El Paso Exploration Company

Well File
Howell B #3
S/W 3-30N-7W

MEMORANDUM

TO: Mr. E. J. Coel

DATE: June 14, 1983

FROM: D. C. Walker

PLACE: Farmington, New Mexico

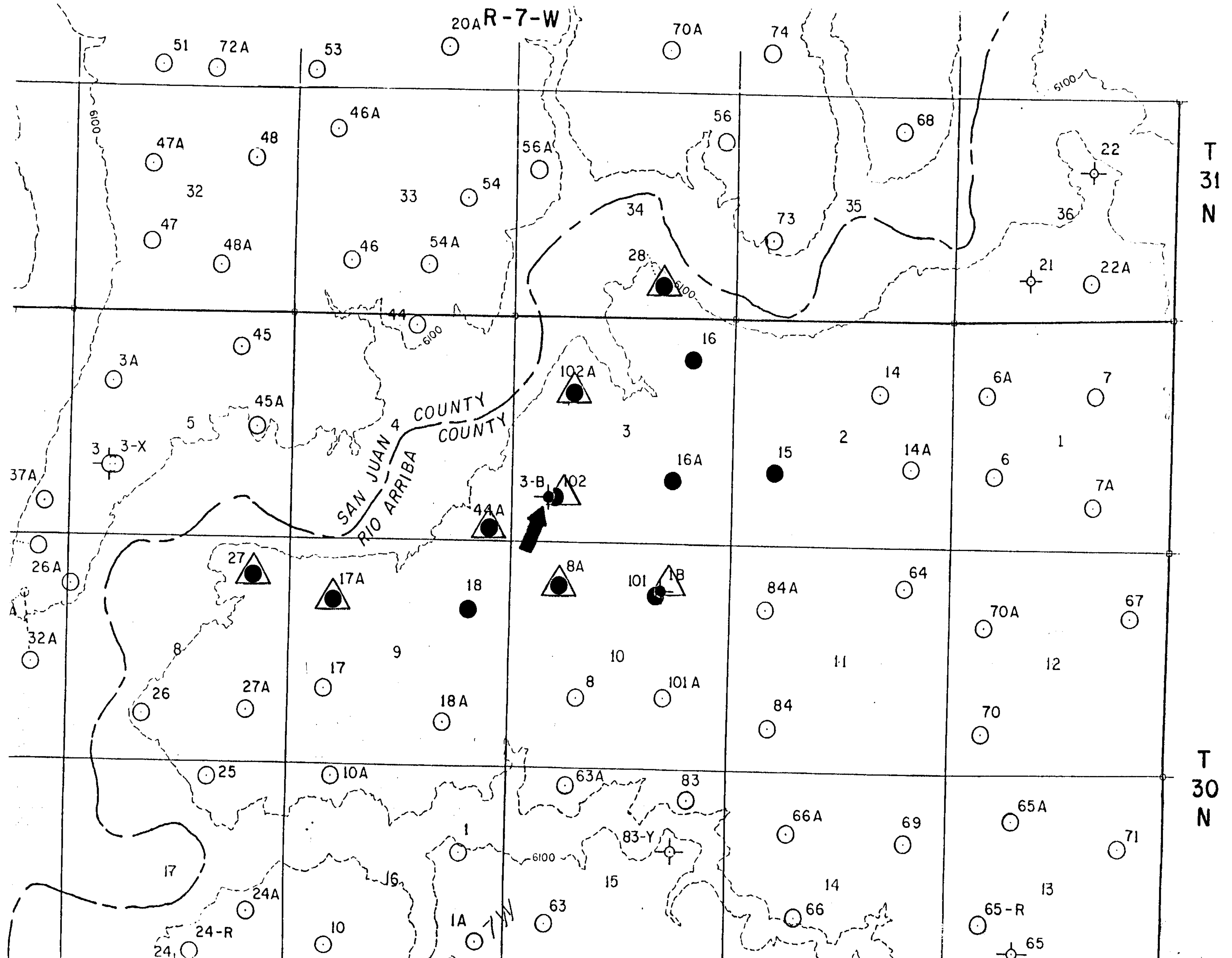
Subject: Howell B #3
Adjacent Well Data

Attached is the data concerning the wells adjacent to the Howell B #3. The data includes a schematic showing casing depths, cement tops, cemented intervals, and formation tops.

The Northeast Blanco Unit wells do not have cathodic protection. Considering this fact and considering how the wells are cemented, a determination has been made of wells in the area that could possibly have casing leaks and gas migration to shallow formations. These wells are shown on the attached plat with the triangle symbol.

D. C. Walker

DCW:pb

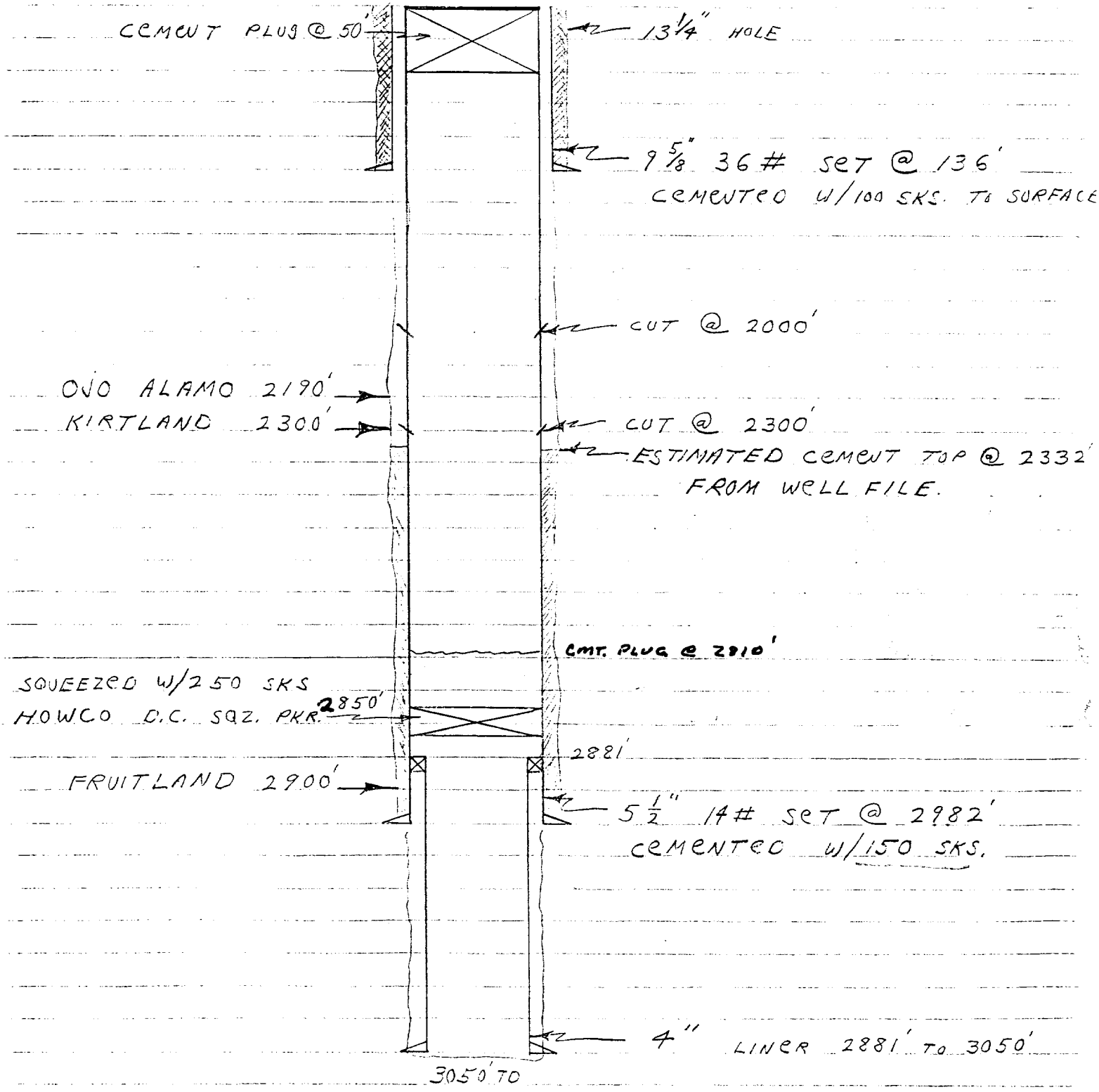

R-7-W
T 31 N
T 30 N
SAN JUAN COUNTY
RIO ARRIBA COUNTY
3-B
102
102A
44A
8A
101
1B
16
16A
15
27
17A
18
28
6100

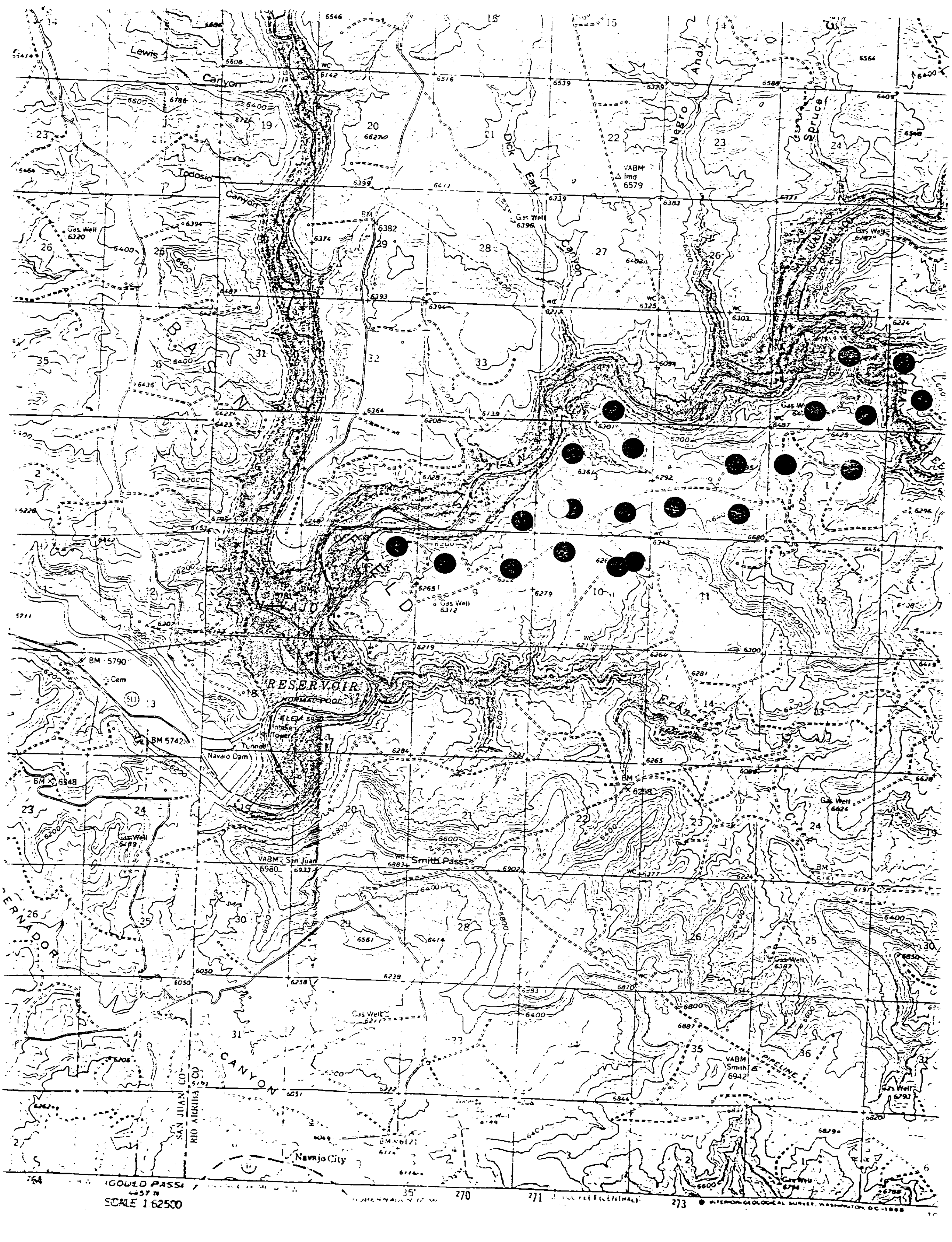
El Paso Natural Gas Company
PRELIMINARY ANALYSIS
Form 33-4 (5-63)

HOWELL # 3B

SW/4 Sec. 3, T-30-N, R-7-W

RIO ARRIBA CO., N.M.





Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Andy
Nebro
Spruce
VABM Ima 6579
Gas Well
BASIN
NAVAJO
FIELD
RESERVOIR
NORMAL POOL
Navajo Dam
Tunnel
BM 5790
BM 5742
Cem
Frances
Creek
Smith Pass
VABM San Juan 6960
VABM Smith 6942
PIPELINE
CANYON
GOBERNADOR
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #18
NE Section 9, T-30-N, R-7-W

This well was drilled and open-hole completed in September, 1954. In June 1966 the 2 3/8" tubing was pulled, but efforts to clean out the open hole section failed. The open hole and a casing failure at 1368' in 7" casing were squeezed. The well was whipstocked with a knuckle joint and 4 1/2" casing cemented in two stages. In March, 1982 the 2 3/8" tubing was pulled and the 4 1/2" casing was tested to 2000 psi, held okay. Two squeeze holes were shot in the 4 1/2" casing at 2550' and were squeezed with 350 sks. The annulus between the 10 3/4" and 7" casing was bradenhead squeezed with 150 sks. The casing was tested to 1000 psi, held okay. The tubing was then rerun. It is very unlikely that this well has a casing leak.

