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A 11331
A 11332

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

STATE WATER RESOURCES CONTROL BOARD

2003 APR -3 AM 11:55

DIV. OF WATER RIGHTS SACRAMENTO

MAR 21 2003

IN REPLY
REFER TO:
MP-400
WTR-4.10

Mr. Edward C. Anton
Chief, Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

Subject: United States Bureau of Reclamation (Reclamation) Permits 11308 and 11310 (Applications 11331 and 11332), on the Santa Ynez River, Cachuma Project – Settlement Agreement

Dear Mr. Anton:

The Bureau of Reclamation holds water right permits issued by the State Water Rights Board, predecessor to the State Water Resources Control Board (SWRCB), for storage and diversion of water from the Santa Ynez River in Santa Barbara County. These permits have been the subject of several orders from the SWRCB since they were first issued in 1958. In its most recent order regarding these permits (Order WR 94-5), the SWRCB, among other things, required Reclamation to undertake certain studies and other activities to determine whether downstream water rights were adequately protected, and whether the diversion and storage of water pursuant to these permits met the requirements of the California public trust doctrine.

In furtherance of these SWRCB requirements, an agreement has been entered into by and among certain affected parties. This agreement titled "Settlement Agreement Between Cachuma Conservation Release Board, Santa Ynez River Water Conservation District, Santa Ynez River Water Conservation District Improvement District No. 1, and the City of Lompoc, Relating to the Operation of the Cachuma Project," dated December 17, 2002, (Settlement Agreement) is the subject of this letter. A copy of the executed Settlement Agreement has been forwarded to your office under separate cover letter dated February 20, 2003, by the Cachuma Conservation Release Board. Reclamation commends the effort of the parties involved with the recent settlement and finds the provisions of the Settlement Agreement to be compatible with the continued operation and maintenance of Bradbury Dam.

Reclamation, while not a signatory to the Settlement Agreement, supports the Settlement Agreement, which resolves longstanding issues relating to the Lower Santa Ynez River and operations at Bradbury Dam (Cachuma Reservoir). The Settlement Agreement resolves certain key issues relative to the satisfaction of downstream water rights. These were identified as key issue No.(s) 4, 4a, 4b, 5, 5a, 5b, 6, and 6a, of the SWRCB Notice of Public Hearing dated September 25, 2000, to review Reclamation's Water Right Permits 11308 and 11310 pursuant to Order WR 94-5. Additionally, the Settlement Agreement through measures in it, implemented pursuant to the Cachuma Project Biological Opinion and the Lower Santa Ynez River Fish Management Plan, addresses the public trust resource issues identified in the September 25, 2000, notice. These were identified as key issue No.(s) 3, 3a, 3b, and 6b.

Enclosed with this letter are proposed modifications to the terms and conditions in Permits 11308 and 11310, determined by the parties to the Settlement Agreement and concurred in by Reclamation to be necessary to protect water rights on the Santa Ynez River, downstream of Bradbury Dam. The terms and conditions that Reclamation is proposing are consistent with those contained in Exhibit C of the Settlement Agreement.

Reclamation submits (enclosure 1) as "Proposed Modifications to Order WR 73-37, as amended by Order WR 89-18, Pertaining to Permits 11308 and 11310 (Applications 11331 and 11332)" and (enclosure 2) as "Revised USBR Exhibit 1, dated February 1, 2003," with the proposed modifications incorporated. Reclamation requests the SWRCB adopt these documents as modifications, which will provide adequate measures to protect downstream water rights on the Santa Ynez River below Bradbury Dam. Reclamation further requests that a pre-hearing conference be scheduled to address the Settlement Agreement and proposed modifications to Reclamation's permits. This request is made with the understanding that, pursuant to Section 11415.60 of the Government Code, the SWRCB has the authority to issue a decision by settlement on certain key issues identified for Phase 2 of the Cachuma Water Rights hearing.

If you have any questions, please contact Mr. Michael Jackson, Deputy Area Manager, South Central California Area Office (SCCAO) at 559-487-5116, or Ms. JoAnn Struebing, Mid-Pacific Regional Office, Water Rights Division, at 916-978-5249.

Sincerely,

Kirk C. Rodgers
Regional Director

Enclosures – 2

cc: Art Kidman
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Continued on next page.

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129 C Street, Suite 2
Davis, CA 95616

Continued on the next page.

