FNL	200 FWL	8 5/8 IN	825	500	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4080	250	2670	SURVEY	NA	NA	NA	NA	NA
30025235090002	MCA UNIT	256	1/1/1971	4145	PA	20	17S	32E		2590 FSL	1310 FEL	8-5/8 IN	748	300	28	SURVEY	NA	NA	NA	NA	NA	5-1/2 IN	4145	300	2400	SURVEY	NA	NA	NA	NA	NA
30025236600000	MCA UNIT	262	12/30/1970	4145	PA	21	17S	32E		2615 FNL	25 FWL	8 5/8 IN	780	350	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4145	250	2900	SURVEY	NA	NA	NA	NA	NA
30025236870000	MCA UNIT	266	3/8/1971	4110	ACT	20	17S	32E		1345 FSL	2615 FWL	8 5/8 IN	700	325	SURFACE	CIRC	NA	NA	NA	NA	NA	4 1/2 IN	4110	250	2100	EST	NA	NA	NA	NA	NA
30025237060000	MCA UNIT	269	3/4/1971	4130	ACT	20	17S	32E		125 FSL	1295 FEL	8 5/8 IN	770	400	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4130	300	2700	EST	NA	NA	NA	NA	NA
30025237070000	MCA UNIT	270	2/13/1971	4130	ACT	29	17S	32E		2615 FNL	1345 FWL	8 5/8 IN	740	375	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4130	350	2100	EST	NA	NA	NA	NA	NA
30025237330000	MCA UNIT	277	3/27/1971	4083	PA	29	17S	32E		1295 FNL	2615 FEL	8 5/8 IN	750	375	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4083	300	2450	EST	NA	NA	NA	NA	NA
30025237410000	MCA UNIT	281	4/17/1971	4025	ACT	29	17S	32E		1295 FNL	25 FWL	8 5/8 IN	750	375	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4025	420	2100	EST	NA	NA	NA	NA	NA
30025237670000	MCA UNIT	293	5/8/1971	4185	PA	29	17S	32E		1345 FSL	1345 FWL	8 5/8 IN	825	400	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4185	300	2231	SURVEY	NA	NA	NA	NA	NA
30025237780001	MCA UNIT	288	1/15/1972	4080	PA	29	17S	32E		65 FNL	1295 FWL	8-5/8 IN	700	400	SURFACE	CIRC	NA	NA	NA	NA	NA	5-1/2 IN	4080	300	2100	SURVEY	NA	NA	NA	NA	NA
30025237970000	MCA UNIT	294	7/21/1971	4150	ACT	29	17S	32E		1345 FSL	2615 FWL	8 5/8 IN	900	500	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4147	300	2200	EST	NA	NA	NA	NA	NA
30025237980000	MCA UNIT	290	7/5/1971	4080	PA	29	17S	32E		1295 FNL	1295 FWL	8 5/8 IN	770	425	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4080	400	3500	SURVEY	NA	NA	NA	NA	NA
30025238070000	MCA UNIT	287	6/27/1971	4120	ACT	20	17S	32E		1395 FSL	25 FEL	8 5/8 IN	800	450	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4120	300	2126	EST	NA	NA	NA	NA	NA
30025240760000	MCA UNIT	308	4/13/1972	4100	ACT	29	17S	32E		1980 FNL	1780 FEL	8 5/8 IN	784	400	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4100	300	2540	EST	NA	NA	NA	NA	NA
30025242130000	MCA UNIT	319	7/30/1972	4125	ACT	29	17S	32E		2615 FNL	1345 FEL	8 5/8 IN	800	400	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4125	350	2100	EST	NA	NA	NA	NA	NA
30025266060000	MCA UNIT	358	1/16/1980	4150	PA	20	17S	32E		2600 FNL	660 FEL	16 IN	749	755	SURFACE	CIRC	NA	NA	NA	NA	NA	10 3/4 IN	3635	3030	SURFACE	CIRC	7 5/8 IN	4148	100	3545	TOP OF LINER
30025270630001	MCA UNIT	360	8/1/1983	4150	PA	20	17S	32E		2371 FNL	899 FEL	13 3/8 IN	750	455	SURFACE	CIRC	NA	NA	NA	NA	NA	8 5/8 IN	4150	2300	SURFACE	CIRC	NA	NA	NA	NA	NA
30025270640000	MCA UNIT	361	12/21/1980	4150	PA	20	17S	32E		2449 FSL	891 FEL	13 3/8 IN	750	460	SURFACE	CIRC	NA	NA	NA	NA	NA	8 5/8 IN	4150	2900	SURFACE	CIRC	NA	NA	NA	NA	NA
30025270650000	MCA UNIT	362	1/14/1981	4150	PA	20	17S	32E		2442 FSL	432 FEL	13 3/8 IN	750	675	SURFACE	CIRC	NA	NA	NA	NA	NA	8 5/8 IN	4150	2870	SURFACE	CIRC	NA	NA	NA	NA	NA
30025270760000	MCA UNIT	359	10/25/1980	4150	PA	20	17S	32E		2365 FNL	425 FEL	13 3/8 IN	762	651	SURFACE	CIRC	NA	NA	NA	NA	NA	8 5/8 IN	4150	2295	SURFACE	CIRC	NA	NA	NA	NA	NA
30025291020000	MCA UNIT	365Y	12/19/1984	827	ACT	29	17S	32E		1220 FNL	1580 FEL	16 IN	810	625	SURFACE	CIRC	10-3/4 IN	2150	1124	SURFACE	CIRC	8-5/8 IN	4020	525	SURFACE	CIRC	NA	NA	NA	NA	NA
30025298530000	MCA UNIT	369	2/14/1987	4160	ACT	29	17S	32E		1395 FNL	1295 FWL	17-1/2 IN	603	520	SURFACE	CIRC	NA	NA	NA	NA	NA	7 IN	4166	1350	SURFACE	CIRC	NA	NA	NA	NA	NA
30025299560000	MCA UNIT	372	8/27/1987	4300	ACT	20	17S	32E		1225 FSL	1310 FEL	17-1/2 IN	785	680	SURFACE	CIRC	11 3/4 IN	2000	945	SURFACE	CIRC	7 IN	4300	2145	466	UNKNOWN	NA	NA	NA	NA	NA
30025311000000	MCA UNIT	386	1/7/1991	4350	ACT	29	17S	32E		1921 FNL	1995 FWL	13 3/8 IN	960	850	SURFACE	CIRC	8-5/8 IN	3652	2580	SURFACE	CIRC	5 1/2 IN	4350	650	SURFACE	CIRC	NA	NA	NA	NA	NA
30025349330000	MC FEDERAL	4	2/17/2000	5982	ACT	21	17S	32E		2310 FSL	330 FWL	13 3/8 IN	308	325	SURFACE	CIRC	8 5/8 IN	2202	750	SURFACE	CIRC	5 1/2 IN	5982	1030	SURFACE	CIRC	NA	NA	NA	NA	NA
30025349730000	MC FEDERAL	5	9/24/2000	6010	ACT	21	17S	32E		990 FSL	1650 FWL	13 3/8 IN	773	650	SURFACE	CIRC	9 5/8 IN	2208	600	SURFACE	CIRC	7 IN	6004	950	SURFACE	CIRC	NA	NA	NA	NA	NA
30025379310000	MCA UNIT	394	10/16/2006	4445	ACT	28	17S	32E		1295 FNL	675 FWL	8 5/8 IN	855	540	SURFACE	CIRC	NA	NA	NA	NA	NA	5 1/2 IN	4436	1050	SURFACE	CIRC	NA	NA	NA	NA	NA
30025387030000	MC FEDERAL	20	3/15/2008	7027	ACT	21	17S	32E		1500 FSL	990 FWL	13 3/8 IN	836	1000	SURFACE	CIRC	8 5/8 IN	2129	1100	SURFACE	CIRC	5 1/2 IN	7005	1100	SURFACE	CIRC	NA	NA	NA	NA	NA
30025387140000	BC FEDERAL	33	3/16/2008	7027	ACT	20	17S	32E		2310 FNL	480 FEL	13 3/8 IN	642	700	SURFACE	CIRC	8 5/8 IN	2110	900	SURFACE	CIRC	5 1/2 IN	7027	1100	SURFACE	CIRC	NA	NA	NA	NA	NA