Form 7-1 (Rev. 9-77)

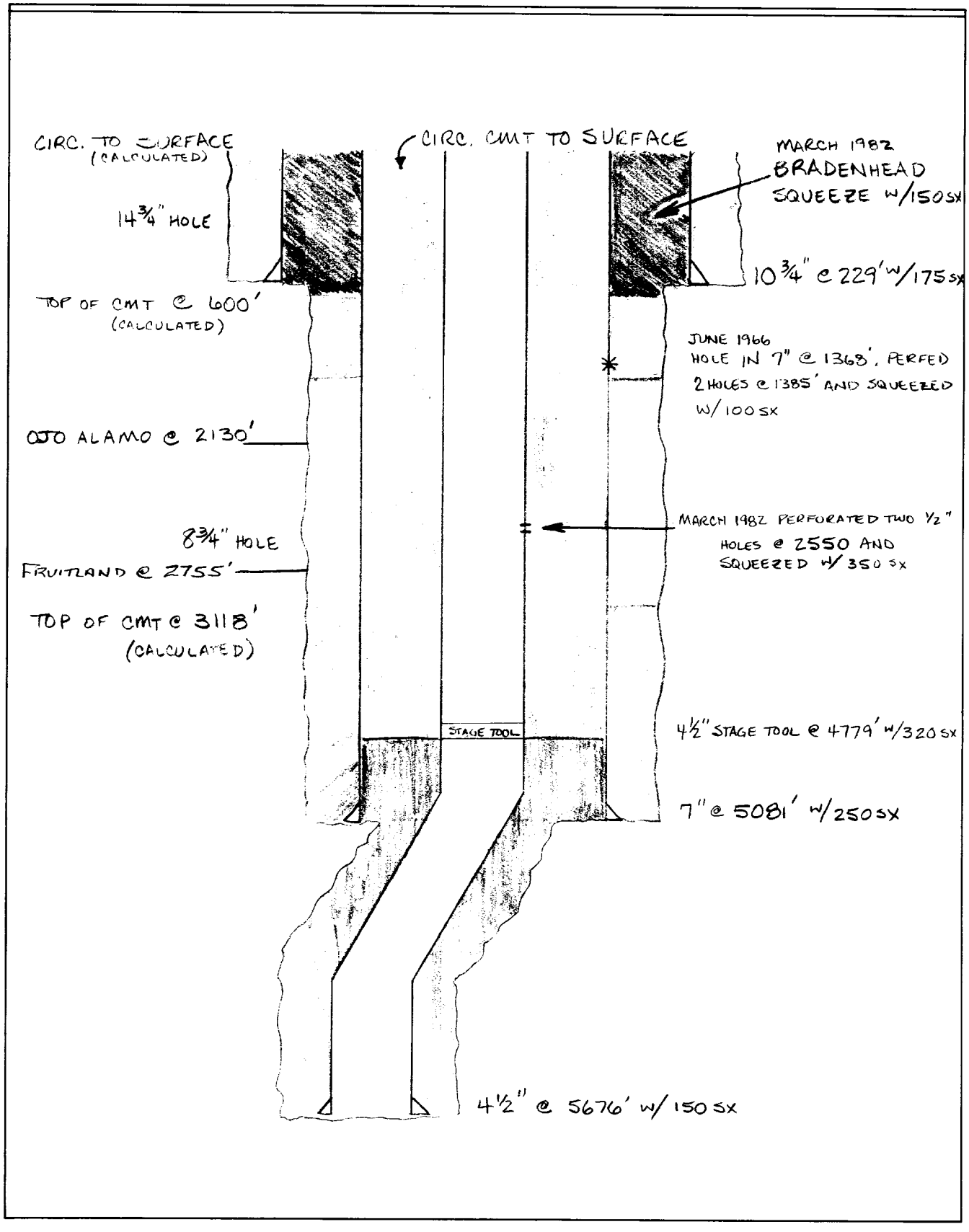
ENGINEERING CALCULATION

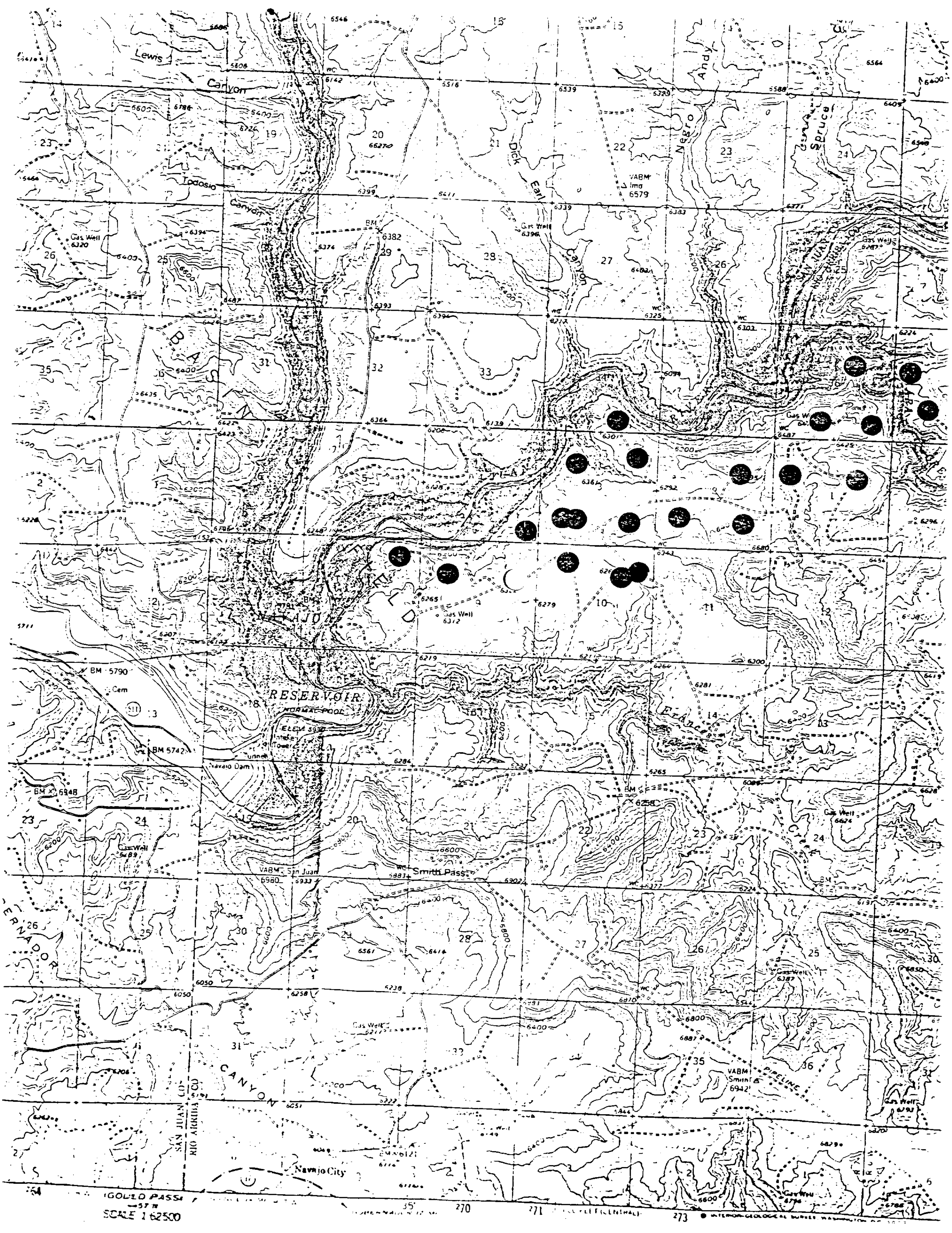
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT # 18
NE SEC 9 - T30N - R7W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38




Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Negro
Andy
Spruce
Gas Well
VABM
6579
BM
6382
B A S I N
NAVAJO
F I E L D
RESERVOIR
NORMAL POOL
Intake Tower
Tunnel
Navajo Dam
Cem
BM 5790
BM 5742
BM 6948
VABM San Juan
6960
Smith Pass
VABM Smith
6942
PIPELINE
C A N Y O N
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1 62500

Northeast Blanco Unit #101
NE Section 10, T-30-N, R-7-W

This well, formerly the Howell B #1X, was spudded in August, 1957, and completed in October, 1957. In June 1972, holes were found in the 5 1/2" casing from 1520' to 1820' and were squeezed with 400 sks. Cement was circulated between the 7 5/8" and 5 1/2" casing. The casing was pressure tested to 1000 psi, held okay, and 2 3/8" tubing was rerun. During the past eleven years, the casing may have developed another leak. However, it is unlikely, considering the squeeze cementing, that the well is leaking gas to a shallow formation unless it is communicating with the plugged Howell B #1.

Form 7-1 (Rev. 9-77)

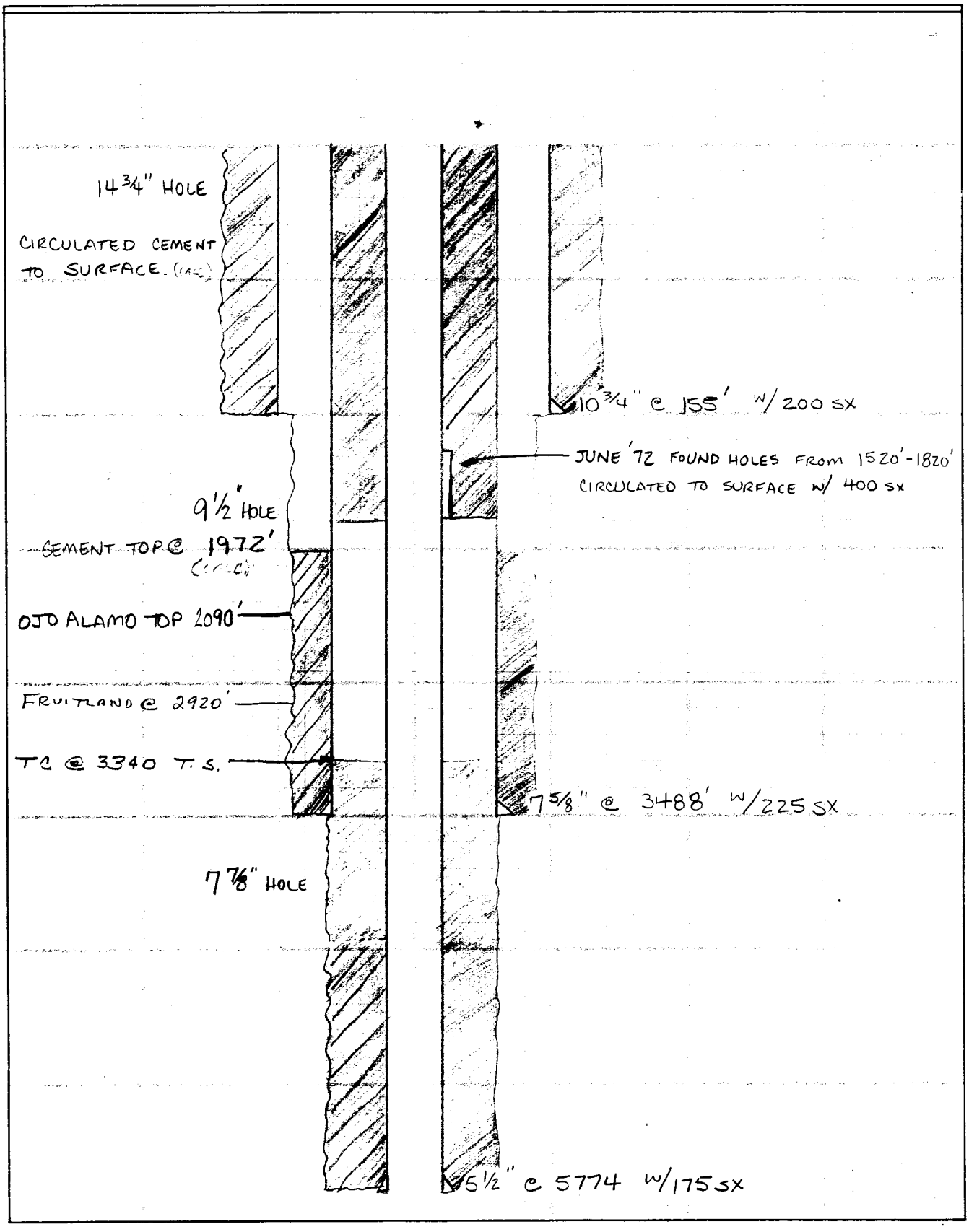
ENGINEERING CALCULATION

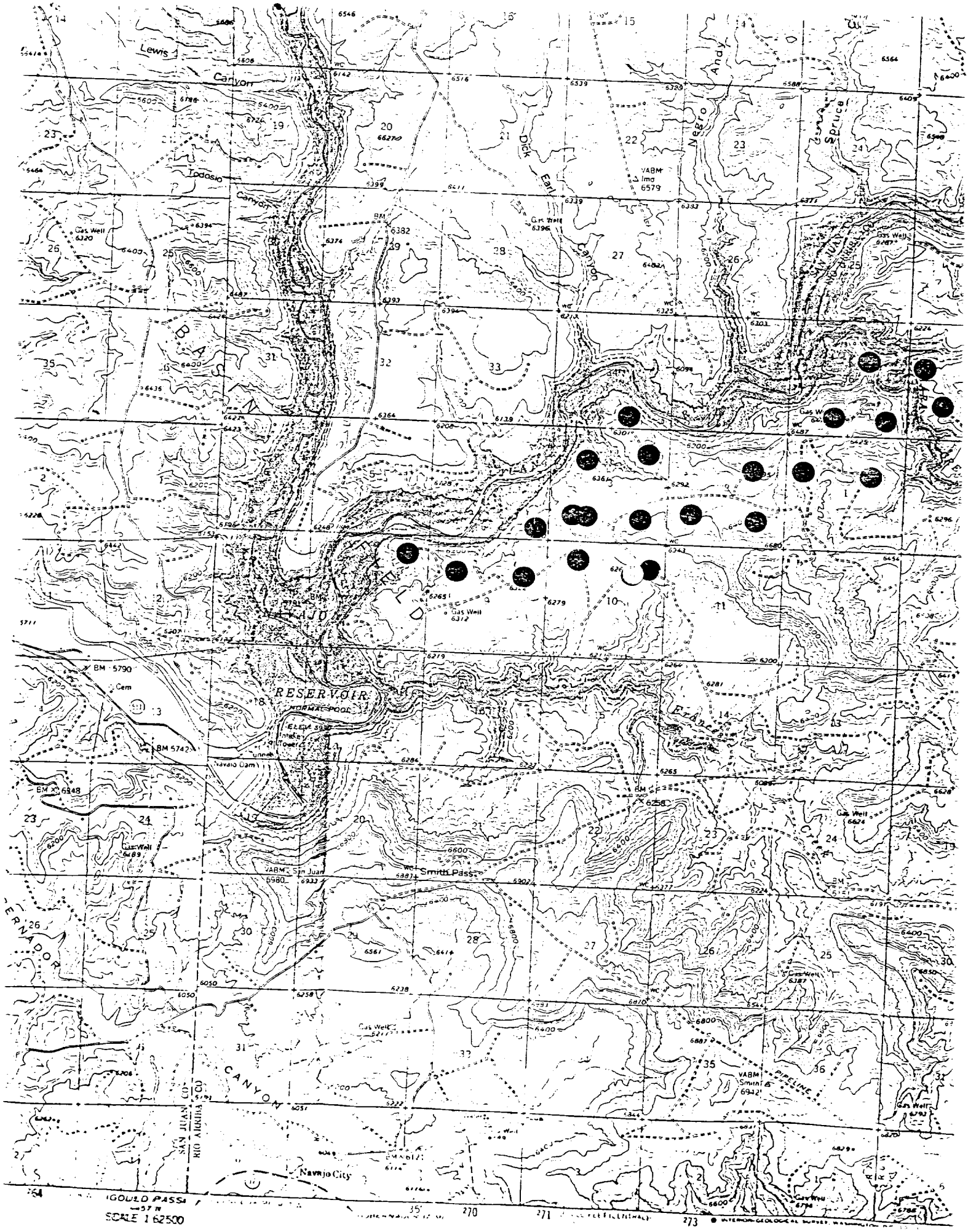
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT # 101
NE SEC 10 - T30N - R7W
(FORMERLY HOWELL # 1-BX)

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MISC. MW		gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38




Lewis Canyon
Todasio Canyon
Dick Earl Canyon
Navajo Andy
Spruce
BASIN
FIELD
RESERVOIR
NORMAL POOL
Navajo Dam
Smith Pass
CANYON
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #8A
NW Section 10, T-30-N, R-7-W

This well was drilled in 1978. The corrosive Ojo Alamo water is covered with cement according to temperature survey. The well does not have cathodic protection.

The tubing has not been pulled and the casing tested since completion.

It is unlikely this well is leaking gas; however, gas could be migrating in the 7" x 8 3/4" annulus if the 7" casing has failed.