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Sacramento, CA 95827

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Cachuma Conservation Release Board
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Santa Barbara, CA 93111

Rebecca Lent
National Marine Fisheries Service
Southwest Region
510 W. Ocean Boulevard, Suite 4200
Long Beach, CA 90802-4213

Enclosure 1 (Reference)

Proposed Modifications to WR-73-37 as amended by WR 89-18
Pertaining to Permits 11308 and 11310 (Applications 11331 and 11332)
of the
United States Bureau of Reclamation
For the Cachuma Project, California
as developed by:

United States Bureau of Reclamation,
Santa Ynez River Water Conservation District,
Cachuma Conservation Release Board,
Santa Ynez River Water Conservation District, Improvement District No. 1,
and the City of Lompoc

5." (1.1) The volume of dewatered storage in the groundwater basins above the Narrows shall be determined at the end of each calendar month. USBR Exhibit 1, dated ~~December 1, 1988~~, February 1, 2003, contains, in Attachment A thereto, a list of indicator wells in 23 storage units comprising these basins which shall be used for the determination and, in Attachment B thereto, a compilation of curves dated ~~December 1, 1988~~ February 1, 2003, that relate dewatered storage to water level elevations in the indicator wells.

"(1.4) Each month, the inflow to Lake Cachuma stored that month during periods when a live stream did not actually exist in the Santa Ynez River shall be computed. All such stored inflow shall be credited monthly and accumulated in an 'above Narrows' account. At the end of each month, the account shall be reduced, if necessary, so that it does not exceed the actual amount of dewatered storage in the 23 storage units at that time. (A 'live stream' as that term is used herein, shall be deemed to exist in the Santa Ynez River whenever there is a visible stream of water flowing on the surface of the River bed at the San Lucas Bridge [river mile 45.7], at the Mission Bridge near Solvang [river mile 38], at U.S. Highway 101 Bridge near Buellton [river mile 34.31], at the Santa Rosa damsite [river mile 25.3], at Robinson Bridge near Lompoc [river mile 12.9] and the flow measured at the USGS gauge entitled 'Santa Ynez River at Narrows near Lompoc' [Narrows Gauge] meets the criteria for a live stream condition as shown on Attachment H to USBR Exhibit 1, dated ~~December 1, 1988~~ February 1, 2003, entitled ' Correlation of Flow at Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue'.) In determining the existence

or non-existence of a live stream, water released by permittee from the "above Narrows" account pursuant to paragraph (1.5) of section (1) and from the "below Narrows" account pursuant to paragraph (2.5) of section (2) which is in transit above the Narrows, shall not be considered to be surface flow of the Santa Ynez River.

In addition, water released for maintenance of habitat, adaptive management and passage flows in the Santa Ynez River, hereinafter referred to as "fish water releases", which is in transit between Bradbury Dam and the Narrows, shall not be considered to be surface flow of the Santa Ynez River. When fish water releases are made and flow measured in San Lucas Creek at the Highway 154 crossing is less than 0.3 cfs, the live stream in the Santa Ynez River at the San Lucas Bridge (river mile 45.7) is deemed to be non-existent.

When fish water releases are made and there is a visible stream of water flowing on the surface of the Santa Ynez River bed at the San Lucas Bridge (river mile 45.7), at the Mission Bridge near Solvang (river mile 38), at U.S. Highway 101 Bridge near Buellton (river mile 34.31), at the Santa Rosa damsite (river mile 25.3) and at Robinson Bridge near Lompoc (river mile 12.9), the flow measured at the Narrows Gage is adjusted as provided in Attachment H to USBR Exhibit 1, dated February 1, 2003, entitled "Correlation of Flow at the Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue" to meet the criteria for a live stream condition.

"(2.2) A monthly computation shall be made of the amount of impairment of percolation to the Lompoc Basin due to the Cachuma Project. The amount of such percolation during the computation month shall be determined by means of the "Relationship Between Percolation from Santa Ynez River from Narrows through Floradale Avenue and Flow of Santa Ynez River at Narrows" correlation shown in USBR Exhibit 1, Attachment E, dated ~~December 1, 1988~~, February 1, 2003, assuming (i) the measured flow at the Narrows and (ii) the constructive flow at the Narrows. The monthly impairment shall be equal to the difference between the two amounts thus determined.

"(2.2.1) (Eliminated) ~~For a period of five years, which years shall include a range of surface flow conditions in the Santa Ynez River below the Narrows from high to low, the parties will make additional observations to permit more accurate calculations as to when Curve B, [the lower curve] as depicted on~~

~~USBR Exhibit 1, Attachment E, dated December 1988 shall be used in lieu of Curve A, [the upper curve] as depicted on said USBR Exhibit 1, Attachment E. During said observation period, Curve A [the upper curve] shall be used at all times. Any party may, after an adequate observation period has ended, seek an amendment of this order to establish the time and circumstances under which Curve B, [the lower curve] shall be used. Upon the effective date of the amendment the "below narrows" account credits for the five year period immediately preceding the amendment shall be recalculated using Curve B, [the lower curve] whenever appropriate, and adjustments to the "below Narrows" account shall be made. Any reductions in the "below Narrows" account resulting from such adjustments shall be spread equally over the five year period immediately following the effective date of the amendment, or such other period as the parties may agree to at the time.~~

"(2.3) The amount of percolation impairment shall be credited to the "below Narrows" account. The volume of dewatered storage in the groundwater basin below the Narrows shall be determined at the end of each month. Each month the account shall be reduced, if necessary, so that it does not exceed the actual amount of dewatered storage in the Lompoc Basin at that time. A list of indicator wells showing their "full" elevation in eight storage units in the Lompoc Basin is contained in USBR Exhibit 1, Attachment C, dated ~~December 1, 1988~~. February 1, 2003. USBR Exhibit 1, Attachment D, dated ~~December 1, 1988~~, February 1, 2003, is a compilation of curves that relate dewatered storage to water level elevations in the indicator wells. Said Attachments C and D shall be used to make the determination required by this paragraph (2.3) of section (2).

