Department of Natural Resources
Energy & Coastal Zone Administration
Tawes State Office Building
Annapolis, Maryland 21401

Permit Number 117
Well Number 2
Company Texas Eastern
County Garrett

COMPLETION REPORT

(oil or gas well)

This report must be submitted within 30 days after completion of the well

WELL DESCRIPTION - KIND OF WELL: Observation Well (Oil, Gas, Other)

NAME & WELL NO. J. W. Margroff Unit #1, Well #2

ELEVATION: Grd. 2328 LEASE: F. Paugh

DRILLING COMMENCED: 7/16/79 DRILLING COMPLETED: 10/11/79

PRODUCTION: None - Observation Well

RESERVOIR PRESSURE 4 psig 14 1/2 hrs.

WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)
None

RESERVOIR PRESSURE AFTER TREATMENT:
No Treatment

RESULTS AFTER TREATMENT: No treatment - completed as observation well

REMARKS: All csg strings cemented from btm to surface (ground). Stage cement tool in 7" DV at 6672'. No gas in Chert. Gas in Oriskany too small to measure.

Size of Casting and Tubing	Used in Drilling	Left in Well	Packers: Type, Size and Depth
20" OD	0	474'	None used
13 3/8" OD	0	900'	
9 5/8" OD	0	2993'	
7" OD	0	7909'	

PERFORATIONS AT:
None

CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)

20" csg @ 474' w/100 sx 40% Diacel D + 235 sx 10% Diacel D + 100 sx Reg - good cmt to surface

13 3/8" csg @ 900' w/325 sx 10% Diacel D, 275 sx Chem Comp + 150 sx reg - good cmt returns at sur.

9 5/8" csg @ 2993' w/600 sx Halli lite + 250 sx Chem Comp + 150 sx reg. cmt - cmt returns at sur.

7" csg at 7909', 1st stage w/350 sx 25-75 Pozmix + 100 sx Latex, 2nd stage thru DV tool 6672' w/1065 sx 25-75 Pozmix + 515 sx Chem Comp + 100 sx Latex, good cmt returns at surface.

GEOPHYSICAL LOGS (Type of Geophysical Logs Run on Well)

Schlumberger Gamma Ray 2942-100'
Schlumberger FD Cal Ind & Dir 2992-900'
Schlumberger GR F Den Ind & Dir 7894-2990'
Schlumberger Temp & GR F. Den 8047-7600'

Completion Report continued on page 2

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
ENERGY & COASTAL ZONE ADMIN.
TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401

APPLICATION FOR PERMIT TO DRILL OIL OR GAS WELL

(Applications must be submitted in triplicate)

Margroff #2

OWNER Texas Eastern Transmission Corporation

STREET or R.F.D. 1221 McKinney

POST OFFICE Box 2521

Houston, TX 77001

PERMIT TO DRILL WELL

NOT TO BE FILLED IN BY APPLICANT

PERMIT NO. 117

The permit is herewith granted subject to the conditions stipulated.

Anthony F. Abbott 7/3/79
Mining Administrator

Date June 1, 1979

Special conditions that may apply:

See Attachment 1

Approved as to legal form and sufficiency this 1st day of June, 1979

M. Hebron II
Assistant Attorney General

LOCATION OF WELL

COUNTY Garrett

NEAREST POST OFFICE Accident, MD

Distance from Post Office 17637.11'

Direction from Post Office N11° 30' 03" E

APPROXIMATE DEPTH OF WELL (feet) 7400'

METHOD OF DRILLING Rotary

DEEPEST GEOLOGIC FORMATION WELL WILL BE DRILLED into Heldeberg Lime

DISTANCE OF WELL LOCATION TO NEAREST BUILDING (feet) 457.5'

NUMBER OF SHIFTS PER DAY 3'

LICENSED DRILLER IN CREW OF EACH SHIFT

NAME	ADDRESS
Cliff Hames #144	Box 591, Buchannon, W. VA
Mike England #143	Box 214, Grantsville, MD
John Nestor #145	Box 205, Hambelton, W. VA
Leonard McCarley #147	Box 591, Buchannon, W. VA

These names may be supplied later but before drilling begins

The names and post office addresses of the owners of the tracts of land included on the plat or map accompanying the application are to be given below.

NOTE

A BOND FOR $2,500 PAYABLE TO THE STATE OF MARYLAND MUST ACCOMPANY THE APPLICATION
THIS APPLICATION FORM MUST BE FILLED OUT WITH TYPEWRITER OR IN BLOCK LETTERS

Brenneman Well Drilling

Accident, Maryland 21520

John Brenneman - *Senior Partner* (Office) 301 826-8111
Larry Brenneman - *Partner* 301 826-8557
Dan Brenneman - *Partner* 301 746-5468
Shop 301 746-5112