Form 7-1 (Rev. 9-77)

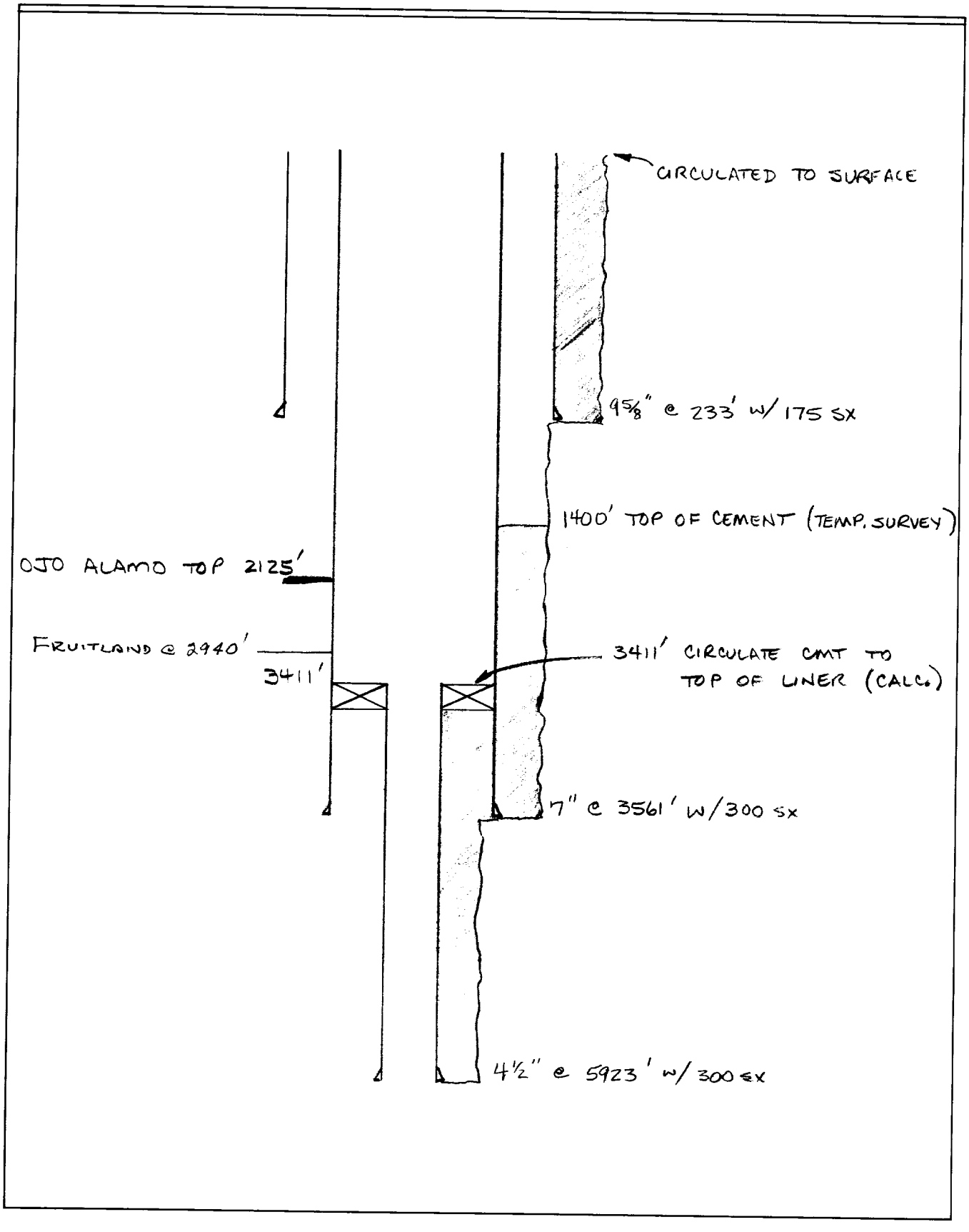
ENGINEERING CALCULATION

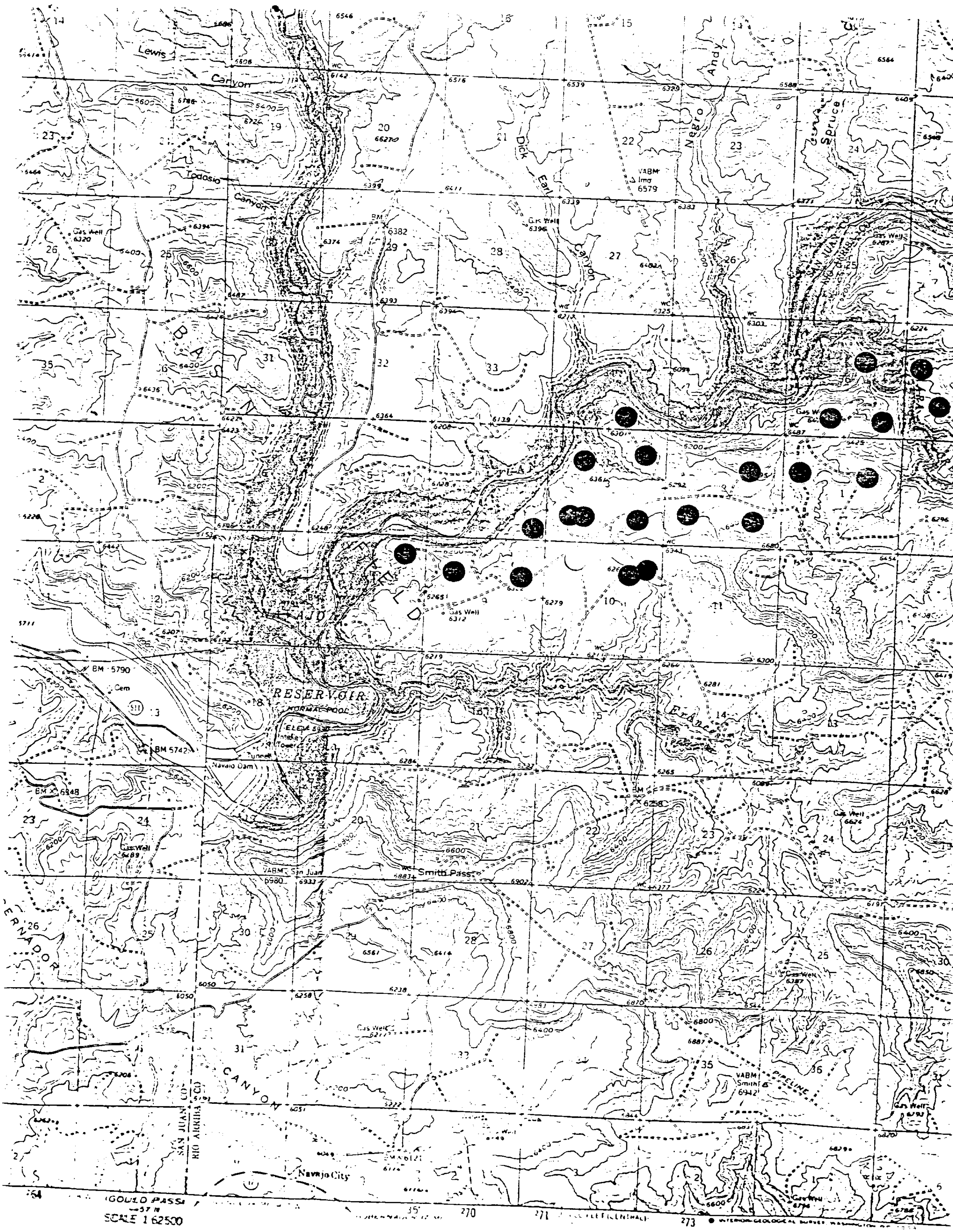
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT # 8A
NW SEC 10 - T30N - R7W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis
Canyon
Todasio
Canyon
Dick
Earl
Canyon
Negro
Andy
Spruce
VABM
Img
6579
Gas Well
RESERVOIR
NORMAL POOL
Tunnel
Navajo Dam
BM 5790
BM 5742
Cem
CANYON
Smith Pass
VABM San Juan
6980
VABM
Smith
6942
PIPELINE
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1:62500

Howell B #1 (P&A)
NE Section 10, T-30-N, R-7-W

This well was drilled in 1951. The 7" casing collapsed and parted at 2259'. A retainer was set at 2125' and the well was squeezed with 100 sks. The well was temporarily abandoned until 1958 when the 7" casing was perforated at 200' and cement circulated to surface. The well was abandoned.

It may be assumed that the 100 sks. of cement pumped through the retainer at 2125' dropped to the open hole section from 4931' to 5523' and was lost into the fractured Point Lookout. This would allow Cliff House and Fruitland gas to migrate to shallow formations and into the lake.

This well does not have the Fruitland covered with cement.

Form 7-1 (Rev. 9-77)

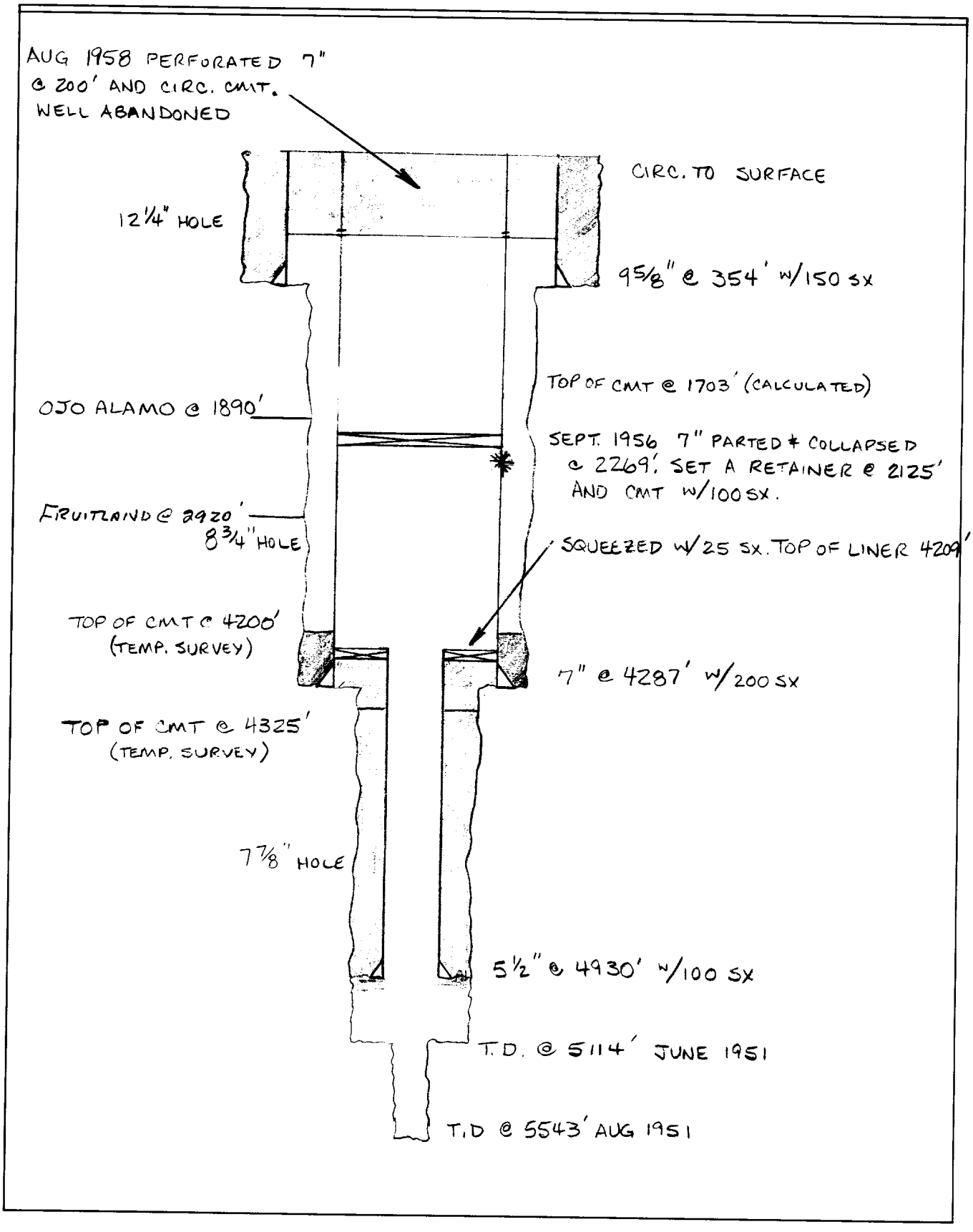
ENGINEERING CALCULATION

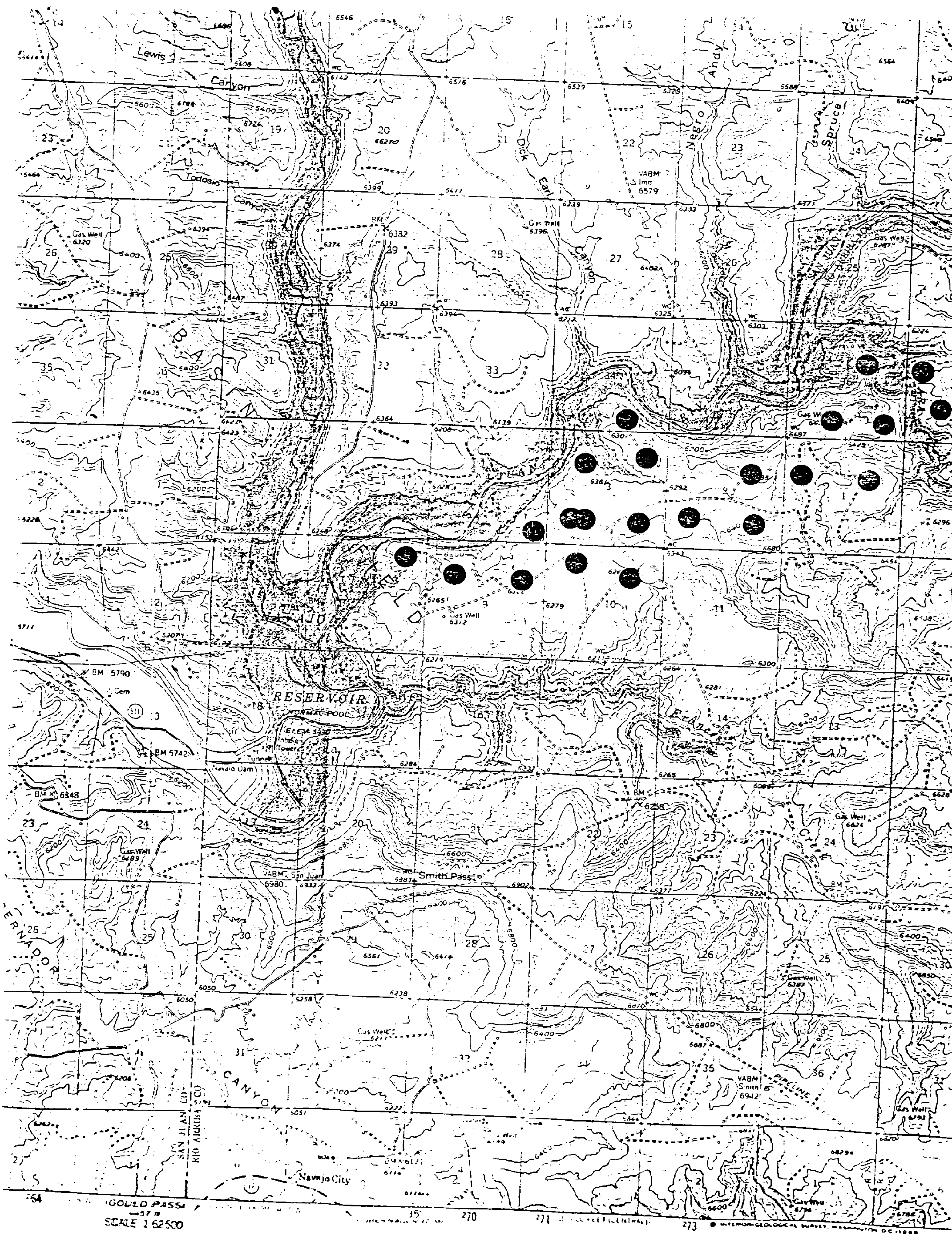
Sheet: _____ of _____
Date: _____
By: _____
File: _____

HOWELL B #1
NE SEC 10 - T30N - R7W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Negro
Andy
Spruce
VABM
Ima
6579
Gas Well
6320
6382
Gas Well
6396
BASIN
NAVAJO
FIELD
Gas Well
6312
BM 5790
Cem
BM 5742
Navajo Dam
RESERVOIR
NORMAL POOL
Intake
Tower
Tunnel
Frances
Gas Well
6489
VABM San Juan
6980
Smith Pass
Gas Well
6626
Gas Well
6387
PIPELINE
VABM
Smith
6942
Gas Well
6793
CANYON
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #16
NE Section 3, T-30-N, R-7-W

This well was drilled and completed in July, 1954. In May, 1962, the tubing was pulled and the well was cleaned out to 5525'. A long string of 4" and 4 1/2" casing was set at 5510' with the change over at 4976'. A temperature survey showed the top of cement at 2450'. The 4 1/2" and 7" casing annulus was then cemented and circulated to surface. The casing was tested to 1500 psi and held okay. The well has not been entered since that time and appears to have good cement coverage.