"(2.5.1) Notwithstanding Paragraph 2.5, "below Narrows" account water in Lake Cachuma up to the Accumulated Drought Water Credit (ADWC) shall be made available to the Cachuma Member Units when and so long as the Lake Cachuma storage level remains below 100,000 acre-feet in accordance with the "Procedures for Conjunctive Operation of Below Narrows Account" depicted on Attachment F of USBR Exhibit 1, dated February 1, 2003.

6. Until further order of the Board, permittee shall make or cause to be made suitable field investigation, measurements, and studies, and shall install and maintain necessary measuring facilities, to determine the amount, timing and rate of releases of water into the natural channel of the Santa Ynez River below Bradbury Dam that are required of permittee in order to fully comply

with the provision of Condition No. 5 in this permit, and to accurately measure all flows at the Narrows. Permittee shall provide the necessary measuring devices and shall submit to the Board with the annual progress reports, or at such other times as the Board may require, a report of such investigations, measurements and studies and the results thereof, including but not limited to the following:

"(a) A continuous record of Lake Cachuma water surface elevations.

"(b) A continuous record of precipitation near Bradbury Dam.

"(c) Daily evaporation, wind movement, precipitation, and temperature near Bradbury Dam.

"(d) Daily inflow to Lake Cachuma, including underground flows, by proper computations of tunnel diversions, reservoir releases, spills, Central Coast Water Authority (CCWA) deliveries into Lake Cachuma, and change in storage.

"(e) (Eliminated by Order of September 28, 1961.)

"(f) (Eliminated by Order of September 28, 1961.)

"(g) Continuous records of outflow from Lake Cachuma, including flows through river outlets at Bradbury Dam, inflows and outflows through Tecolote Tunnel, and overflows at Bradbury Dam spillway. Instruments suitable for accurate measurement of small outflows shall be installed.

"(h) Continuous groundwater studies below Bradbury Dam in the Santa Ynez Basin, with monthly observation of representative wells influenced by Santa Ynez River flows at locations shown on USBR Exhibit 1, Attachment G, dated ~~December 1, 1988~~. February 1, 2003.

"(i) (Eliminated)

"(j) Semiannual water quality analyses of surface and groundwater downstream form Bradbury Dam at locations as shown on USBR Exhibit 1, Attachment G, dated ~~December 1, 1988~~. February 1, 2003.

"(k) (Eliminated)

"(l) (Not used)

"(m) On September 21, 1989, the Board adopted an order modifying Condition 6 (m) to read as follows:

> Permittee and the Department of Fish and Game (DFG) shall develop and undertake a study plan and annual monitoring program to determine the extent and condition of the riparian vegetation in and along the margins of the Santa Ynez River below Bradbury Dam. Timing, methodology, and specific criteria to measure impacts to riparian vegetation will be part of the plan and program. A plan agreed to by the permittee and DFG shall be submitted to the Chief Division of Water Rights within one year of adoption of this order. This program shall be in place for five years at which time the permittee and DFG shall report to the Board the feasibility of continuing such a program. An annual written report shall be prepared by permittee and DFG and submitted to the Board. The Board retains jurisdiction to adopt appropriate mitigation measures, in the event adverse impacts are caused to the riparian vegetation by release schedules or procedures contained within this order.
>
> *(Note: The "Santa Ynez River Vegetation Monitoring Study, Santa Barbara County, California, Final Phase 1 Report", dated April 2000, was forwarded by the Bureau of Reclamation, to the State Water Resources Control Board and reviewed by Board staff. By letter dated July 26, 2000, the Chief, Division of Water Rights, accepted the April 2000 report as meeting the requirement of Condition 3(c) of WR 94-5.)*

"(n) (Eliminated)

"(o) A record on monthly quantities of dewatered storage downstream from Bradbury Dam and of monthly quantities shown in the "above Narrows" and the "below Narrows" accounts, as described in Condition No. 5 of this permit.

"(p) A record of all daily flows and quality (as measured in EC/TDS) passing the Narrows as provided by the United States Geological Survey.

"(q) A record of flow in San Lucas Creek at the Highway 154 crossing.

"(r) A record of all daily flows and quality (as measured in EC/TDS) measured near the Mission Bridge (Solvang) as provided by the United States Geological Survey.

"(s) Continuous records of CCWA deliveries into Lake Cachuma.