WATER WELL DRILLING

WELL LOG

Northern Middle School
U. S. Route 219
Garrett County, Maryland

0 - 6 ft.	Rock and Dirt - CREEKWASH
6 - 7 ft.	Reddish Brown Sandstone
7 - 9 ft.	Brown Sandstone
9 - 12 ft.	Red Shale (Sandy)
12 - 17 ft.	Red Shale
17 - 25 ft.	Gray Shale
25 - 27 ft.	Red Shale
27 - 46 ft.	Gray Rock
Set Casing at 41 ft.	
Sandy Water at 42 ft. - 4 GPM	
46 - 49 ft.	Gray Shale - Rough at 48 ft.
49 - 50 ft.	Red Shale
50 - 53 ft.	Gray Sandstone
53 - 55 ft.	Hard Slate Rock
55 - 58 ft.	Gray Rock - Sandy
58 - 60 ft.	Gray Shale
60 - 62 ft.	Red Shale
62 - 64 ft.	Red Sandstone
64 - 65 ft.	Gray Rock - Sandy (Rough)
65 - 71 ft.	Gray Shale
71 - 75 ft.	Gray Sandstone
Water at 72 ft. - 6 GPM	
75 - 78 ft.	Red Sandstone
78 - 84 ft.	Gray Sandstone
84 - 89 ft.	Red Sandstone (Rough)
89 - 92 ft.	Gray Shale
92 - 94 ft.	Gray Rock - Sandy
94 - 96 ft.	Gray Shale
96 - 97 ft.	Gray Rock - Sandy (Rough)
97 - 100 ft.	Gray Sandstone
100 - 109 ft.	Gray Shale (Soft)
109 - 118 ft.	Gray Shale

Brenneman Well Drilling

Accident, Maryland 21520

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Larry Brenneman - *Partner* 301 826-8557
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Shop 301 746-5112

WATER WELL DRILLING

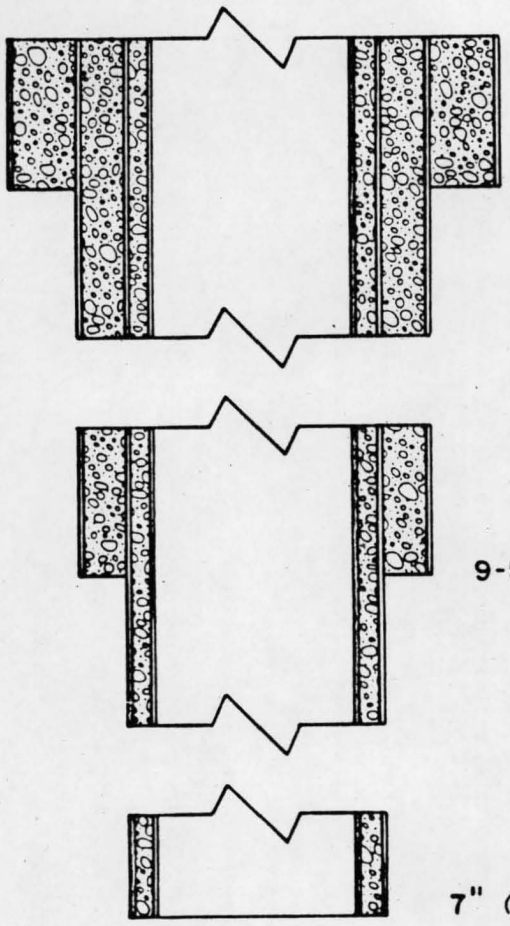
WELL LOG

Northern Middle School
U. S. Route 219
Garrett County, Maryland

118 - 127 ft.	Gray Rock - Sandy
127 - 137 ft.	Red Sandstone
Water at 130 ft. - 5 GPM	
137 - 143 ft.	Gray Sandstone
143 - 149 ft.	Gray Shale
149 - 199 ft.	Gray Sandstone - Rough at 150 to 154 ft.
199 - 205 ft.	Red Sandstone
205 - 215 ft.	Gray Sandstone
215 - 223 ft.	Gray Shale
223 - 226 ft.	Red Sandstone
226 - 260 ft.	Gray Sandstone
260 - 268 ft.	Red Sandstone
268 - 274 ft.	Red Shale - Soft
274 - 283 ft.	Gray Rock - Rough at 278 ft.
283 - 284 ft.	Gray Shale
284 - 301 ft.	Gray Sandstone
301 - 321 ft.	Red Rock
321 - 326 ft.	Red Shale
326 - 349 ft.	Red Rock - Rough at 383 ft. & 343 ft.
349 - 380 ft.	Gray Rock - Very Rough at 363 ft.
380 - 487 ft.	Gray Sandstone - Rough 395, 415, 484 ft.
487 - 540 ft.	Gray Shale
540 - 558 ft.	Red Shale - Rough at 552 ft.
558 - 570 ft.	Gray Rock - Sandy
570 - 575 ft.	Gray Rock - Softer
575 - 581 ft.	Red Shale - Rough at 577 ft.
581 - 600 ft.	Gray Shale
600 - 607 ft.	Gray Shale