Form 7-1 (Rev. 9-77)

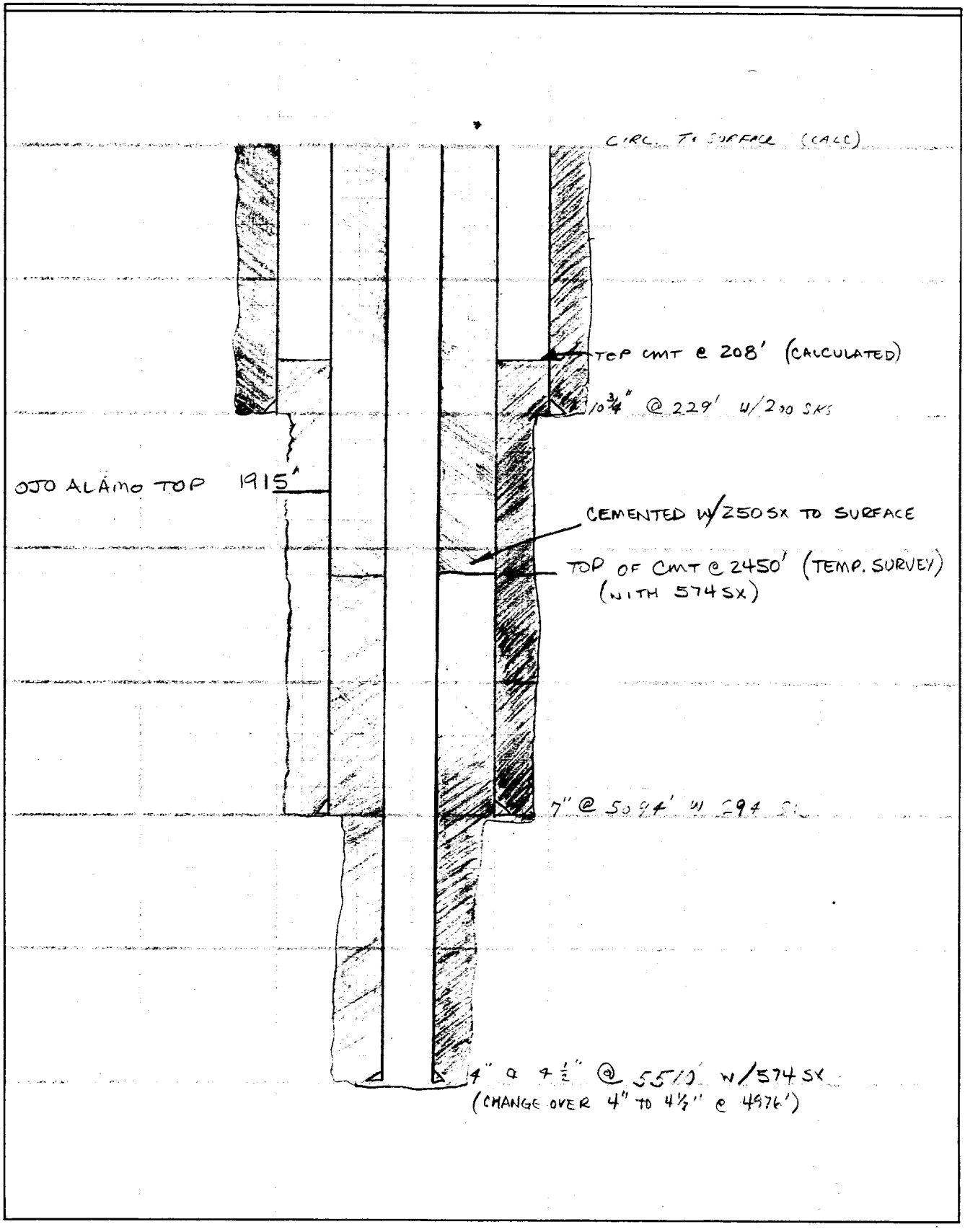
ENGINEERING CALCULATION

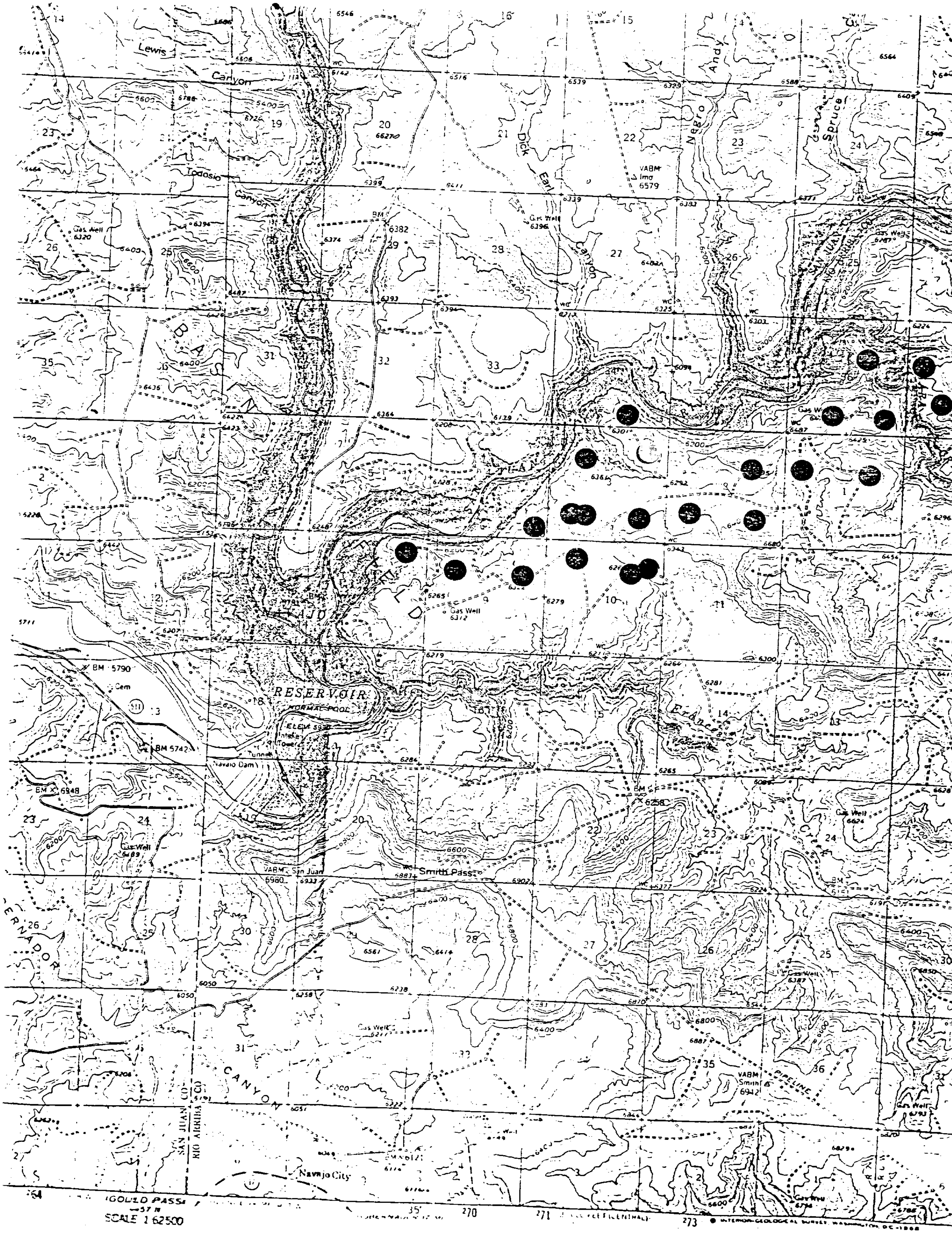
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT # 16
NE SEC. 16, T 30 N, R 7 W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Negro
Andy
Spruce
VABM
Ima
6579
Gas Well
BM
6382
B A S
RESERVOIR
NORMAL POOL
Tunnel
Navajo Dam
BM 5790
Cem
BM 5742
Francés
Smith Pass
VABM San Juan
6960
Creek
PIPELINE
VABM
Smith
6942
CANYON
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #102
SW Section 3, T-30-N, R-7-W

This well, formerly the Howell #2B, was spudded in November, 1951, and completed in March, 1953. In May, 1958, the open hole was found to be caved in through the Menefee zone and the 7" casing parted at 1577'. A full string of 4 1/2" casing was set at 5624'. The initial cement job did not stop gas flow behind the casing and two days later was squeezed. Since May, 1958, the tubing has not been pulled nor the casing tested with a packer. During the past 25 years, it is likely that a casing leak may have developed. However, the condition of this well is such that if a casing leak has developed, migration of gas to shallow zone would not be likely.

The Ojo Alamo is not covered with cement nor does the well have cathodic protection.

Form 7-1 (Rev. 9-77)