"Permittee shall make its records of such investigations and measurements available for inspection by the Board and shall allow authorized representatives of the Board, Santa Barbara County Water Agency and member units, the Santa Ynez River Water Conservation District, City of Lompoc, and United States military installation at Vandenberg Air Force Base, reasonable access to its project works and properties for the purpose of gathering information and data."

7. The Board may make such further orders as may be required concerning proper and adequate releases of water for downstream use, and recharge of groundwater concerning the amounts, timing, and rates of releases of water past Bradbury Dam in satisfaction of downstream rights. ~~The Board, either upon the request of any party or on its own motion may, and shall, prior to the expiration of a 5-year observation period ending December 31, 1994 hear, review, and make such further and different orders as may be specifically provided for in this order or as may be required concerning proper and adequate releases of water for downstream use, and recharge of groundwater., and concerning the investigations, measurements and studies to be conducted by permittee, until final determination and order can be made concerning the amounts, timing and rates of releases of water past Bradbury Dam in satisfaction of downstream rights, and the Board retains continuing jurisdiction for such purposes during said 5-year observation period, or for such further time prior to issuance of license as the Board may determine upon notice and hearing to be reasonably necessary for the aforesaid purposes.~~

All other sections, paragraphs or subparagraphs of the existing order, as previously amended, not specifically amended by this agreement are intended to and shall remain in full force and effect.

Enclosure 1

Proposed Modifications to WR-73-37 as amended by WR 89-18
Pertaining to Permits 11308 and 11310 (Applications 11331 and 11332)
of the
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the event adverse impacts are caused to the riparian vegetation by release schedules or procedures contained within this order.

(Note: The "Santa Ynez River Vegetation Monitoring Study, Santa Barbara County, California, Final Phase 1 Report", dated April 2000, was forwarded by the Bureau of Reclamation, to the State Water Resources Control Board and reviewed by Board staff. By letter dated July 26, 2000, the Chief, Division of Water Rights, accepted the April 2000 report as meeting the requirement of Condition 3(c) of WR 94-5.)

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7. The Board may make such further orders as may be required concerning proper and adequate releases of water for downstream use, and recharge of

groundwater concerning the amounts, timing, and rates of releases of water past Bradbury Dam in satisfaction of downstream rights.

All other sections, paragraphs or subparagraphs of the existing order, as previously amended, not specifically amended by this agreement are intended to and shall remain in full force and effect.

Enclosure 2

CACHUMA PROJECT
Santa Barbara County, California

Pertaining to the Review of SWRCB Order WR 73-37, as amended by WR 89-18

Revised
USBR Exhibit 1
February 1, 2003

Bureau of Reclamation
Mid-Pacific Region
Sacramento, California

Groundwater And Percolation Data For Use In Determining Downstream Releases

Santa Ynez River - Cachuma Project
Santa Barbara County, California

Table of Contents

Revised USBR Exhibit 1
February 1, 2003

INDICATOR WELLS ABOVE NARROWS

NODE	WELL NUMBER (T., R., Sec.)	GROUND SURFACE ELEVATION	"FULL" ELEVATION
1	6N/34W-2A6	129.9	92
2	6N/34W-1G2	110.7	105 (110) 2/
2	6N/33W-7E3	130.9	115
3	6N/33W-6D4	140.9	137
4	6N/33W-6K2	187.0	142
5	6N/33W-8E4	174.8	153
6	6N/33W-8J2	200.5	164
7	6N/33W-16B1	214.7	166
8	6N/33W-11M1	203.8	196
9	6N/33W-12L1	223.6	209
10	6N/32W-18C2	233.2	226
11	6N/32W-8N4	246.0	236
12	6N/32W-17J2	256.0	248
13	6N/32W-16G4	277.3	263
14	6N/32W-9G1	305.0	273
15	6N32W-13G2	317.4	310 (300) 2/
15	6N/32W-11D1	298.0	290
16	6N/31W-17D1	340.6	332
17	6N/31W-17R1	364.3	348
18	3/		
19	4/		
20	6N/31W-22F1	400.0	392
21	6N/31W-24K2	426.0	420
22	6N/30W-29E1	465.0	452
23	6N/30W-21E1	490.7	475 (471) 2/
23	6N/30W-20H2	476.4	468
24	6N/30W-22C2	502.9 1/	506
25	6N/30W-24E5	550.3	541

1/ Well destroyed – to be replaced.
2/ Average elevation of two wells to determine dewatered storage.
3/ Combined with Node 17.
4/ Combined with Node 20.