ROY BENDER #1

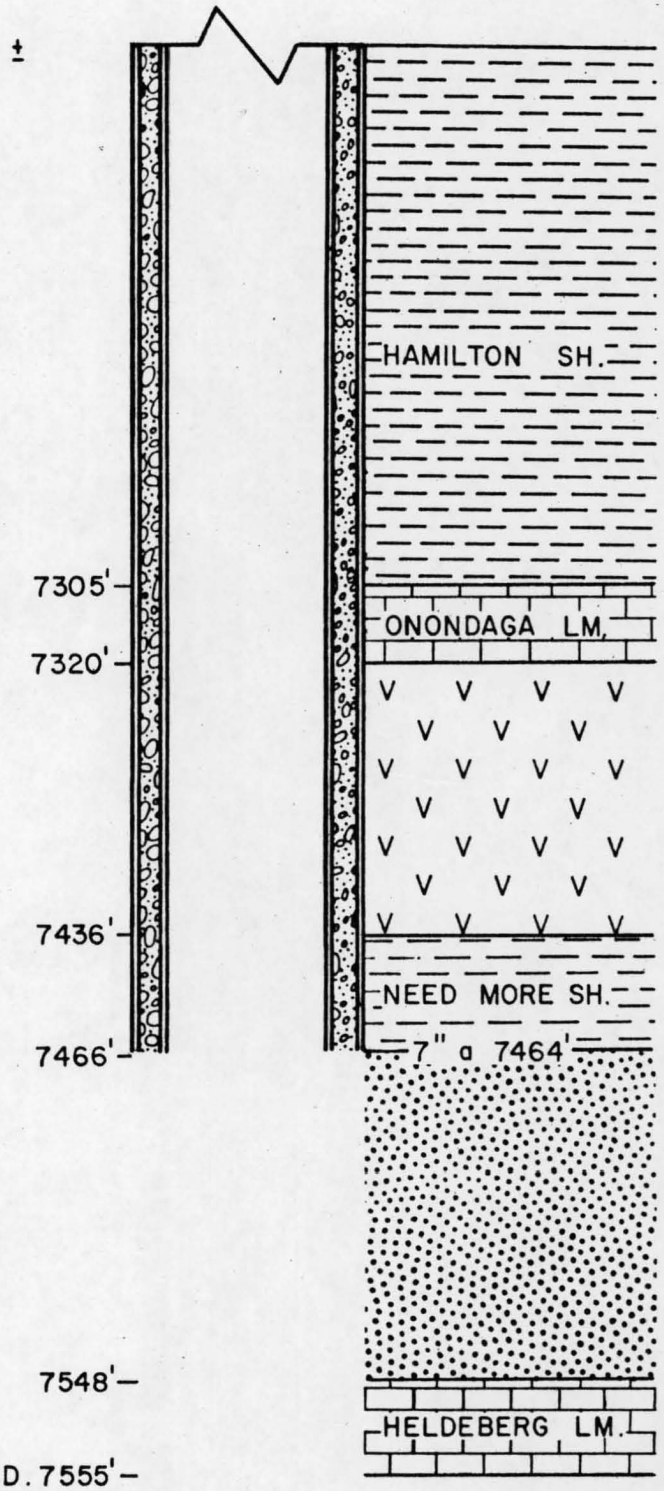
ELEV. 2329.72' GRD.