33
- 1
- 8

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PROPOSAL

The proposed workover consists of pulling MCA 94 for the purpose of increasing injection capacity in the Lower San Andres-9. It is proposed to deepen MCA 94 from the current TD @ 4098 (-100 RMSL) to 4225 (-227 RMSL). The additional injection capacity is required to accommodate the additional water production associated with the current 25-well development drilling program.

WELL HISTORY

MCA 94 (surface location: 660 FSL & 660 FEL, 20P-17S-32E) was drilled in 1939 by the Maljamar Oil & Gas Corp. as the Mitchell B-2. The well was drilled w/ rotary tools to a reported casing point depth at 3600 ft. where 7" casing w/ DVT @ 864 was set. The 7" casing string was cemented in 2 stages w/ a reported 450 sx. The well was then drilled w/ cable tools to the base of the Grayburg to an original TD at 3760 ft. The well was completed natural from the 6-1/4" OH interval: 3600-3760 ft. On 24-hour initial potential test of 09.04.39, the Mitchell B-2 flowed 410 BO w/ no reported water.

In June 1945, then operator Buffalo Oil Co. deepened the Mitchell B-2 from 3760 ft. to 4090 ft. in the SA9. The following 6-1/4" OH intervals were nitro-shot:

Lwr SA9 4036-4088: nitro-shot w/ 170 qts (06.22.45)
Upr SA7 3814-3858: nitro-shot w/ 140 qts (06.23.45)

On 24-hour test of 07.05.45, the Mitchell B-2 flowed 600 BO w/ no water. Per Buffalo IOC of July 12, 1945:

> "This well is bottomed @ -95 ft. (suggesting 1945 drilling datum @ 3995 ft.), which is anticipated to be approximately 25 feet above the water table (1945 estimated OWC for SA9: -120 ft.). "

On August 16, 1958, Continental Oil Co. purchased Buffalo Oil Co. The Mitchell B-2 was re-named MCA 94 effective with the unitization of MCA on May 1, 1963. In February 1967, MCA 94 was converted to injection.