Attachment A
Revised USBR Exhibit 1
February 1, 2003

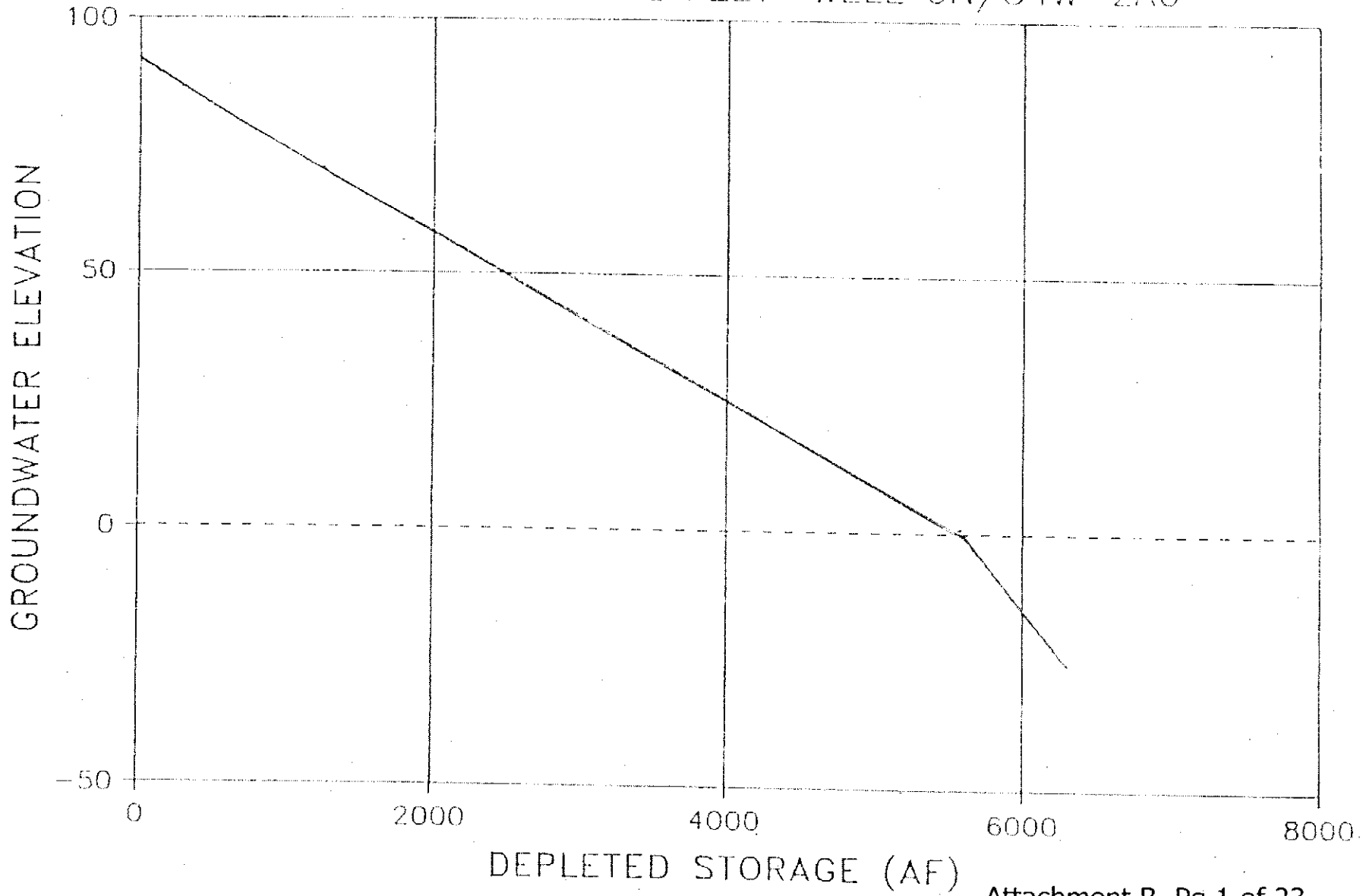
STORAGE CAPACITY CURVES
FOR
INDICATOR WELLS