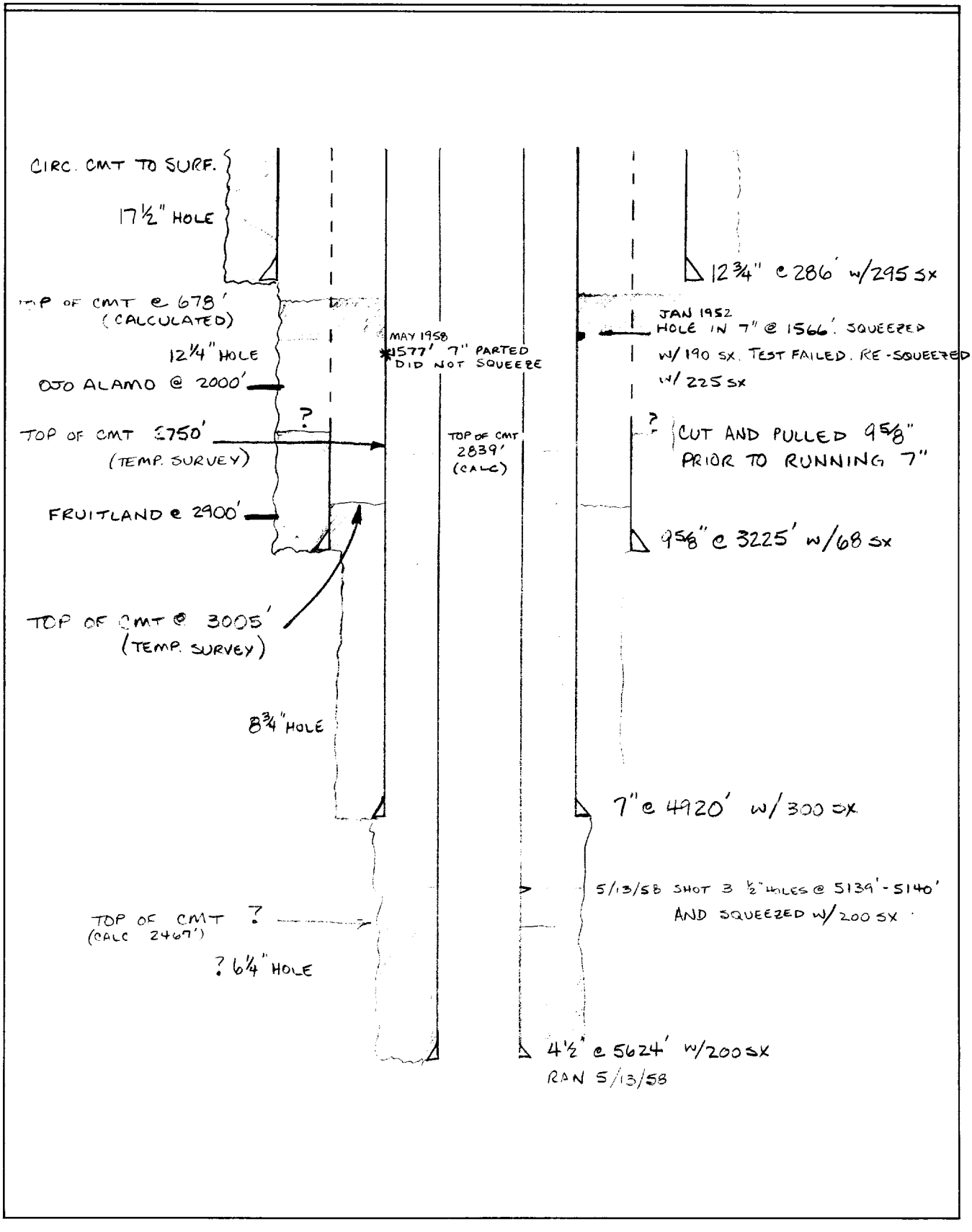
ENGINEERING CALCULATION

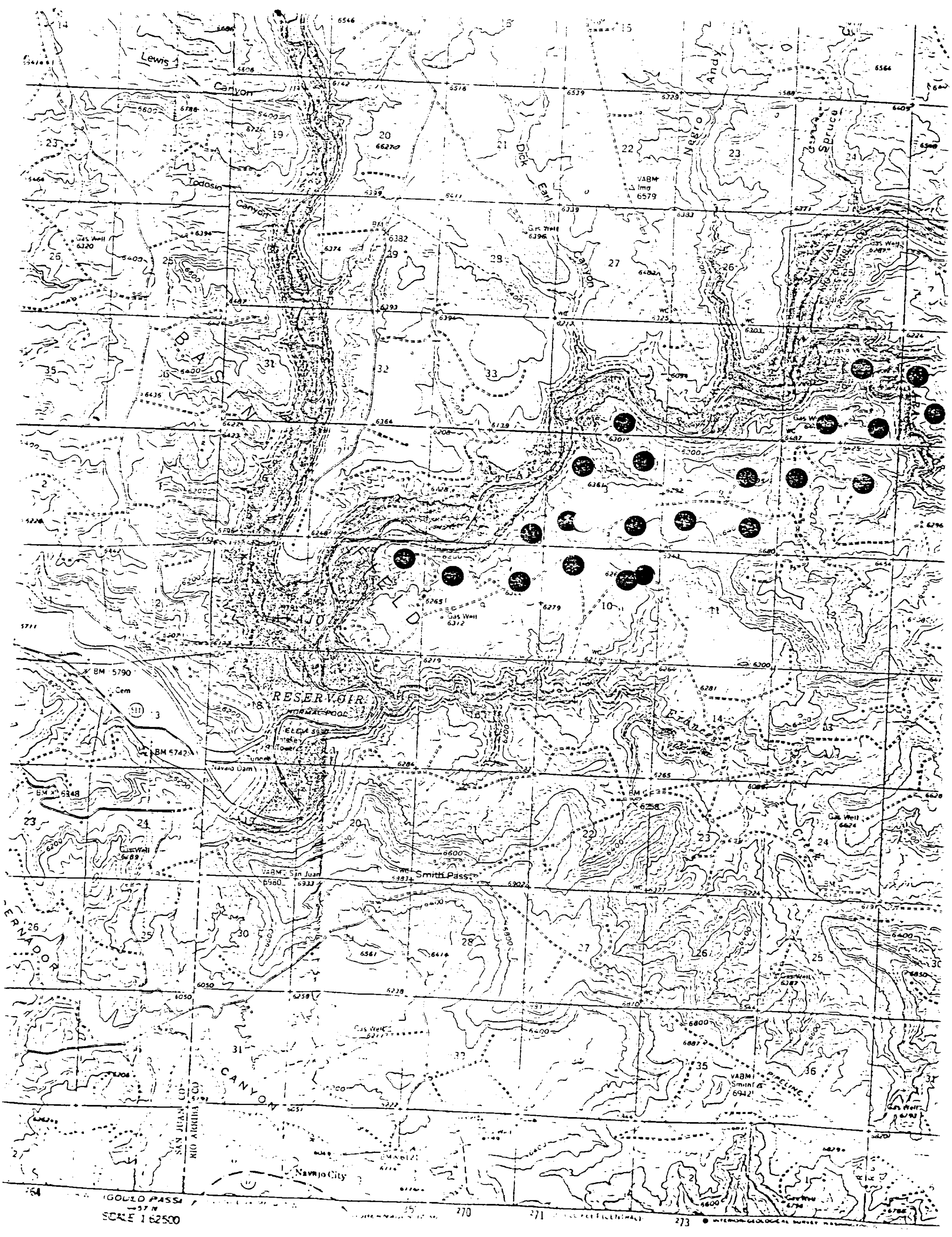
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT # 102
SW SEC 3 - T 30 N - R 7 W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Andy
Spruce
VABM
6579
Gas Well
NAVAJO
RESERVOIR
NORMAL POOL
BM 5790
Cem
BM 5742
Navajo Dam
Tunnel
BM 6348
Francis
Smith Pass
VABM San Juan
CANYON
PIPELINE
VABM Smith
6942'
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #15
SW Section 2, T-30-N, R-7-W

This well was drilled and completed in May and June 1954. In July, 1966, the tubing was found to be stuck at 5300'. The tubing was cut at 5280' and the 7" was found corroded from 800' to 2440' with a hole at 870'. The casing was squeezed and the hole whipstocked at 4849'. A full string of 4 1/2" casing was set at 5640' and cemented in two stages. The Mesa Verde was completed in two stages and 178 joints of 2 3/8" tubing was run. Since 1966 the well has not been entered and may have developed a casing leak. However, it is not likely that a leak would migrate to a shallow formation.

Form 7-1 (Rev. 9-77)

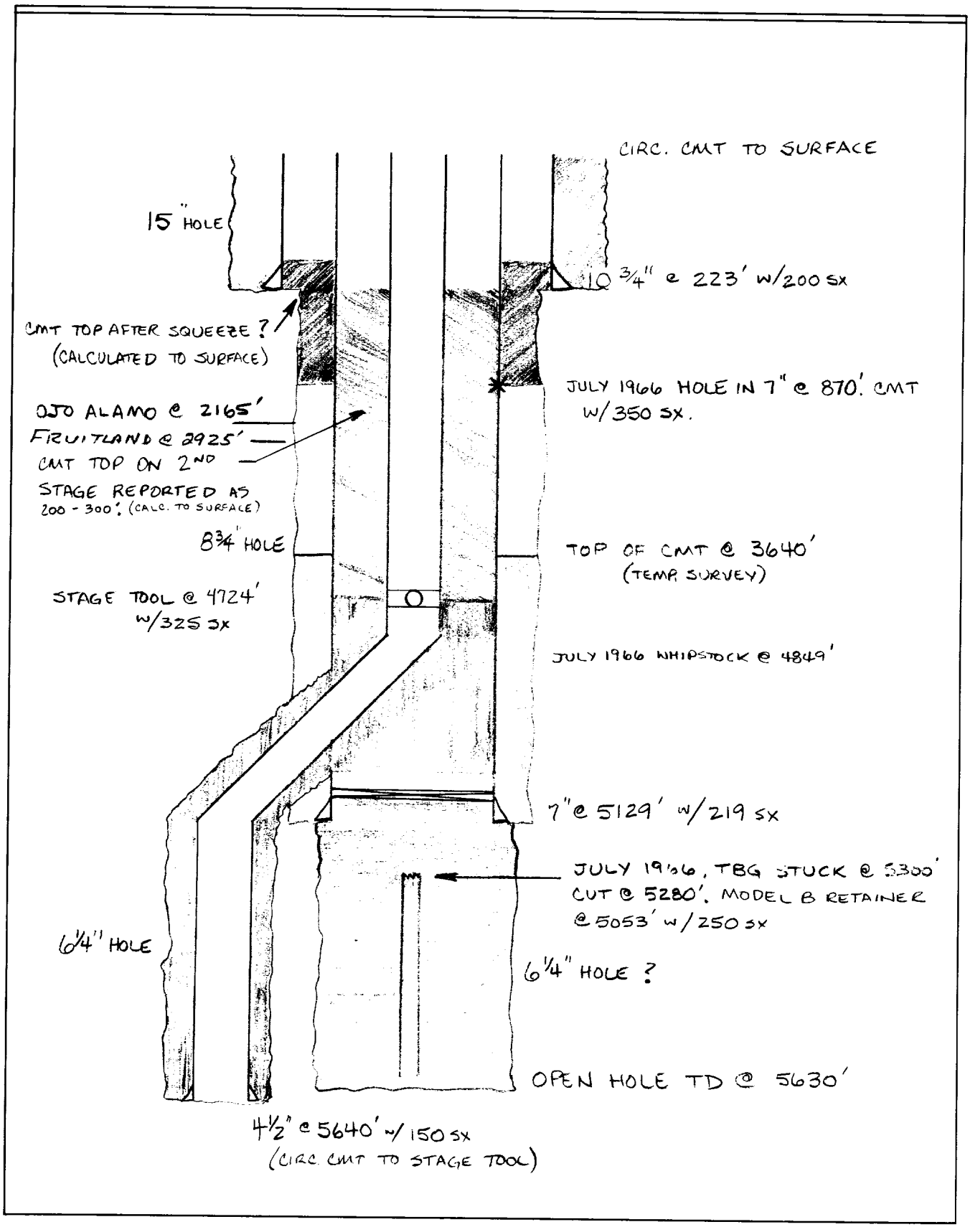
ENGINEERING CALCULATION

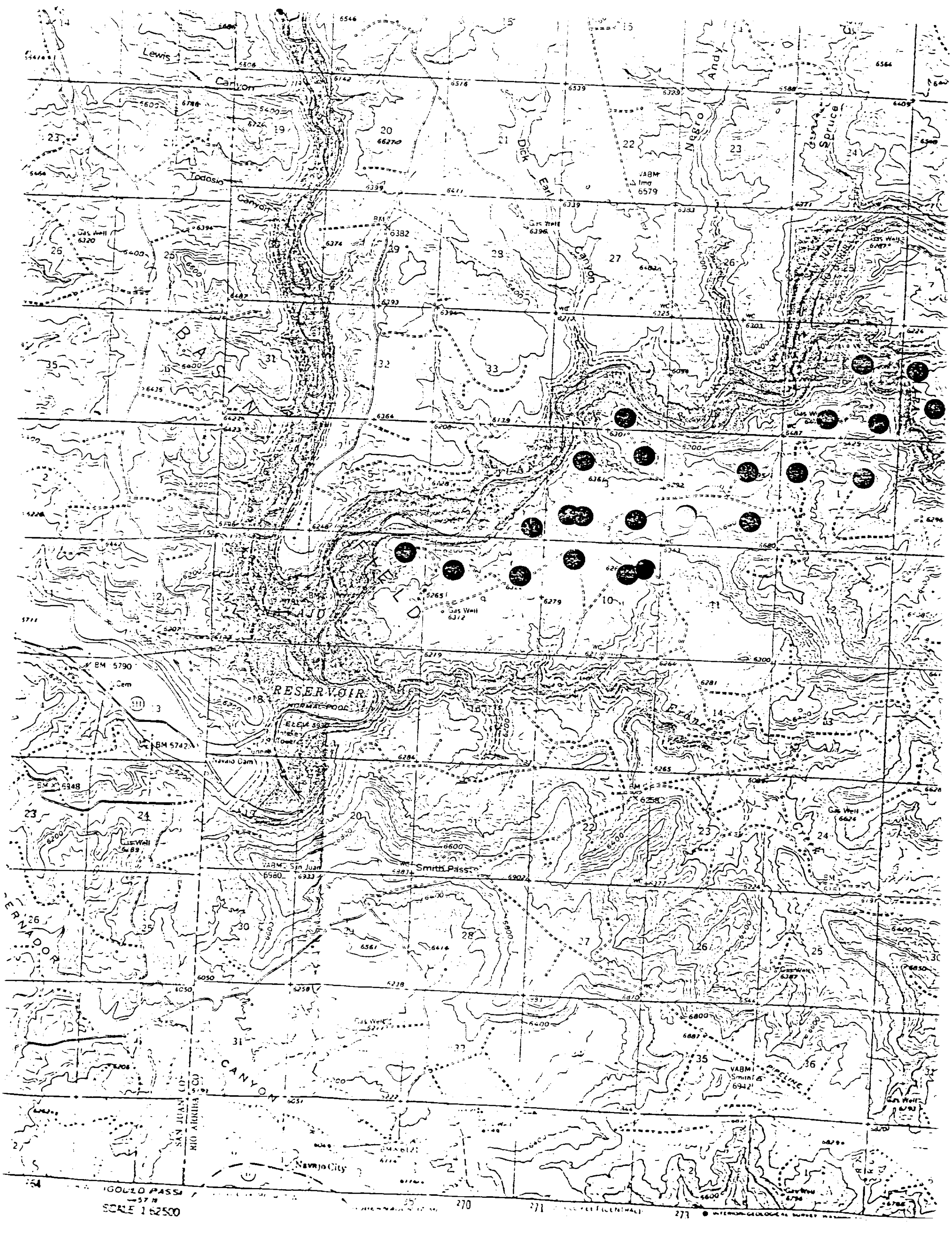
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT #15
SW SEC 2 - T30N - R7W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis Canyon
Todosio Canyon
Dick
Negro
Andy
Spruce
Canyon
RESERVOIR
NORMAL POOL
Intake Tower
Tunnel
Navajo Dam
Cem
Gas Well
VABM San Juan
Smith Pass
CANYON
PIPELINE
VABM Smith
Navajo City
SAN JUAN CO
RIO ARRIBA CO
SCALE 1:62500

Northeast Blanco Unit #28
SE Section 34, T-31-N, R-7-W

This well was drilled and completed in October, 1955. In December, 1955, the tubing was pulled and the 5 1/2" casing was tested to 1200 psi, held okay. New hole was drilled to 5571' and a 4" flush joint liner was run from 5229' to 5570'. The liner was cemented with 35 sks. and then, two days later, squeezed through a perforation at 5436' with 75 sks. The Point Lookout and Cliff House were completed and 2 3/8" tubing run. Since that time, the well has not been entered and may have developed a casing failure. The Ojo Alamo is not covered.

This well would have to develop leaks in both the 5 1/2" and 7" casing strings to allow gas to escape to a shallow formation. This may be possible since the Ojo Alamo is not covered with cement nor does the well have cathodic protection.

Form 7-1 (Rev. 9-77)