In October 1967, MCA 94 was cleaned out to a reported TD 4097. Per Western Gammatron log of 10.13.67:

		RKB	RGL	RMSL
	7" csg shoe	3608	3598	390
	SA7	3817	3807	181
	SA8	3945	3935	53
	SA9	3975	3965	23
	TD: Driller	4090	4080	-92
	TD: Logger	4098	4088	-100
Neutron Suggested Shot Hole Intervals	SA7	3824-3870	3814-3860	+174 / +128
	SA9	4048-4098	4038-4088	-50 / -100

NOTE: Gammatron log of 10.13.67 indicates 7" csg shoe & TD are 8 ft. deep to pre-1967 reported depths.

During the period February-April 1987, MCA 94 was equipped w/ a 5-1/2", 17# FJ liner set @ 4096 w/ liner hanger at 3111 (cmt w/ 200 sx. Rev out 35 sx.). A 5-1/2", 17# tie-back string was run and cemented to surface (circ 42 sx).

Prior to running the liner, several 7" casing leak intervals were squeezed. The OH nitro-shot intervals were packed w/ resin-coated sand. The well was then drilled out to the reported TD @ 4098 (04.11.87). On a bit run to condition hole prior to running the liner, it was reported "hard fill" was encountered at 4093. The well was drilled out to 4095.5. Recovery consisted of "metal shavings, nitro cans & pea gravel" (04.16.87).

During clean-out of liner, the wiper plug was encountered @ 3823 w/ 70 ft. cement below plug (float collar: 4050). The liner was essentially void of cement to 4092...no cement between float collar and 4092 (csg shoe @ 4094-4096).

MCA 94 was perforated in the following intervals @ 1 spf -90 degree phasing (04.29.87):

Perforation Interval	Perforations	
3738-3762	25	Grbg6
3826-3862	37	Upr SA7
3932-3938	7	Lwr SA7
4002-4018	17	Upr SA9
4050-4084	35	Lwr SA9
	121	

There is no record that perforated intervals were stimulated following perforating.

During 09.28.88-10.04.88, the Lwr SA9 perforated interval: 4050-4084 was isolated w/ cement retainer @ 4039 and capped w/ 1 sk cmt to 4033 in effort to modify then existing injection profile. The perforated gross interval: 3738-4018 was acidized w/ 64 bbl 15% HCl in 3 stages w/ 250# RS between stages (AIR: 3 BPM. AIP: 2600#. ISIP: 1990#).

The following is a summary of historical injection profile surveys:

							Injection Profile: Velocity Survey (percent of injectant volume)				
Date	Injectant	Log Derived Injection Rate		Pressure	Log TD		Grbg6	SA7U	SA7L	SA9U	SA9M
		BPD equiv	MCFPD	psi	ft.		3738-3762	3826-3862	3932-3938	4002-4018	4050-4084
06.17.87	water	485		1800	**4092**		0	18	0	13	48
11.22.88	water	507		1850	4033		14	48	0	38	0
04.10.89	CO2	425		1800	4032		42	33	0	25	0
12.05.89	CO2	456	1040	1840	4033		56	31	0	13	0
10.29.90	CO2	380	1040	2000	3859		52	37	0	11	0
12.27.91	CO2	341	942	2050	4041		0	0	0	100	0
03.02.92	CO2	452	942	2150	4034		40	36	0	24	0
12.10.92	CO2	697	1925	**2400**	4038		41	52	0	7	0
12.16.93	water	334		1850	4035		51	30	0	19	0

over limit -

PROCEDURE

1. MI well service unit. NU BOPE w/ stripper head. Pump 35 bbl 10# brine down tbg (capacity to bottom perforation: 23.1 bbl). Un-set PKR @ 3625. Circ annulus w/ 75 bbl 10# brine (2-3/8" x 5-1/2", 17# annular capacity: 64.4 bbl). POOH.

   The following is a well file-sourced summary of the current downhole configuration:

	Depth RKB (KB - GL: 10 ft.)		
	top	btm	
2-3/8", 4.7#, J-55, IPC w/ TK-99 tbg	7	3625	
Baker AD PKR	3625	3627	
5-1/2", 17# Otis Stainless Steel Inter-Lock PKR w/	3628	3631	per injection surveys
Otis 1.71" RN Profile Nipple w/ 1.56" No-Go			
in On-Off tool gudgeon @ 3628			
Possible Wireline Entry Guide	3631	3632	
Grayburg 6 @ 1 spf: 25 perforations	3738	3762	
SA7U @ 1 spf: 37 perforations	3826	3862	
SA7L @ 1 spf: 7 perforations	3932	3938	
SA9U @ 1 spf: 17 perforations	4002	4018	
1 sack cmt cap	4033	4039	
Cement Retainer (5-1/2", 17#)	4039	4042	
	Depth RKB (KB - GL: 10 ft.)		
7" x 10" 1500 series Cameron braidenhead flange			
7", 20-26#	surface	3608	TOC @ surface
5-1/2", 17#, J-55 Seal Tech FJ Liner (tie-back)	surface	3111	TOC @ surface. Circ 42 sx.
Brown Hy-Flo Hanger/PKR w/ hold-downs	3111	3116	
5-1/2", 17#, J-55 Seal Tech FJ Liner	3116	4095	Cmt to top of liner. Circ 35 sx to pit
PBD: 1 sack cmt cap	4033	4039	
Cement Retainer (5-1/2", 17#)	4039		
Hard Fill/Junk	4096	4098	
TD		4098	

2. PU 2-7/8", 6.5#, J-55 workstring. RIH w/ cutting shoe, 1 jt of wash-pipe & 4: 3-1/2" DC (5-1/2", 17# csg ID: 4.892 in.; drift ID: 4.767 in.). RU reverse unit. Wash down to Otis Inter-Lock PKR @ 3636. Cut over Otis Inter-Lock PKR @ 3636. Condition well w/ 10# brine. POOH.