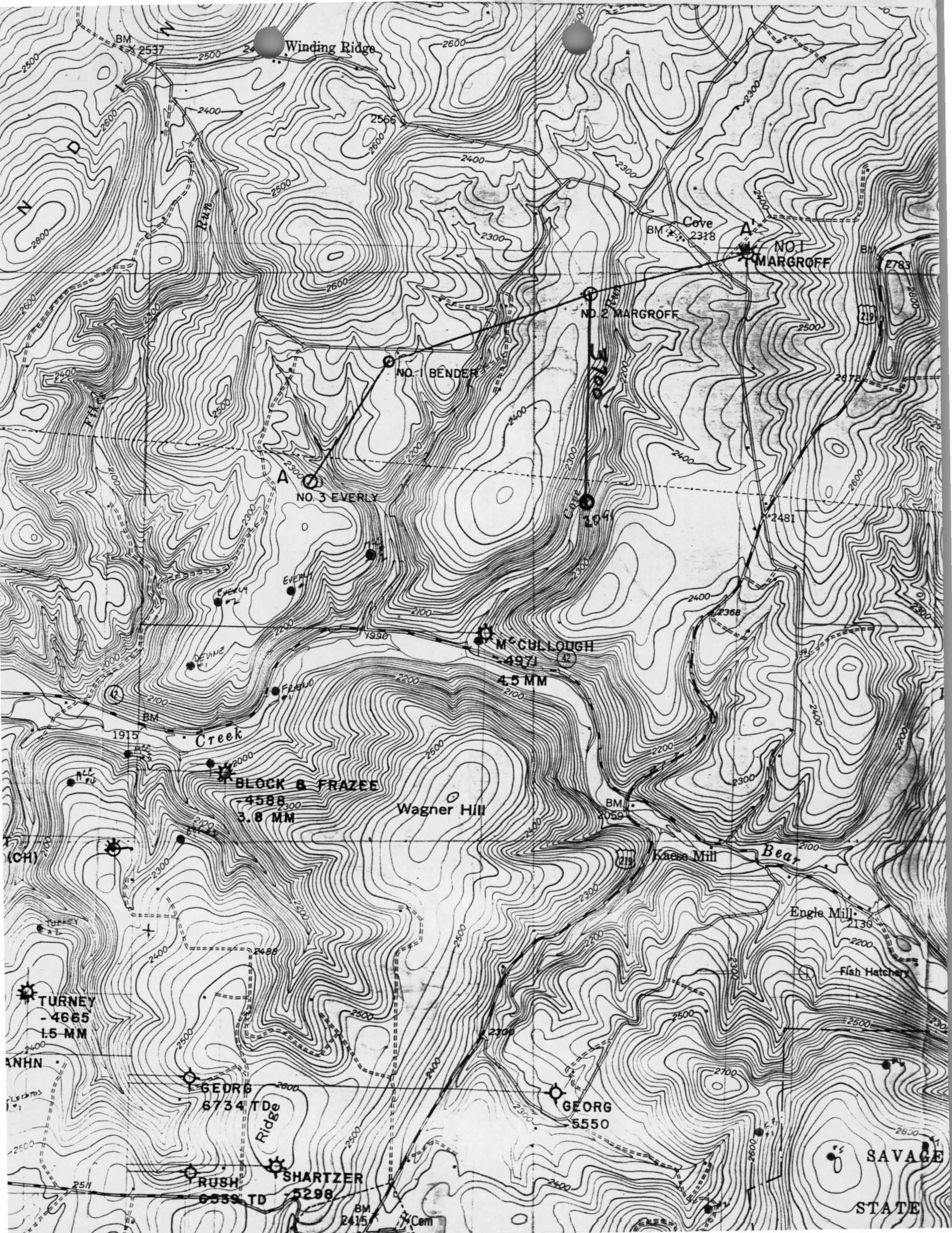


13 3/8" @ 295' ±

9-5/8" @ 2992'

7" @ 7464'





Winding Ridge
BM 2537
2566
Cove
BM 2318
A'
NO. 1 MARGROFF
BM 2783
NO. 2 MARGROFF
NO. 1 BENDER
A
NO. 3 EVERLY
2991
2481
2368
M^c CULLOUGH
-4971
4.5 MM
Creek
BM
1915
BLOCK & FRAZEE
-4588
3.8 MM
Wagner Hill
BM 2059
Kaese Mill
Bear
Engle Mill
2130
Fish Hatchery
TURNEY
-4665
1.5 MM
2488
GEORG
6734 TD
Ridge
GEORG
5550
RUSH
6539 TD
SHARTZER
-5298
BM 2415
Cem
SAVAGE
STATE

TETCO NO. 2 MARGROFF

Notes For Enclosures

Enclosure No. 1

This is a portion of the Accident Quadrangle Topographic Map (1 inch = 2,000 feet) by the U.S. Geological Survey. Well "B" is the approximate location of the Middle School Water Well, which is about 4,200 feet southeast of the alleged contaminating well, the Texas Eastern #1 Bender, Well "A". The well to be drilled is the TETCO #2 Margroff shown as Well "C", about 4,000 feet north-northwest of Well "B: (approximate distances). Cross sections "A-B" and "C-B" are color-coded as Enclosure No.s 2 and 5 respectively.

Enclosure No. 2

Both enclosure No.s 2 and 5 are true scale structural cross sections, and both have sections at two different scales. The smaller, upper section fits directly the scale of Enclosure No. 1 (1 inch = 2,000 feet). The larger, lower section is just an expanded scale for better viewing. Well No. B, the Middle School water well, is on the right. It was drilled to 607 feet and casing was set at 42.5 feet. From these two depths, correlation lines were drawn paralleling known dip rates of rock outcrops whose values are circled and color coded for later reference. At normal flow rates through these rocks, it may be possible, but highly unlikely that drilling fluids could flow the 4,200 feet from Well A, the TETCO #1 Bender, to Well "B", within the time framework in question.

Enclosure No. 3

This enclosure is a portion of the Garrett County Geologic Map at a scale of 1 inch = 1 mile. Wells A, B and C and the color coded cross sections A-B and C-B are as shown on Enclosure No. 1. Circled in purple between Wells A and C is a dip symbol showing 12^0 northwest dip. Circled in red are four dip symbols illustrating horizontal beds or very low dipping beds. This indicates that some sort of a structure is being crossed from northwest to southeast, which will be explained in Enclosure No. 4.

Enclosure No. 4

This enclosure is a portion of a geologic cross section from the Geologic Map of Garrett County showing by color coding the approximate location of the two cross sections which are Enclosures 2 and 5. The structure they overlie is the equivalent of the Accident anticline whose axis is just left of Callis Hill.

Enclosure No. 5

This final enclosure is true scale structural cross section C-B. The two different scale sections and Well No. B have already been discussed under Enclosure No. 2. Well No. C is the proposed TETCO #2 Margroff Well. Correlations are shown from the base of casing and total depth of Well No. B. The correlative equivalent of the T.D. of Well No.B (shaded orange) intercepts Well No. C at approximately 860 feet. TETCO has agreed to set conductor casing to 885 feet in Well No. C, which should provide protection to the shallow water feed-in zone in the unlikely event that Well No. C would be a potential source of contamination to Well No. B.