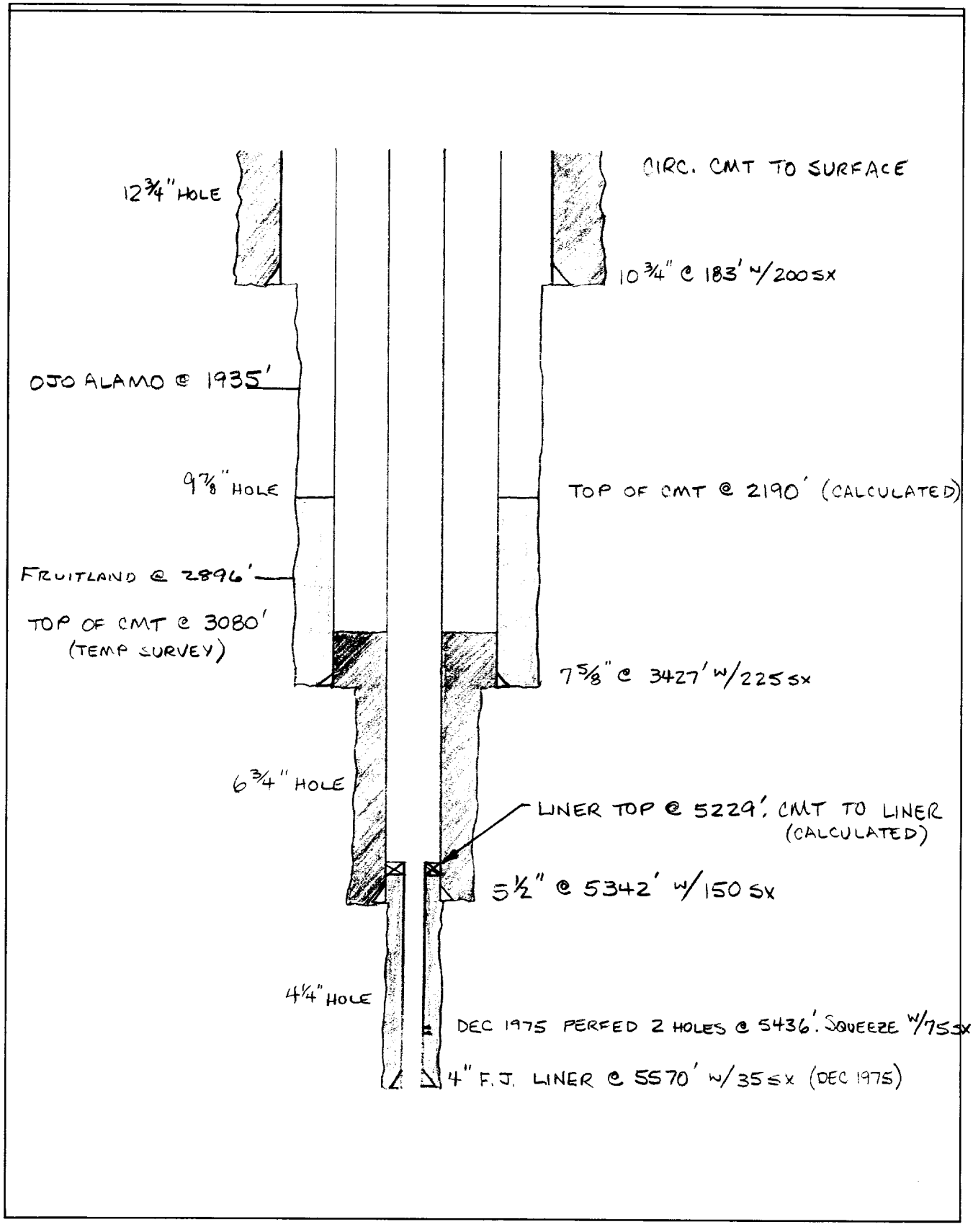
ENGINEERING CALCULATION

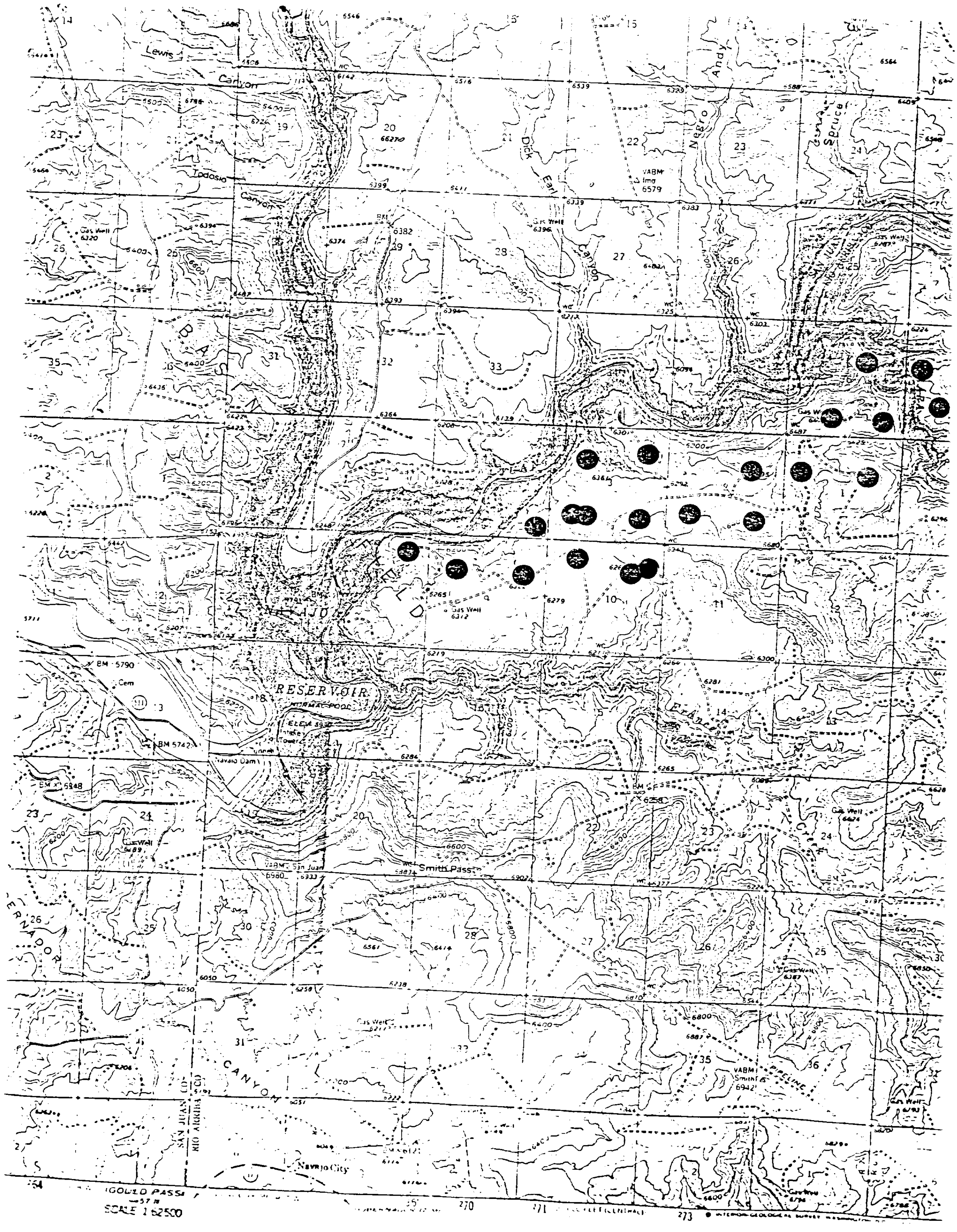
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT #28
SE SEC 34 - T31N - R7W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Andy
Nebo
Spruce
VABM
Img
6579
Gas Well
RESERVOIR
NAVAJO
Navajo Dam
Cem
BM 5790
BM 5742
Smith Pass
CANYON
SAN JUAN CO
RIO ARRIBA CO
Navajo City
PIPELINE
SCALE 1:62500

Northeast Blanco Unit #27
NE Section 8, T-30-N, R-7-W

This well was drilled in 1955 and has not been re-entered since. The calculated top of cement indicates coverage of the Ojo Alamo water. Cathodic protection is not installed on the well.

There is no record of testing the 5 1/2" x 7 5/8" annulus.

This well could be leaking and/or allowing gas migration to a shallow formation where it might eventually break out into the lake in the SE/4 of Section 3.

Form 7-1 (Rev. 9-77)

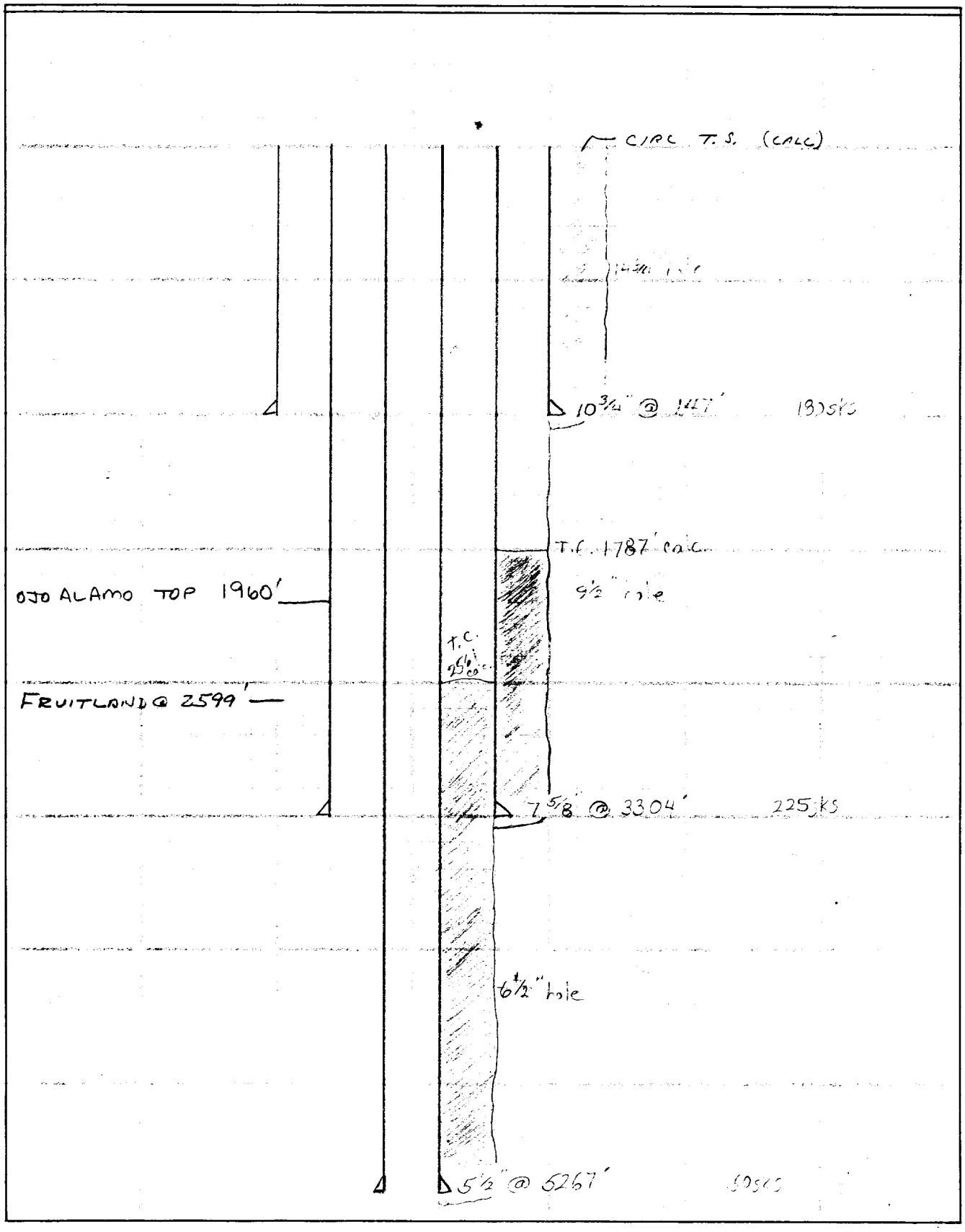
ENGINEERING CALCULATION

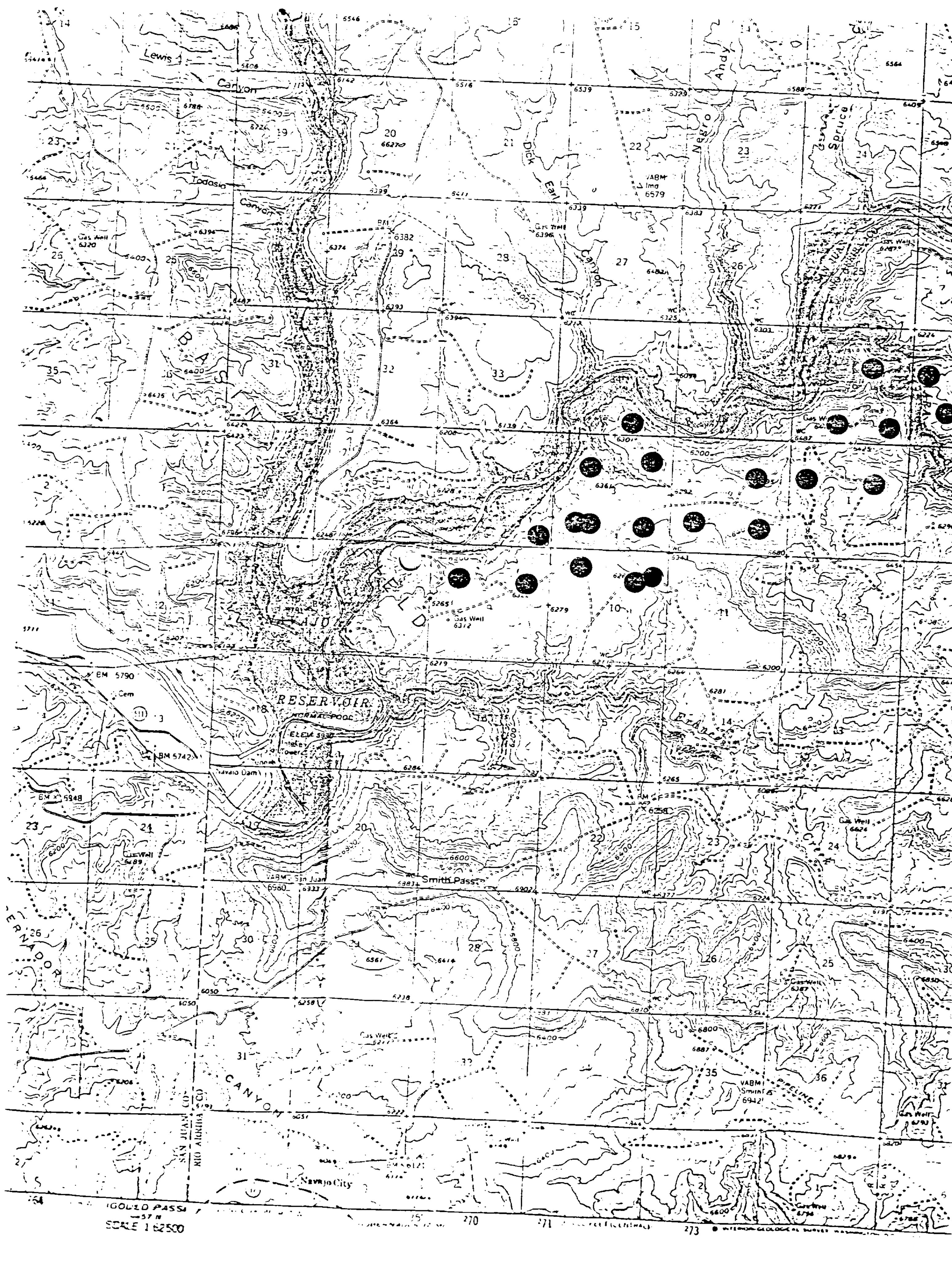
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NE Blanco Unit #27
NE 8 T-30-N R-7-W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MISC. MW		gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis Canyon
Todasio Canyon
Dick Earl Canyon
Negro Andy
Spruce
VABM Ima 6579
Gas Well
B A S I N
F I E L D
NAVAJO
RESERVOIR
NORMAL POOL
Navajo Dam
BM 5790
BM 5742
Cem
Smith Pass
VABM San Juan
C A N Y O N
Navajo City
SAN JUAN CO
RIO ARRIBA CO
PIPELINE
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #16A
SE Section 3, T-30-N, R-7-W

This well was drilled in 1978. The corrosive Ojo Alamo water is covered with cement according to temperature survey. The well does not have cathodic protection.

The tubing has not been pulled and the casing tested since completion.

It is unlikely this well is leaking gas; however, gas could be migrating in the 7" x 8 3/4" annulus if the 7" casing has failed.

Form 7-1 (Rev. 9-77)