3. RIH and retrieve PKR (reported PBD 4033). POOH.

4. RIH w/ 2-7/8" workstring w/ 6: 3-1/2" DC & 4-3/4" bit. Clean out possible fill to PBD @ 4033. Drill out:

	Depth RKB (KB -GL: 10 ft.)		
PBD: 1 sack cmt cap	4033	4039	
Cement Retainer (5-1/2", 17#)	4039	4042	
5-1/2" csg shoe	4094	4096	
Possible Hard Fill/Junk	4096	4098	
New Hole	4098	4225	Lwr SA9: -100/-227

NOTE: In June 1945, MCA 94 (Buffalo Oil Co.-Mitchell B-2) was deepened to 4098 and completed from OH interval: 3608-4098. The OH interval was nitro-shot over the intervals: 3814-3858 & 4036-4088. In April 1987, MCA 94 was equipped w/ a 5-1/2" liner to surface. The well was cleaned out to 4098 (04.14.87). On bit-run prior to running liner (04.16.87),reported "hard fill" 4093-4095.5...could not make hole. Recovered metal shavings, pieces of nitro cans & pea gravel.

Review of well file suggests possible junk could be PKR slip assembly & cone (08.1975) and/or OH PKR remnants (03.87).

If unable to drill past "junk", POOH.

RIH w/ tbg, 6: 3-1/2" DC (250 ft.), fishing jars (10-12 ft.) & 4 ft. smooth OD, flat-bottom, mesh ID w/ inverted diamond shoe (Smith: Ennis Johnson) . Attempt to mill over junk & cut 8"-12" formation. POOH.

RIH w/ 4-3/4" bit, 6: 3-1/2" DC on 2-7/8" workstring. Drill to new TD @ 4225 ft.

NOTE: if unable to drill/mill out junk, may want to consider magnet run or venturi bailer run. Limit efforts to 3 days. If unable to make hole beyond 4096, POOH and proceed w/ Step 5.

5. Condition hole w/ 10# brine at new TD @ 4225. Pump 100 gal 15% HCl followed by 24 bbl 10# brine. Allow well to equalize. POOH w/ tbg & bit.

RIH w/ 2-7/8" tbg w/ PKR. Test tbg below slips @ 5000# (2-7/8", 6.5#, J-55 burst: 7260# @100%). Set PKR @ 4088 in 5-1/2" shoe jt. (btm perforation: 4084; csg shoe: 4095). Acidize OH w/ 6,000 gal 15% HCl. Flush w/ 50 bbl 10# brine (capacity to TD: 27 bbl). Anticipated treating pressure 2500# @ 5 BPM (single pump truck). If csg-tbg communicated during acidizing, flush annulus w/ 75 bbl 10# brine (annular capacity to top of PKR: 62 bbl). Un-seat PKR & POOH.

6. RIH w/ 2-7/8" tbg w/ PKR & RBP. Acidize the following perforated intervals @ 5+ BPM (single pump truck). Anticipated treating pressure: 2500-3000#:

PKR	RBP	Perforation Interval	Perforations	15% HCl: gal	10# Flush: bbl	
4030	4088	4050-4084	35	1750	50	Lwr SA9
3980	4030	4002-4018	17	850	50	Upr SA9
3900	3980	3932-3938	7	350	50	Lwr SA7
3775	3900	3826-3862	37	1850	50	Upr SA7
3690	3775	3738-3762	25	1200	50	Grbg6
				6000		

Note: Due to historical injection, casing interval between 3625 (current injection PKR depth: 3625-3627) and 4018 (base of current gross completion interval: 3738-4018. Current PBD: 4033), may not provide suitable PKR (RBP) seats.

POOH & LD 2-7/8" workstring, PKR & RBP.

7. RIH w/ following:

	RKB	
	(KB-GL: 10 ft.)	
2-3/8", 4.7#, J-55 IPC (TK99) tbg	3615	
On-Off Tool w/ 1.71" profile nipple	3615	
5-1/2", 17# PKR	3616	5-1/2" csg collars: 3590 & & 3630

Install 3500# pump-out plug in bottom of PKR. Set PKR @ 3615 (Note: previous PKR set depth 3625; csg collars: 3590 & 3630). Release from on-off tool. Circ 2-3/8" x 5-1/2", 17# annulus w/ PKR fluid (annular capacity: 65 bbl). Engage on-off tool. Test annulus @ 500# for 30 min.

Pressure test tbg @ 2500#. Pressure tbg to 3500# to shear pump-out plug. Note pump-out pressure. Return well to injection.