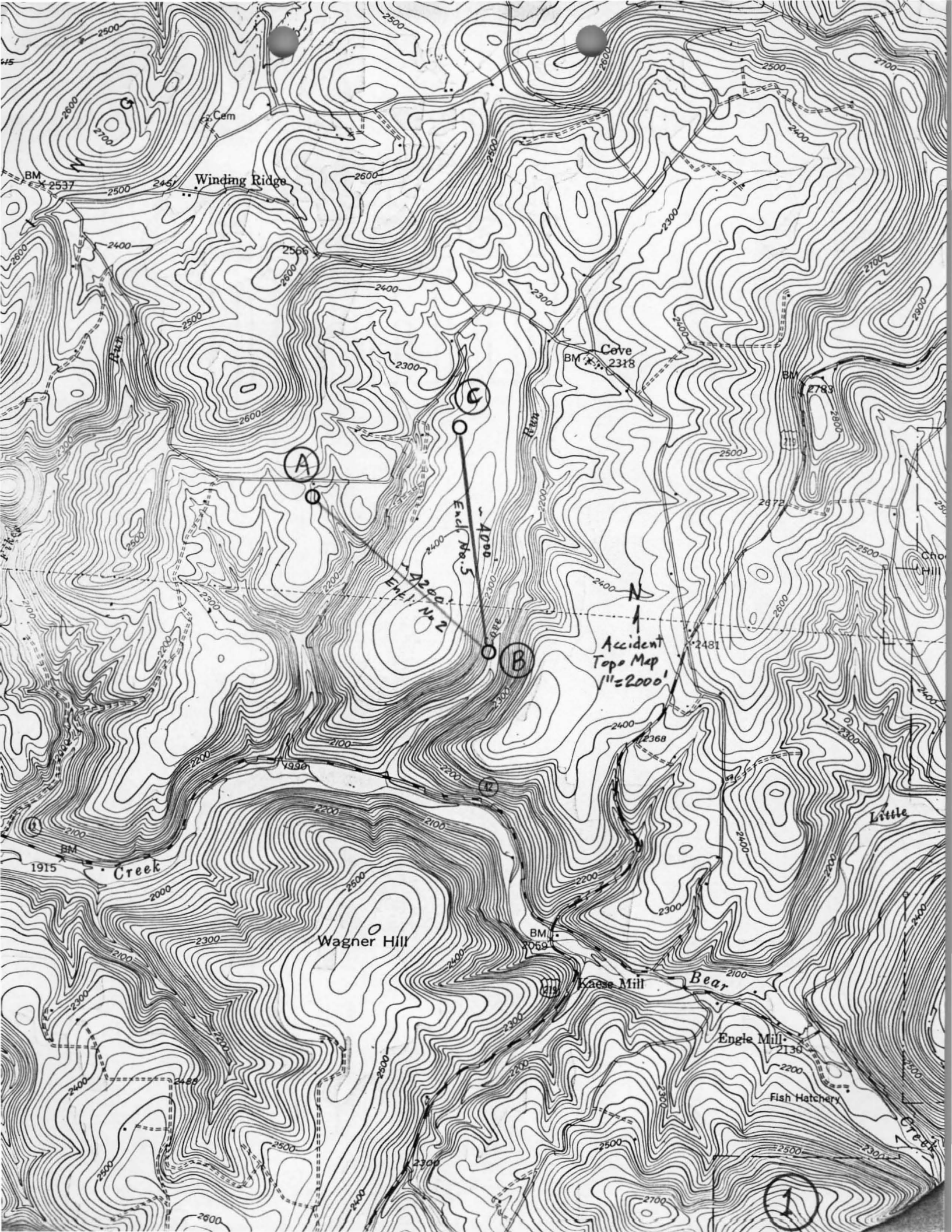
It appears that TETCO is acting responsibly and as a prudent operator by setting the conductor casing deeper than the originally proposed depth (from 300 feet to 885 feet). They have also offered to pay damages for the alleged contamination by their Well No. A, even though the contaminants as reported by the Garrett County Board of Health (personal contact by telephone with Mr. Edgar Harman) consist of turbid (muddy) water and fecal coliform, neither one of which was present in Well No. A. The former contaminant is not unusual when wells are initially flowed. The latter is not uncommon if pollution from human waste is present.