ABOVE NARROWS

Attachment B (23 pages)
Revised USBR Exhibit 1
February 1, 2003

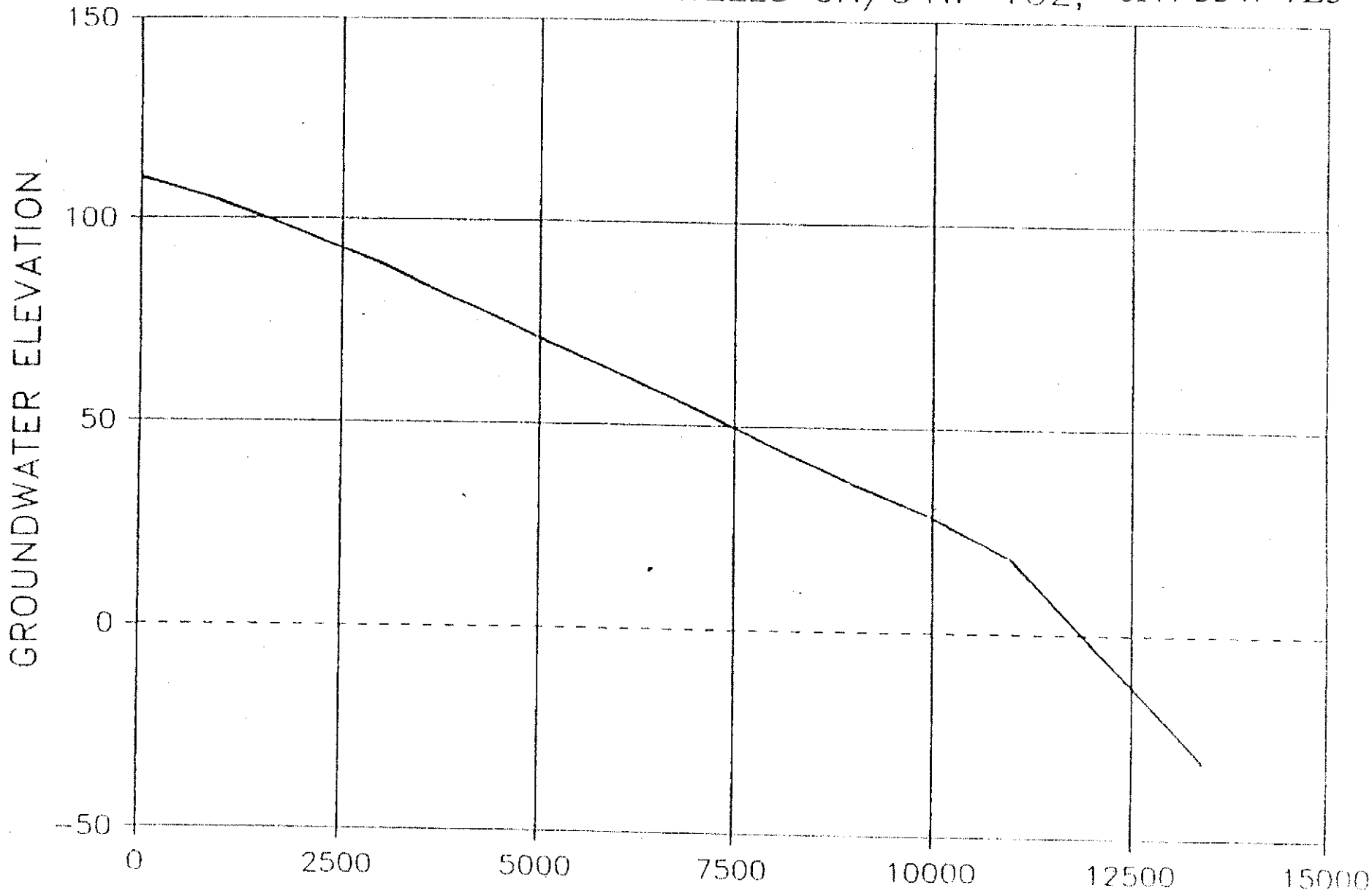
NODE 1 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 92 FEET WELL 6N/34W-2A6