			Internal Yield Pressure: psi			Capacity	
	ID: in.	Drift ID: in.	100%	85%	80%	bbl/ft	gal/ft.
2-3/8", 4.7#, J-55	1.995	1.901	7700	6545	6160	0.00387	0.1624
5-1/2",17#, J-55	4.892	4.767	5320	4522	4256	0.02324	0.9764
2-3/8", 4/7# x 5-1/2", 17#						0.01777	0.7463
2-7/8", 6.5#, J-55	2.441	2.347	7260	6171	5808	0.00579	0.2431
2-7/8", 6.5# x 5-1/2", 17#						0.01522	0.6392
2-7/8" x 4-3/4" OH						0.01389	0.5833
4-3/4" OH						0.02192	0.9205

ConocoPhillips

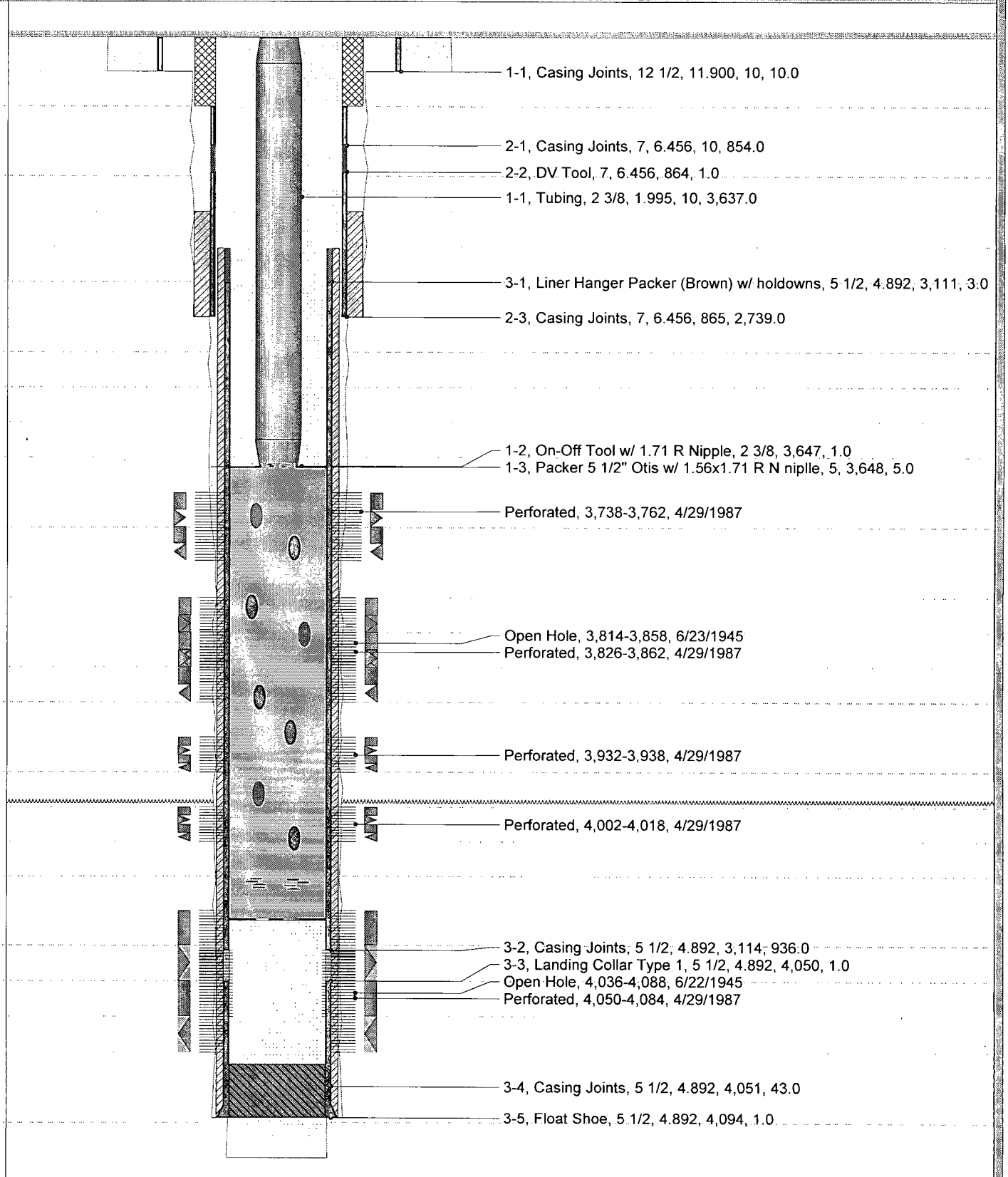
Schematic - Current

MCA 094

Most Recent Job				
Job Category	Primary Job Type	Secondary Job Type	Actual Start Date	End Date
TESTING			10/18/2005	10/18/2005