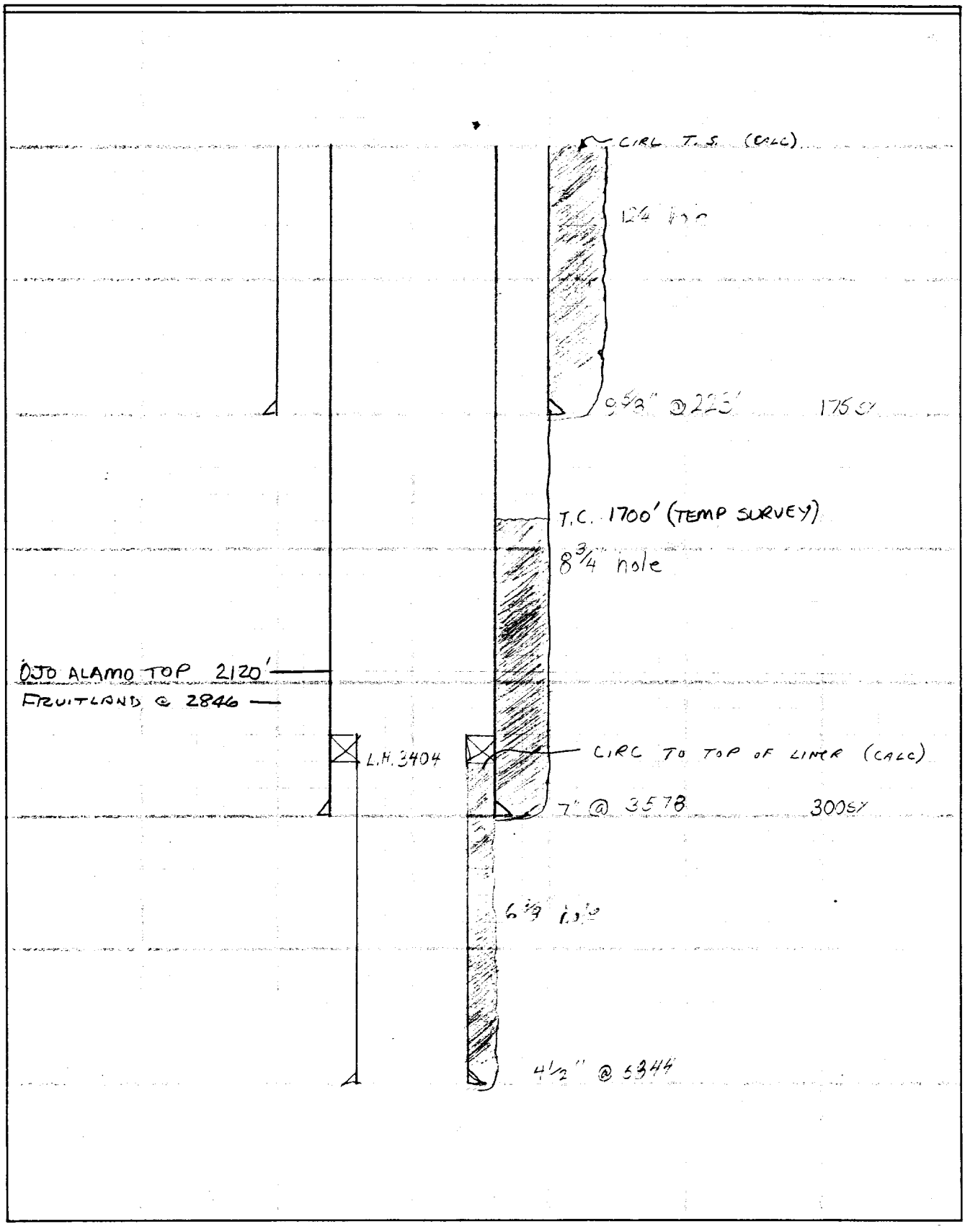
ENGINEERING CALCULATION

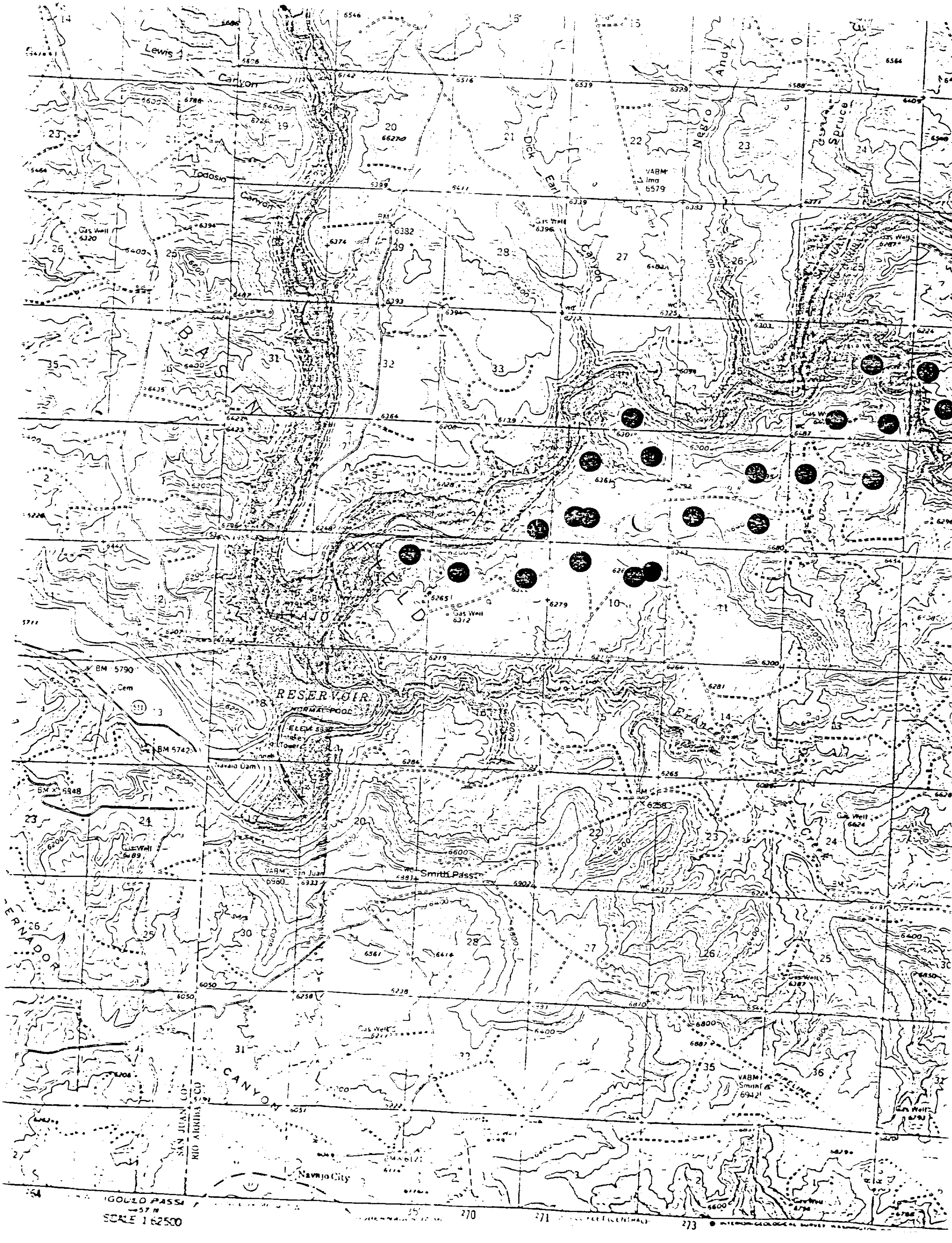
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NE Blanco Unit # 16A
SF 3 T-30-[illegible] N

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38





Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Negro
Andy
Spruce
BASIN
NAVAJO
FIELD
RESERVOIR
NORMAL POOL
Navajo Dam
Intake Tower
Tunnel
Gas Well
Smith Pass
VABM San Juan
VABM Smith
6942
PIPELINE
CANYON
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #102A
NW Section 3, T-30-N, R-7-W

This well was drilled in 1978. The corrosive Ojo Alamo water is covered with cement according to temperature survey. The well does not have cathodic protection.

The tubing has not been pulled and the casing tested since completion.

It is unlikely this well is leaking gas; however, gas could be migrating in the 7" x 8 3/4" annulus if the 7" casing has failed.

Form 7-1 (Rev. 9-77)

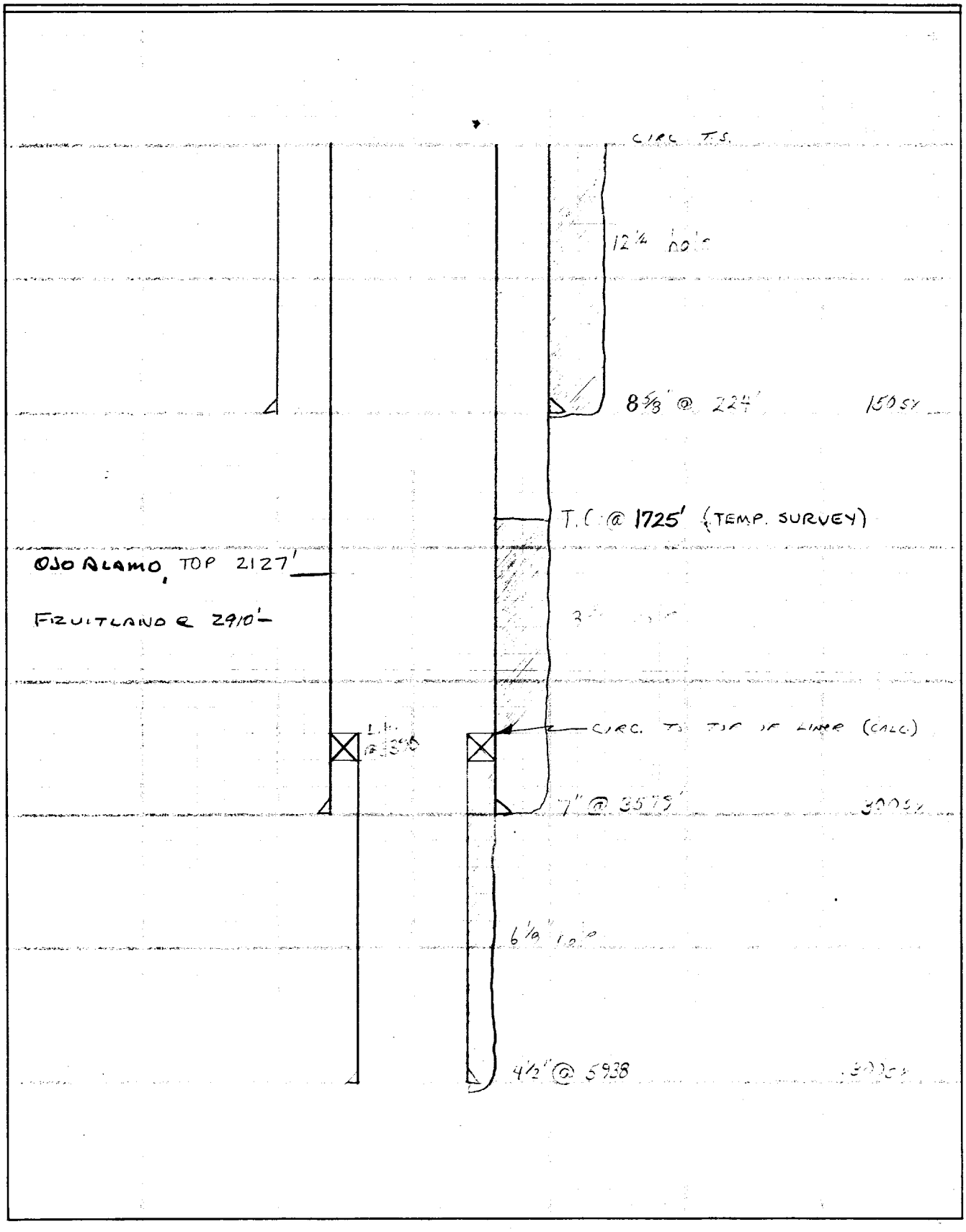
ENGINEERING CALCULATION

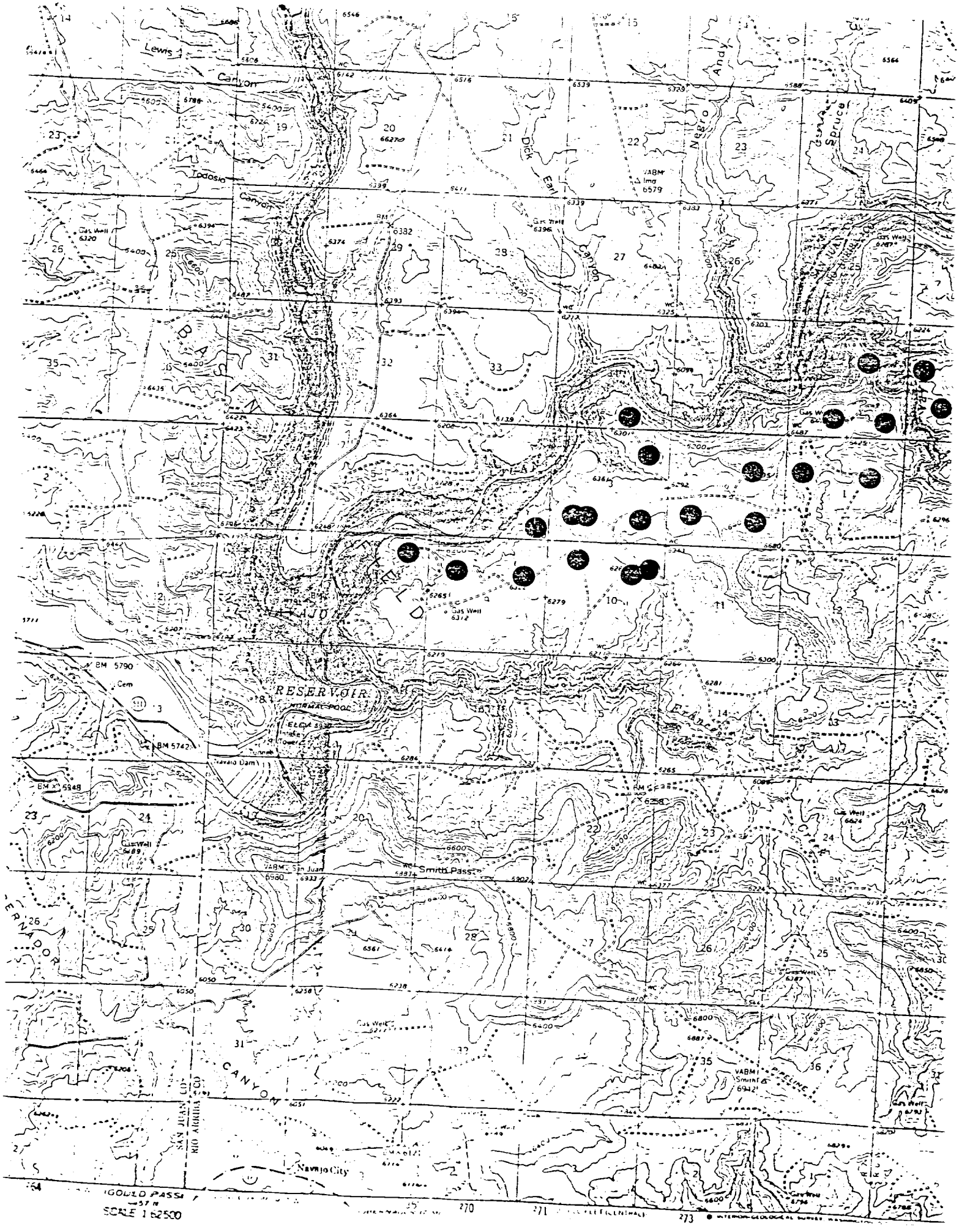
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NE Blanco Unit #224
NW 3 T-30-N R-7-W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38




Lewis Canyon
Todosia Canyon
Dick Canyon
Negro Andy Canyon
Spruce Canyon
BASIN
NAVAJO FIELD
RESERVOIR
NORMAL POOL
Navajo Dam
Smith Pass
CANYON
RIO AMARILLO
SAN JUAN CO.
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #17A
NW Section 9, T-30-N, R-7-W

This well was drilled in 1978. The corrosive water of the Ojo Alamo are covered with cement. The well does not have cathodic protection.

The tubing has not been pulled and the casing tested since completion.

It is unlikely this well is leaking gas but gas could be migrating in the 7" x 8 3/4" annulus if the 7" casing has failed.