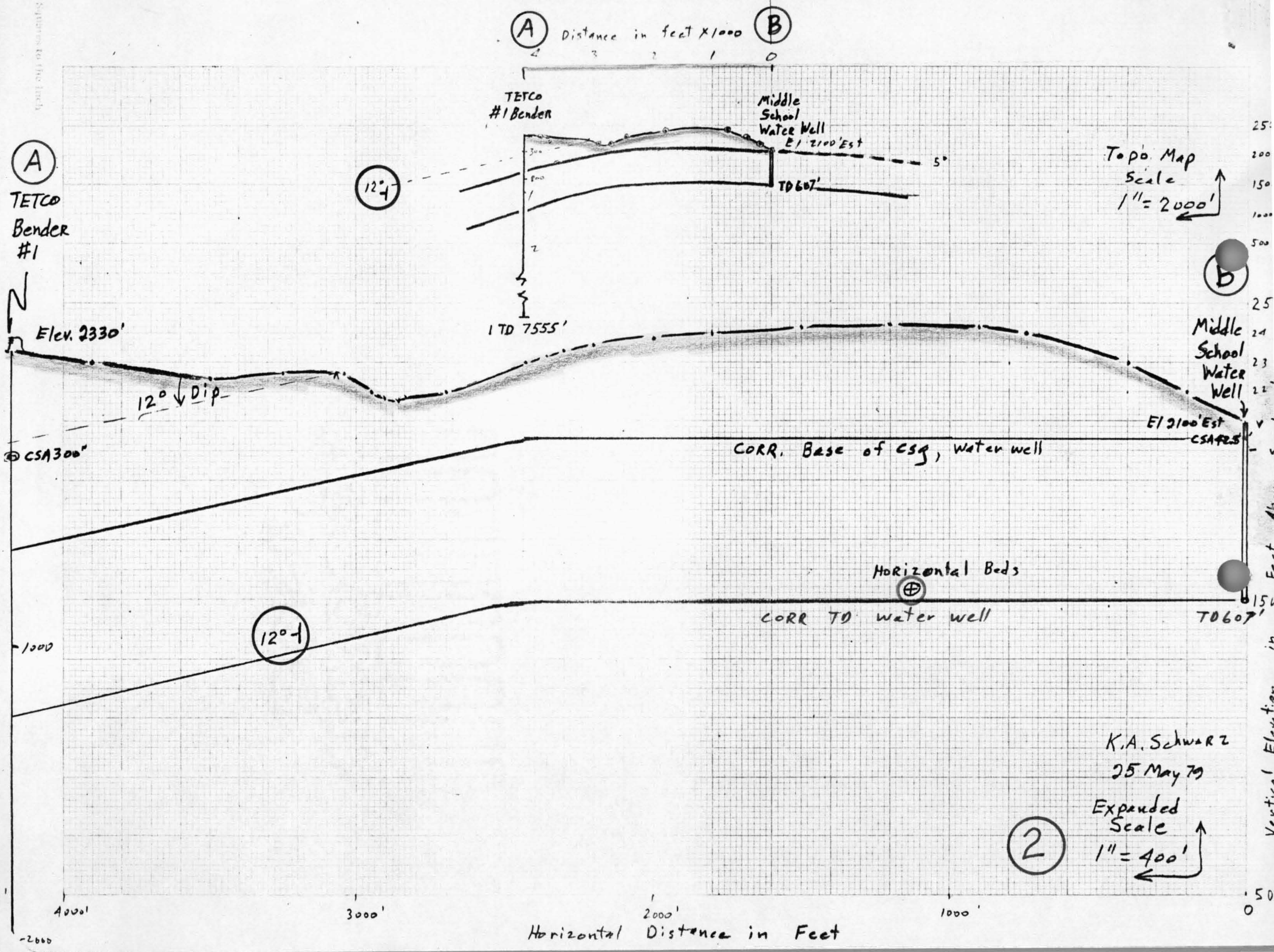
I would recommend that TETCO be allowed to drill their No. 2 Margroff at the earliest possible date compatible with rig availability, provided that: (1) the conductor casing be set at 885 feet in Well No. C as a precautionary measure, and (2) the Middle School Water Well (No. B) be monitored for water quality during the initial stages of drilling Well No. C.

Kenneth A. Schwarz

Kenneth A. Schwarz
Petroleum Geologist

KAS:chm


Cem
BM
2537
Winding Ridge
2566
Run
Cove
BM
2318
BM
2783
A
B
C
Encl. No. 5
~4000'
Encl. No. 2
~4200'
Accident
Topo Map
1"=2000'
2481
2672
2368
1990
BM
1915
Creek
Wagner Hill
BM
2059
Kaese Mill
Bear
Little
Engle Mill
2130
Fish Hatchery
2488
1



A
Distance in feet X1000
B
4 3 2 1 0
TETCO
#1 Bender
Middle
School
Water Well
El 2100'Est
5°
12°
TD 607'
1 TD 7555'
Topo Map
Scale
1" = 2000'
A
TETCO
Bender
#1
B
Elev. 2330'
12° Dip
Middle
School
Water
Well
El 2100'Est
CSA300"
CORR. Base of csg, water well
Horizontal Beds
CORR TD water well
TD 607'
12°
-1000
K.A. Schwarz
25 May 79
Expanded
Scale
1" = 400'
2
4000'
3000'
2000'
1000'
0
-2000
Horizontal Distance in Feet
Vertical Elevation in Feet Above