Well Config: Vertical - Main Hole, 1/23/2009 1:30:06 PM

Schematic - Actual



Report Printed: 1/23/2009

ConocoPhillips

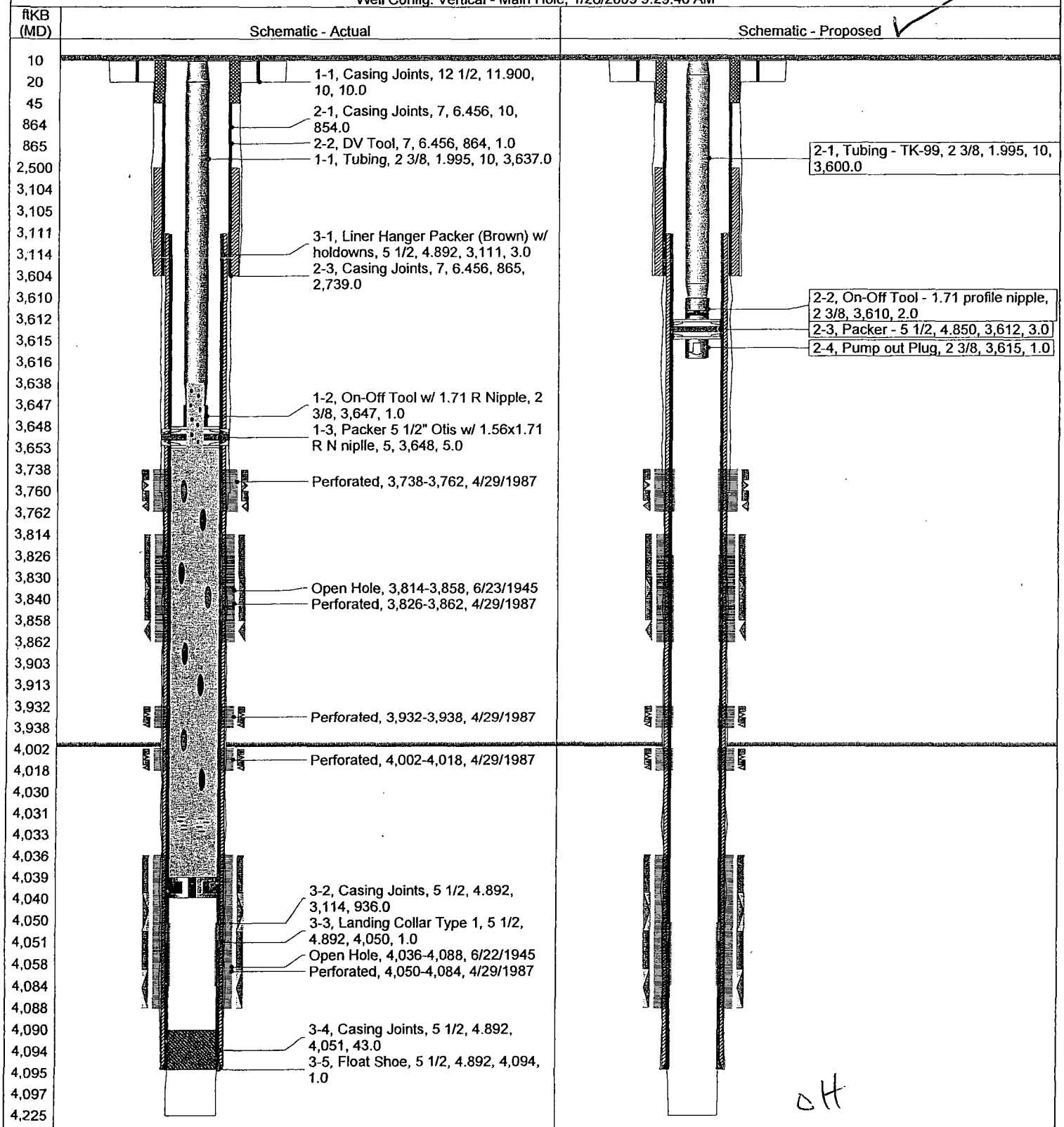
Schematic - Current

MCA 094

District	Field Name	API / UWI	County	State/Province
PERMIAN		300250806300	LEA	NEW MEXICO

Original Spud Date	Surface Legal Location	East/West Distance (ft)	East/West Reference	North/South Distance (ft)	North/South Reference
7/29/1939	Sec. 20, T-17S, R-32E	660.00	E	660.00	S

Well Config: Vertical - Main Hole, 1/26/2009 9:29:40 AM



Water Analysis Report

4/14/2009

Address:

Customer: Conoco Phillips
Attention: Dennis Ross
CC:

Lease: MCA
Formation:
Salesman: Corey Hodnett

Target Name: MCA 238 **Sample Point:** MCA 238

Sample Date: 04/13/2009 **Test Date:** 04/14/2009

Water Analysis(mg/L)

Calcium	128
Magnesium	34
Barium	
Strontium	
Sodium(calc.)	89
Bicarbonate Alkalinity	
Sulfate	52
Chloride	424
Resistivity	

Appended Data(mg/L)

CO2	
H2S	
Iron	0
Oxygen	

Physical Properties

Ionic Strength(calc.	0.02
pH(calc.)	
Temperature(°F)	70
Pressure(psia)	200
Density	

Additional Data

Specific Gravity	
Total Dissolved Solids(Mg/L)	
Total Hardness(CaCO3 Eq Mg/	459

Dew Poin	
Lead	
Zinc	

Calcite Calculation Information

Calculation Method	Value
CO2 in Brine(mg/L)	

Remarks:

SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)		
Gypsum (Calcium Sulfate)	-2.47	
Hemihydrate (Calcium Sulfate)	-2.17	
Anhydrite (Calcium Sulfate)	-2.86	
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

ORDER NO. PMX-153

APPLICATION OF CONOCO INC.TO EXPAND ITS PRESSURE MAINTENANCE/ENHANCED RECOVERY PROJECT IN THE MALJAMAR GRAYBURG/SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-6157, Conoco Inc. has made application to the Division on December 15, 1988 for permission to expand its MCA Unit Pressure Maintenance/Enhanced Recovery Project in the Maljamar Grayburg/San Andres Pool in Lea County, New Mexico.