Form 7-1 (Rev. 9-77)

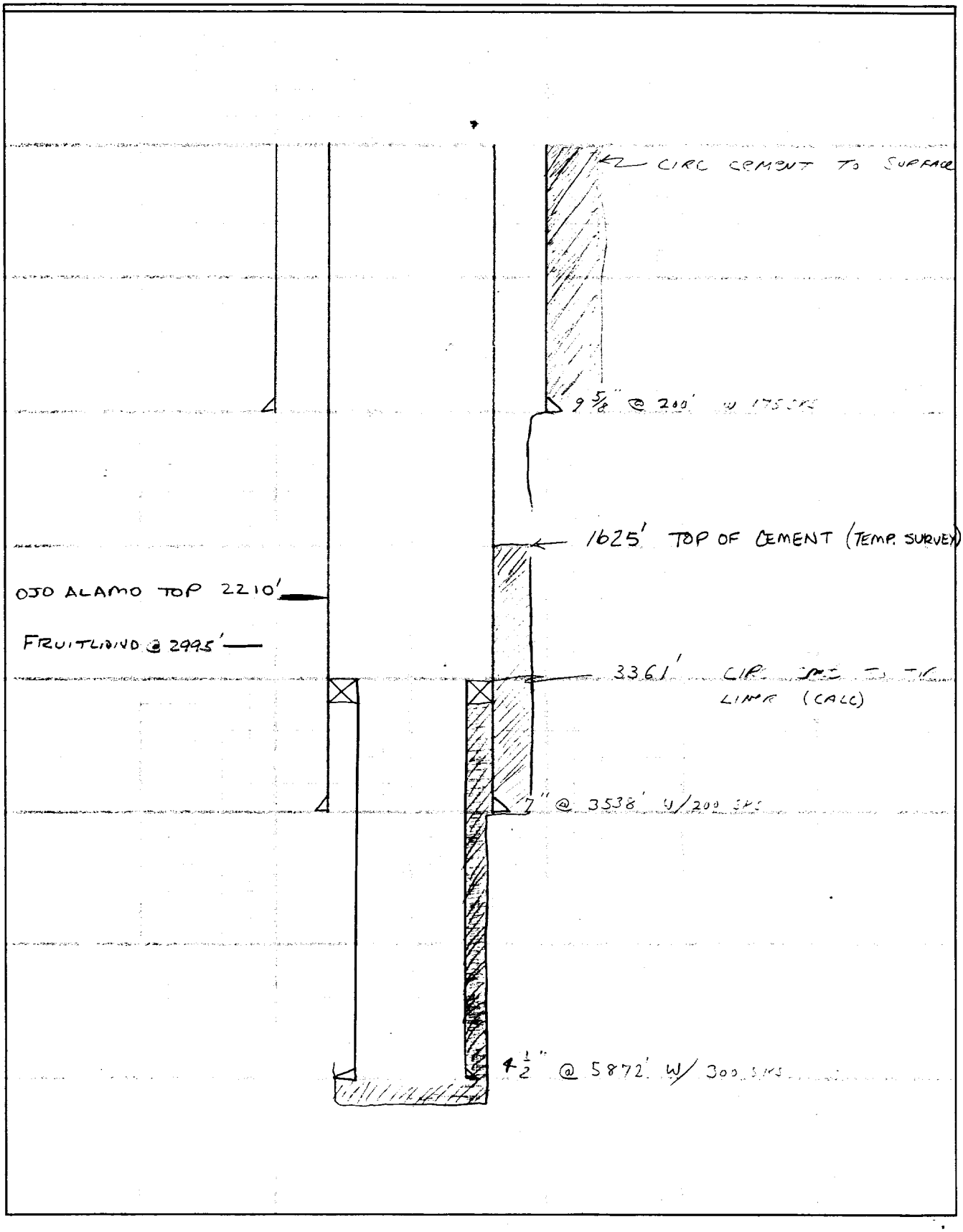
ENGINEERING CALCULATION

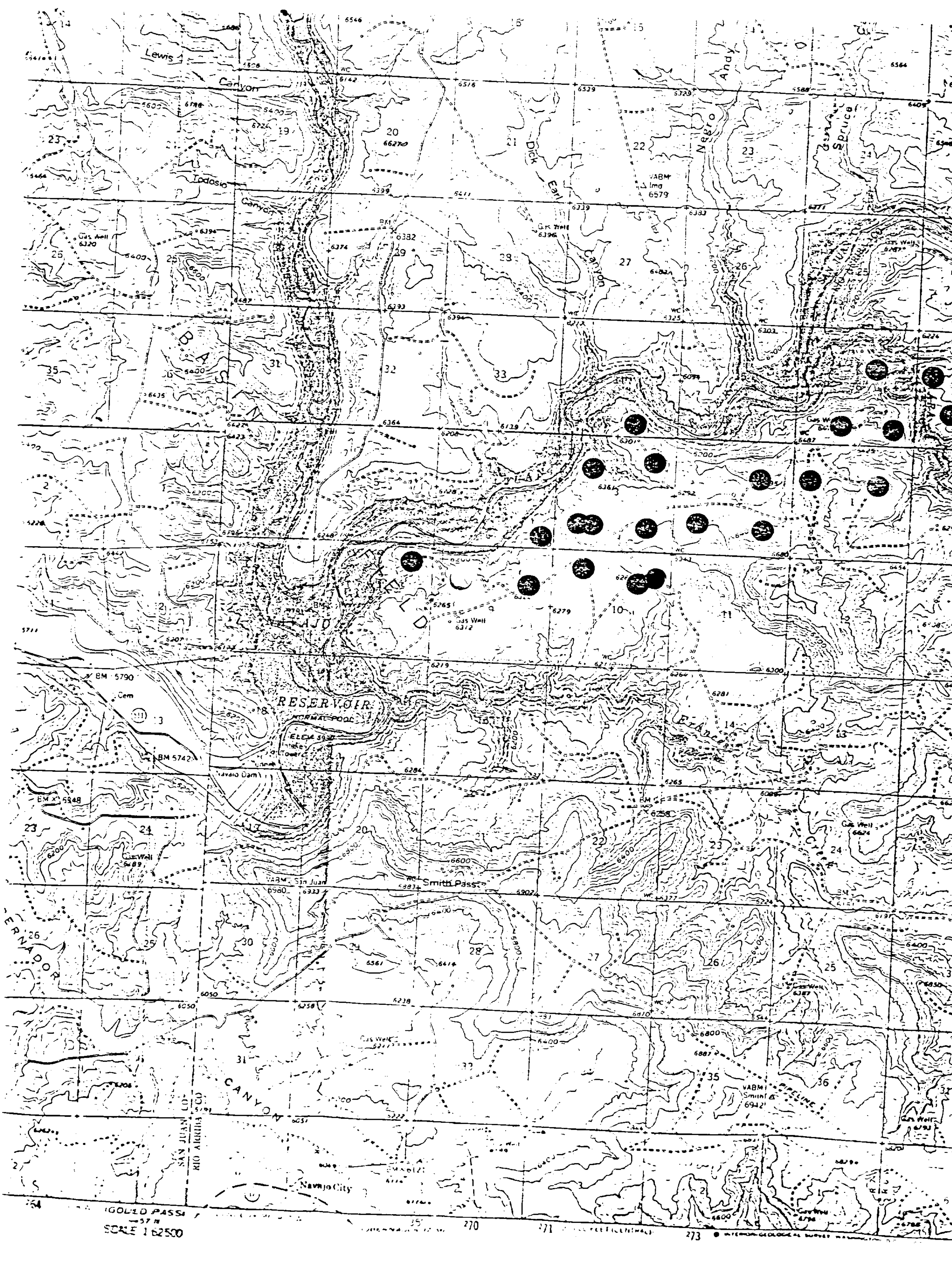
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NORTHEAST BLANCO UNIT # 17A
NW SEC 9 - T 30N - R 7W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38




Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Negro
Andy
Spruce
VABM
Img
6579
Gas Well
BASIN
NAVAJO
FIELD
RESERVOIR
NORMAL POOL
Navajo Dam
BM 5790
Cem
BM 5742
Smith Pass
VABM San Juan
CANYON
PIPELINE
SAN JUAN CO
RIO ARRIBA CO
Navajo City
GOULD PASS
SCALE 1:62500

Northeast Blanco Unit #44A
SE Section 4, T-30-N, R-7-W

This well was drilled in 1978. The corrosive Ojo Alamo is covered by cement according to temperature survey. The well does not have cathodic protection.

The tubing has not been pulled and the casing tested since completion.

It is unlikely this well is leaking gas; however, gas could be migrating in the 7" x 8 3/4" annulus if the 7" casing has failed.

This well is in close proximity to the gas leak in the lake in the SE/4 of Section 4.

Form 7-1 (Rev. 9-77)

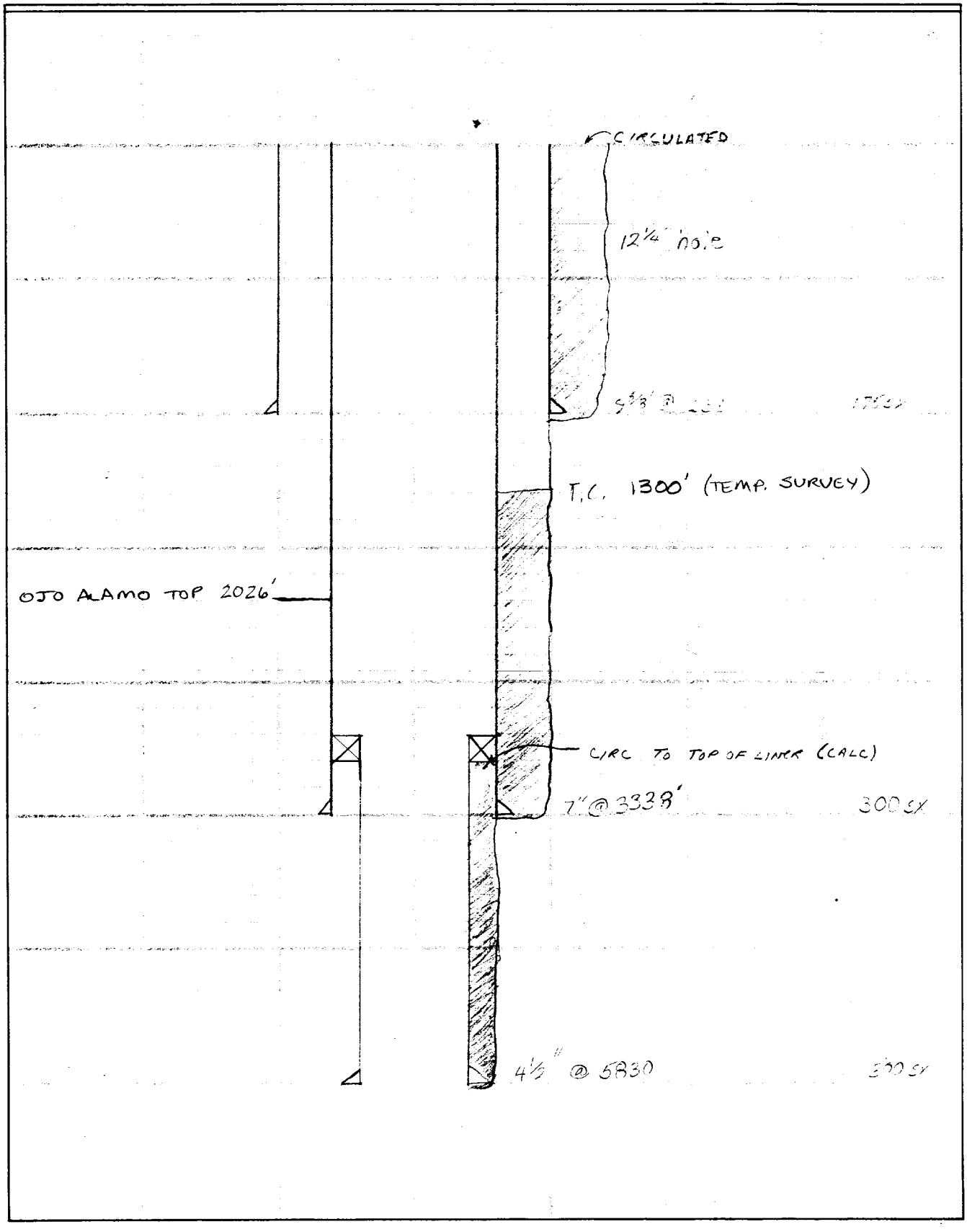
ENGINEERING CALCULATION

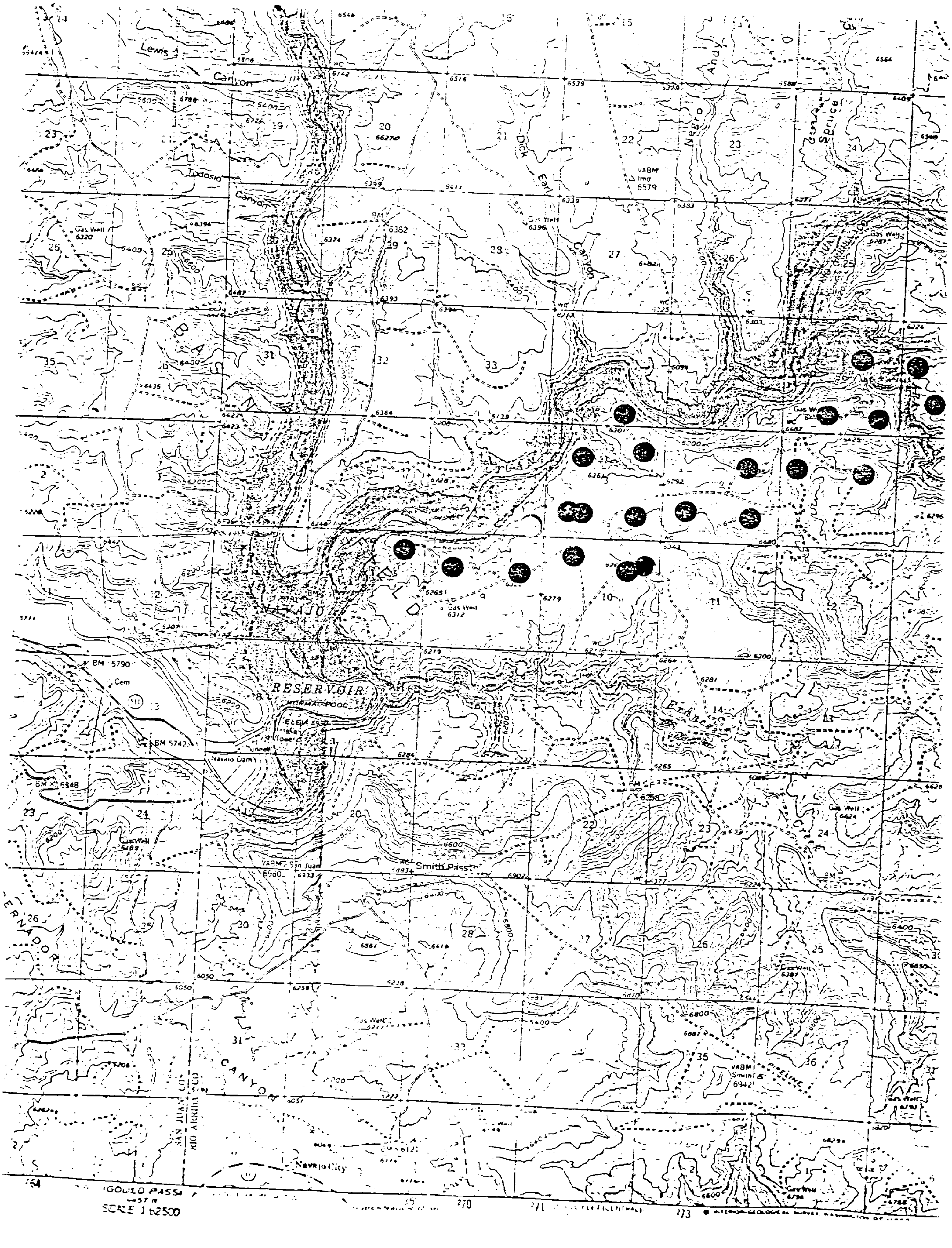
Sheet: _____ of _____
Date: _____
By: _____
File: _____

NE Blanco Unit #44A
SE 4 T-30-N R-7-W

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MISC. MW		gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38




Lewis
Canyon
Todosio
Canyon
Dick
Earl
Canyon
Negro
Andy
Spruce
VABM
Gas Well
NAVAJO
RESERVOIR
NORMAL POOL
Tunnel
Navajo Dam
Cem
BM 5790
BM 5742
VABM San Juan
Smith Pass
CANYON
SAN JUAN CO
RIO ARRIBA CO
Navajo City
PIPELINE
VABM Smith
6942
GOULD PASS
SCALE 1 62500