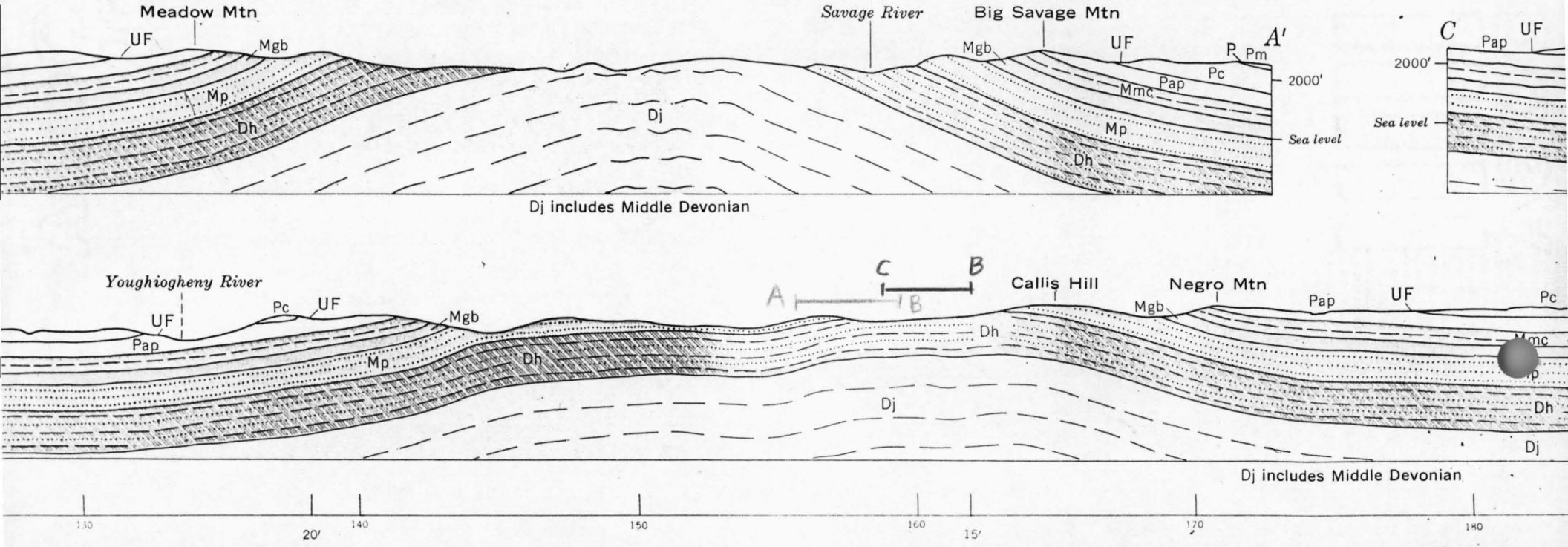

Garrett Co
Geology Map
1" = 1 mile
ADDISON
Polk Hill
PENNSYLVANIA
SOMERSET COUNTY
MARYLAND
GARRETT COUNTY
STRIP MINE
Niles Mill
Winding Ridge
Rich Hill
YOUGHIOGHENY RIVER RESERVOIR
SAVAGE RIVER
TRANSMISSION LINE
Gravel Hill
Bald Knob
Little Bear Creek
Wagner Hill
BEAR CREEK FISH HATCHERY
Accident
Elder Hill
Elder School
George Hill
Hoyes
BITTINGER
A
B
C
3