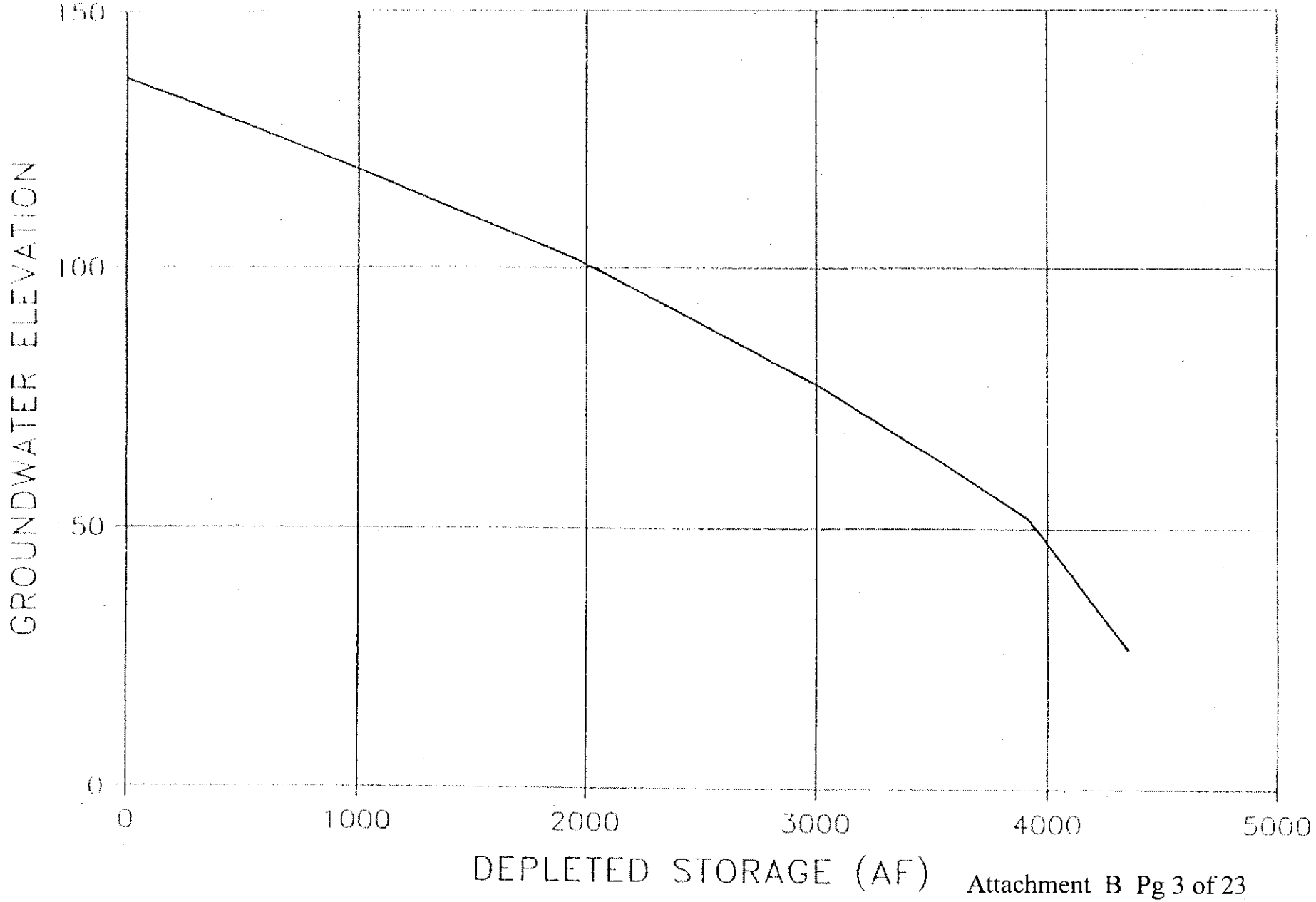
NODE 2 GROUND–WATER STORAGE CAPACITY

FULL ELEVATION – 110 FEET WELLS 6N/34W–1G2, 6N/33W-7E3



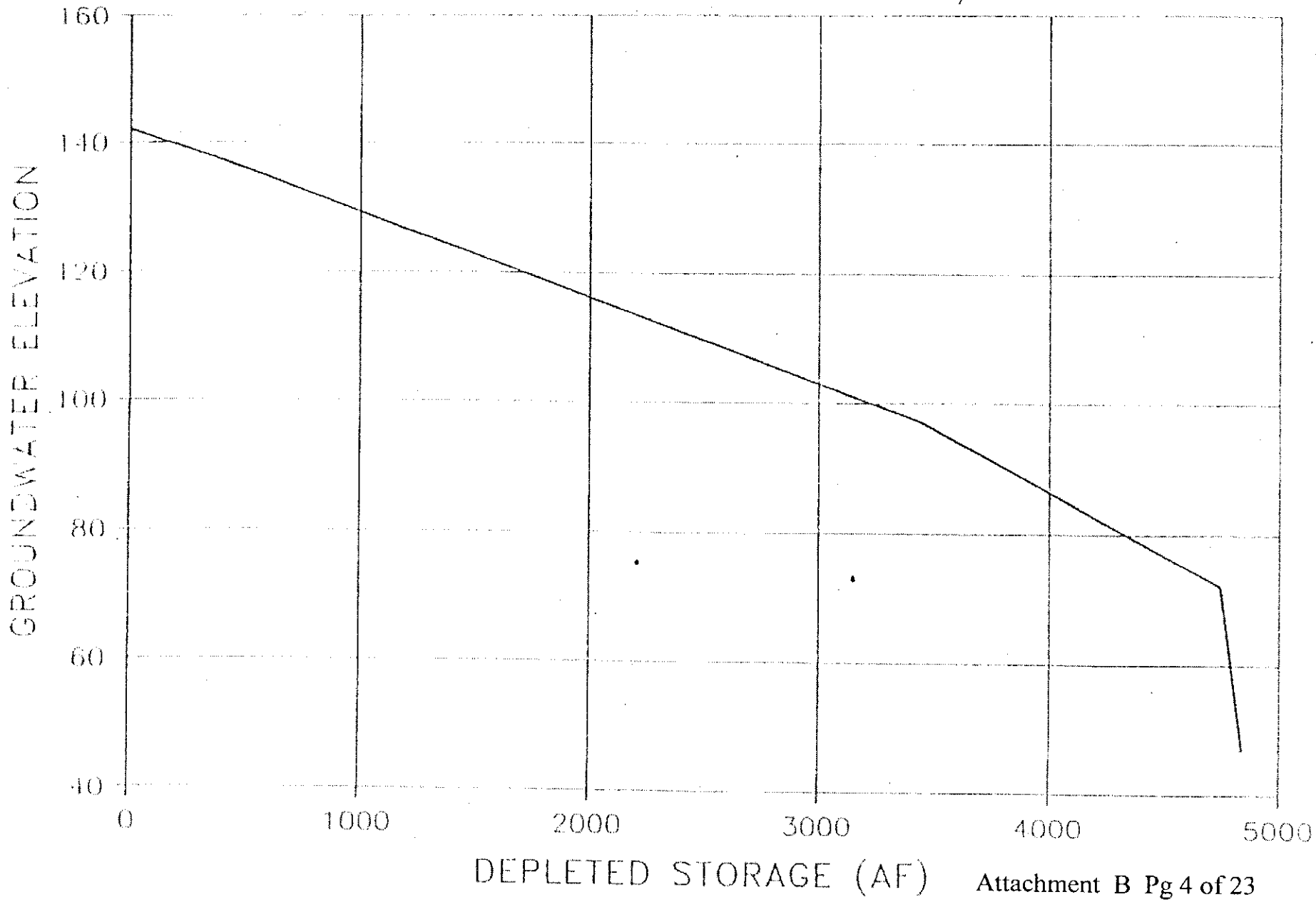
NODE 3 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 137 FEET WELL 6N/33W-6D4