NOW, on this 13th day of January, 1989, the Division Director finds that:

(1) The application has been filed in due form.

(2) Satisfactory information has been provided that all offset operators have been duly notified of the application.

(3) No objection has been received within the waiting period as prescribed by Rule 701(B).

(4) The proposed injection wells are eligible for conversion to carbon dioxide injection under the terms of Rule 701.

(5) The proposed expansion of the above referenced Pressure Maintenance/Enhanced Recovery Project will not cause waste nor impair correlative rights.

(6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Conoco Inc., be and the same is hereby authorized to inject carbon dioxide into the Grayburg and San Andres formations at approximately 3714 feet to approximately 4090 feet through 2 3/8 inch plastic lined tubing set in a packer located approximately within 100 feet of the uppermost injection perforations in the two wells described on Exhibit "A" attached to this order for purposes of enhanced recovery to wit.

4102 - 4290

IT IS FURTHER ORDERED THAT:

The applicant is further authorized to commence injection of carbon dioxide into the Grayburg and San Andres formations through twenty-two existing injection wells (previously approved as water injection wells) shown on Exhibit "B" attached to this order.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected carbon dioxide enters only the proposed injection interval and is not permitted to escape to other formations.

Prior to commencing injection operations into the wells shown on Exhibit "A", the casing in each well shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus in each well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

The injection wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than 2150 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected carbon dioxide from the Grayburg and San Andres formations. Such proper showing shall consist of a test procedure run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing, or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-6157 and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained for the entry of such further order or orders as the Division may deem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The Division Director may further require the installation of additional equipment and/or require additional testing of the subject injection wells upon determination that such equipment or testing is necessary to help control corrosion problems associated with injection of carbon dioxide.

DONE at Santa Fe, New Mexico, on this 13th day of January, 1989.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

for WILLIAM J. LEMAY
Director

S E A L

EXHIBIT "A"

DIVISION ORDER NO. PMX-153

WELL & LOCATION	MAXIMUM SURFACE INJECTION PRESSURE
MCA Unit No. 114 660 FNL & 660 FWL (Unit D) Section 28	2150 PSIG
MCA Unit No. 380 766 FNL & 1874 FEL (Unit B) Section 28	2150 PSIG

Both in Township 17 South, Range 32 East, NMPM
Lea County, New Mexico

EXHIBIT "B"