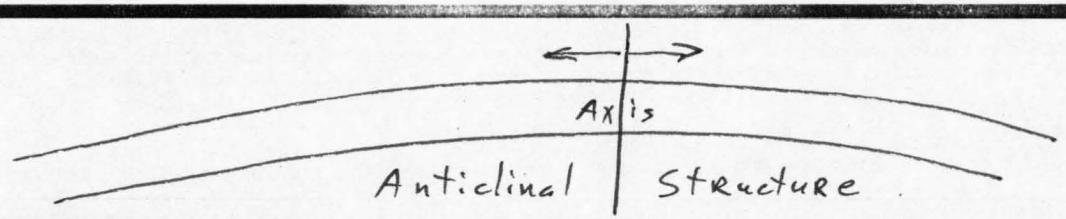
Contour interval 20 feet

Numbered ticks indicate the 10,000 foot Maryland State Grid

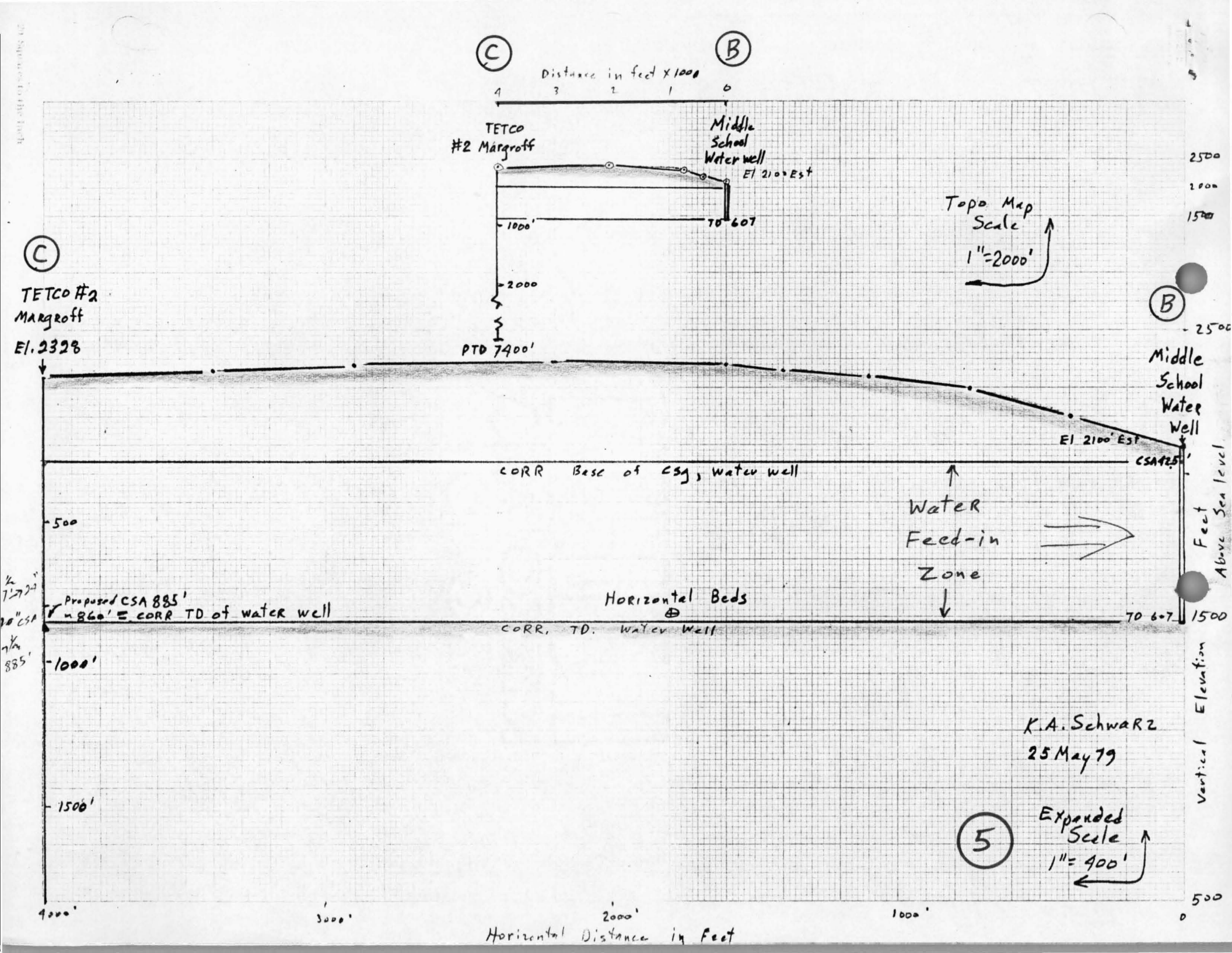
The last three digits of the grid numbers are omitted

Datum is mean sea level





4


C
B
Distance in feet X 1000
4
3
2
1
0
TETCO
#2 Margroff
Middle
School
Water well
El 2100 Est
TD 607
1000'
2000'
PTD 7400'
Topo Map
Scale
1"=2000'
C
TETCO #2
Margroff
El. 2328
B
Middle
School
Water
Well
El 2100' Est
CSA 885'
CORR Base of Csg, water well
Water
Feed-in
Zone
500
Proposed CSA 885'
~860' = CORR TD of water well
Horizontal Beds
TD 607
1500
CORR. TD. Water Well
1000'
1500'
K.A. Schwarz
25 May 79
5
Expanded
Scale
1"= 400'
2500
2000
1500
2500
Feet
Above Sea Level
Vertical Elevation
500
4000'
3000'
2000'
1000'
0
Horizontal Distance in Feet

GEOLOGICAL OPERATIONAL LETTER

PROJECT NO. _____

DATE March 30, 1979 Rev 4/11/79

OPERATOR & FARM: TETCO #2 Margroff Unit

LOCATION: Maryland Grid Coordinates N 645.342' E 150,094.545' ~~N=679,600'=E=150,230'~~

PROPOSED DEPTH: 7400' Test

ELEV: KB ~~2354~~ 2343
GR ~~2339~~ 2328

ESTIMATED GEOL. MARKERS	DEPTH	DATUM
Benson Sandstone	Not developed	
Tully Limestone	6608'	-4254'
Huntersville Chert	7133'	-4779'
Needmore Shale	7249'	-4895'
Oriskany Sandstone	7279'	-4925'
Helderberg Limestone	7389'	-5035'

TUBULAR GOODS:	SIZE	DEPTH
Conductor	13-3/8"	300'
Surface	9-5/8"	3000'
Production	7"	7279'

SERVICES:

Geolograph: Surface to Total Depth
(Open Hole Logs) Gamma Ray-Density-Caliper, Temperature and Directional
(Cased Hole Logs) Gamma Ray-Neutron, Cement Bond and Collar Locator

MUD CONTROL: Air or Gas Drill

NOTICES: Daily Drilling Report to Dale Garner - Office: 713 759-3952
Home: 713 666-4642

Notify Geologist, Franklyn R. Engler - 412 835-8437 or 835-6017
1. Prior to setting surface pipe
2. 7000' or near top of Chert

CUTTINGS: Each connection surface to top of Chert. Every 10' below top of Chert or as requested by wellsite geologist.

REMARKS: Location and access road to be prepared in accordance with procedures outlined in Frank A. Boyd's letter dated July 13, 1967.

Franklyn Engler