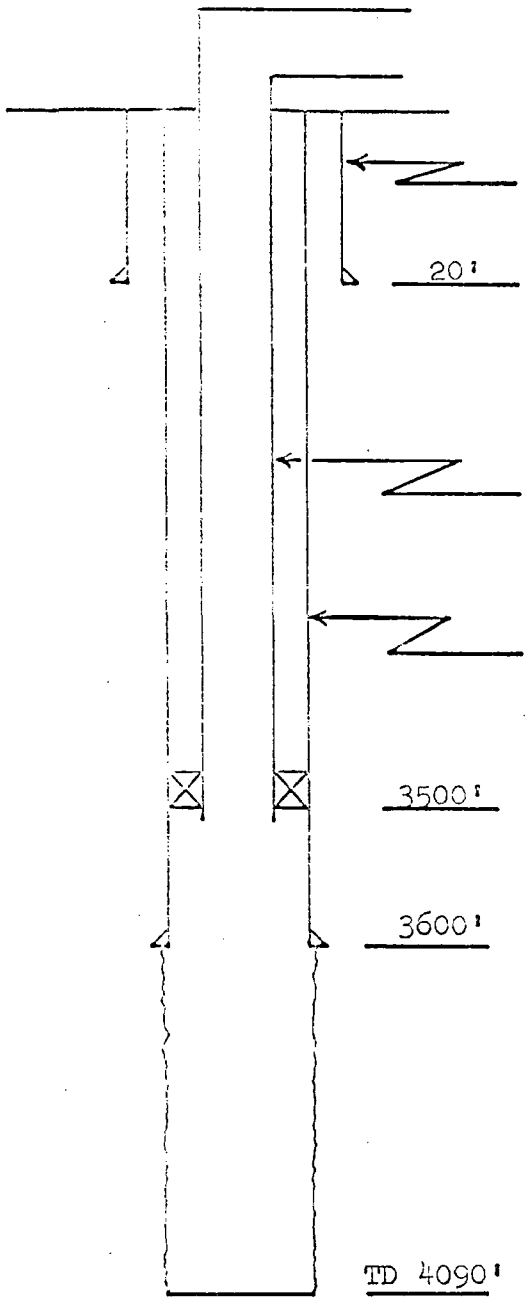
DIVISION ORDER NO. PMX-153

WELL & LOCATION	MAXIMUM SURFACE INJECTION PRESSURE
MCA Unit No. 94 660 FSL & 660 FEL (Unit P) Section 20	2150 PSIG
MCA Unit No. 109 660 FNL & 660 FWL (Unit D) Section 29	2150 PSIG
MCA Unit No. 111 660 FNL & 1980 FEL (Unit B) Section 29	2150 PSIG
MCA Unit No. 119 660 FNL & 660 FWL (Unit D) Section 27	2150 PSIG
MCA Unit No. 121 660 FNL & 1980 FEL (Unit B) Section 27	2150 PSIG
MCA Unit No. 145 1980 FNL & 660 FEL (Unit H) Section 27	2150 PSIG
MCA Unit No. 147 1980 FNL & 1980 FWL (Unit F) Section 27	2150 PSIG
MCA Unit No. 150 1980 FNL & 660 FEL (Unit H) Section 28	2150 PSIG
MCA Unit No. 152 1980 FNL & 1980 FWL (Unit F) Section 28	2150 PSIG
MCA Unit No. 154 1980 FNL & 600 FEL (Unit H) Section 29	2150 PSIG
MCA Unit No. 157 1980 FNL & 1980 FWL (Unit F) Section 29	2150 PSIG
MCA Unit No. 169 1480 FSL & 330 FWL (Unit L) Section 29	2150 PSIG
MCA Unit No. 171 1980 FSL & 1980 FEL (Unit J) Section 29	2150 PSIG
MCA Unit No. 175 1980 FSL & 660 FWL (Unit L) Section 28	2150 PSIG

WELL & LOCATION	MAXIMUM SURFACE INJECTION PRESSURE
MCA Unit No. 180 1980 FSL & 660 FWL (Unit L) Section 27	2150 PSIG
MCA Unit No. 184 1980 FSL & 1980 FEL (Unit J) Section 27	2150 PSIG
MCA Unit No. 205 660 FSL & 1980 FWL (Unit N) Section 27	2150 PSIG
MCA Unit No. 207 660 FSL & 660 FEL (Unit P) Section 28	2150 PSIG
MCA Unit No. 209 660 FSL & 1980 FWL (Unit N) Section 28	2150 PSIG
MCA Unit No. 223 660 FNL & 1980 FEL (Unit B) Section 33	2150 PSIG
MCA Unit No. 273 1980 FSL & 560 FWL (Unit L) Section 26	2150 PSIG
MCA Unit No. 301 1980 FSL & 1780 FEL (Unit J) Section 28	2150 PSIG

All in Township 17 South, Range 32 East, NMPM
Lea County, New Mexico

WATER INJECTION WELL DATA
MCA UNIT NO. 94
ELEV.-D.F. 3972'



12" OD surface casing set at 20' and cemented to NR with NR sacks.

2 3/8" OD EUE tubing w/retrievable packer to be set at approximately 3500'.

7" OD casing set at 3600' and cemented to surface with 360 sacks. (160 sacks through shoe and 200 sacks through DV tool at 856')

Producing Zone
O.H. 3600' to 4090'
Top of 6th Zone 3655'

PROPOSED PROCEDURE

1. Tag bottom and tally out.
2. Run tubing with packer to be set at 3500'

FUTURE WORK

1. Clean out to TD if required.
2. Run gamma ray-neutron open hole log.

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

ADMINISTRATIVE ORDER NO. PMX-164

APPLICATION OF CONOCO, INC. TO EXPAND ITS PRESSURE MAINTENANCE/ENHANCED RECOVERY PROJECT IN THE MALJAMAR GRAYBURG-SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-6157, Conoco, Inc. has made application to the Division on November 6, 1990 for permission to expand its MCA Unit Pressure Maintenance/Enhanced Recovery Project in the Maljamar Grayburg San Andres Pool in Lea County, New Mexico.

NOW, on this 5th day of February, 1991, the Division Director finds that:

(1) The application has been filed in due form.

(2) Satisfactory information has been provided that all offset operators have been duly notified of the application.

(3) No objection has been received within the waiting period as prescribed by Rule 701(B).

(4) The proposed injection well is eligible for conversion to carbon dioxide injection under the terms of Rule 701.

(5) The proposed expansion of the above-referenced pressure maintenance/enhanced recovery project will not cause waste nor impair correlative rights.

(6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Conoco, Inc., be and the same is hereby authorized to inject carbon dioxide into the Grayburg-San Andres formation at approximately 3714 feet to approximately 4090 feet through 2 3/8-inch plastic lined tubing set in a packer located approximately 100 feet from the uppermost perforation in the following described well for purposes of pressure maintenance/enhanced recovery to wit:

MCA Unit Well No. 386
1921' FNL & 1995' FWL (Unit F)
Section 29, T-17 South, R-32 East, NMPM,
Lea County, New Mexico.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected carbon dioxide enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 2150 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected carbon-dioxide from the Grayburg-San Andres formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject well shall be governed by all provisions of Division Order No. R-6157 and Rules 701-708 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly progress reports of the project in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

Approved at Santa Fe, New Mexico, on this 5th day of February, 1991.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

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