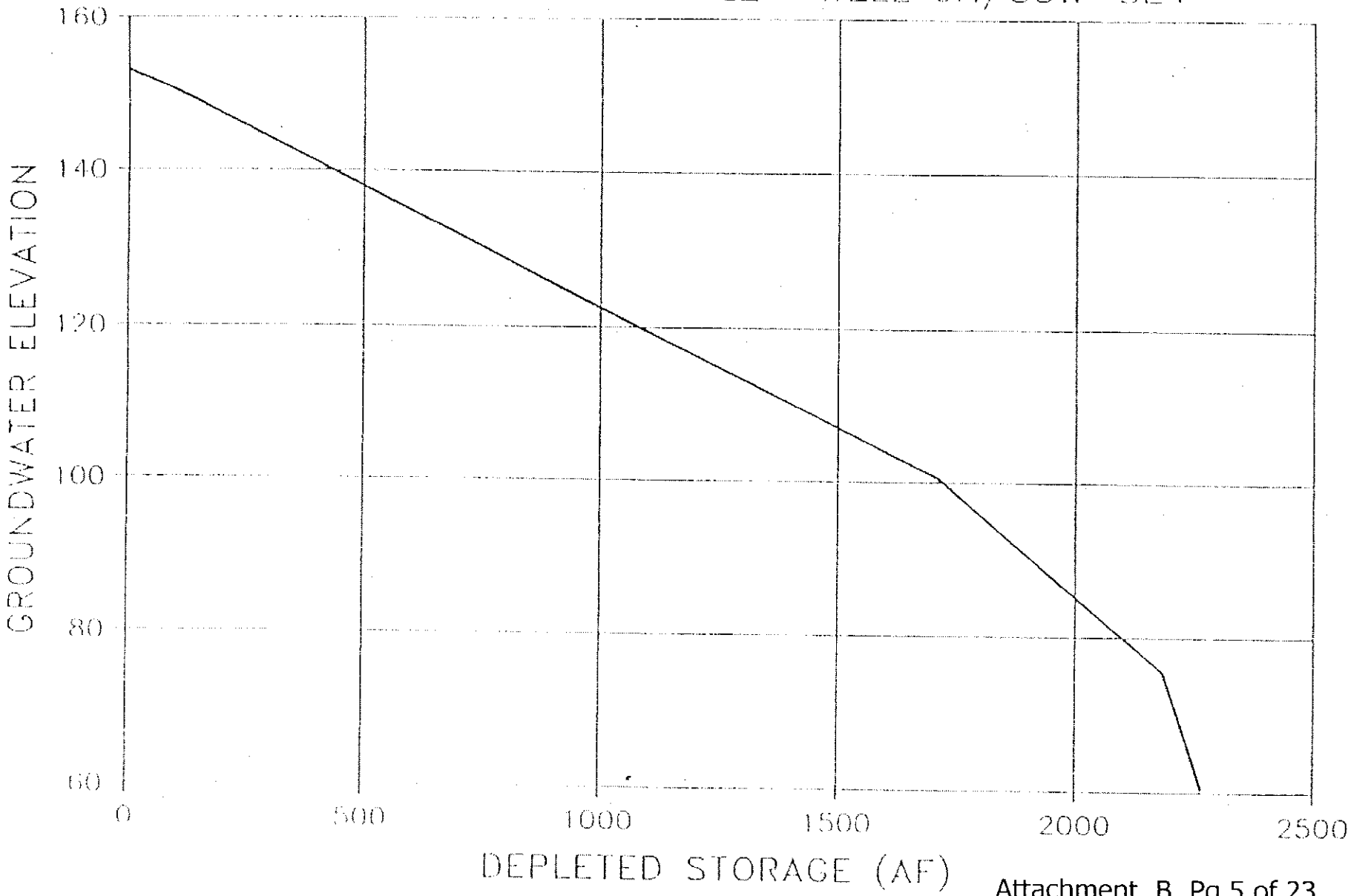
NODE 4 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 142 FEET WELL 6N/33W-6K2



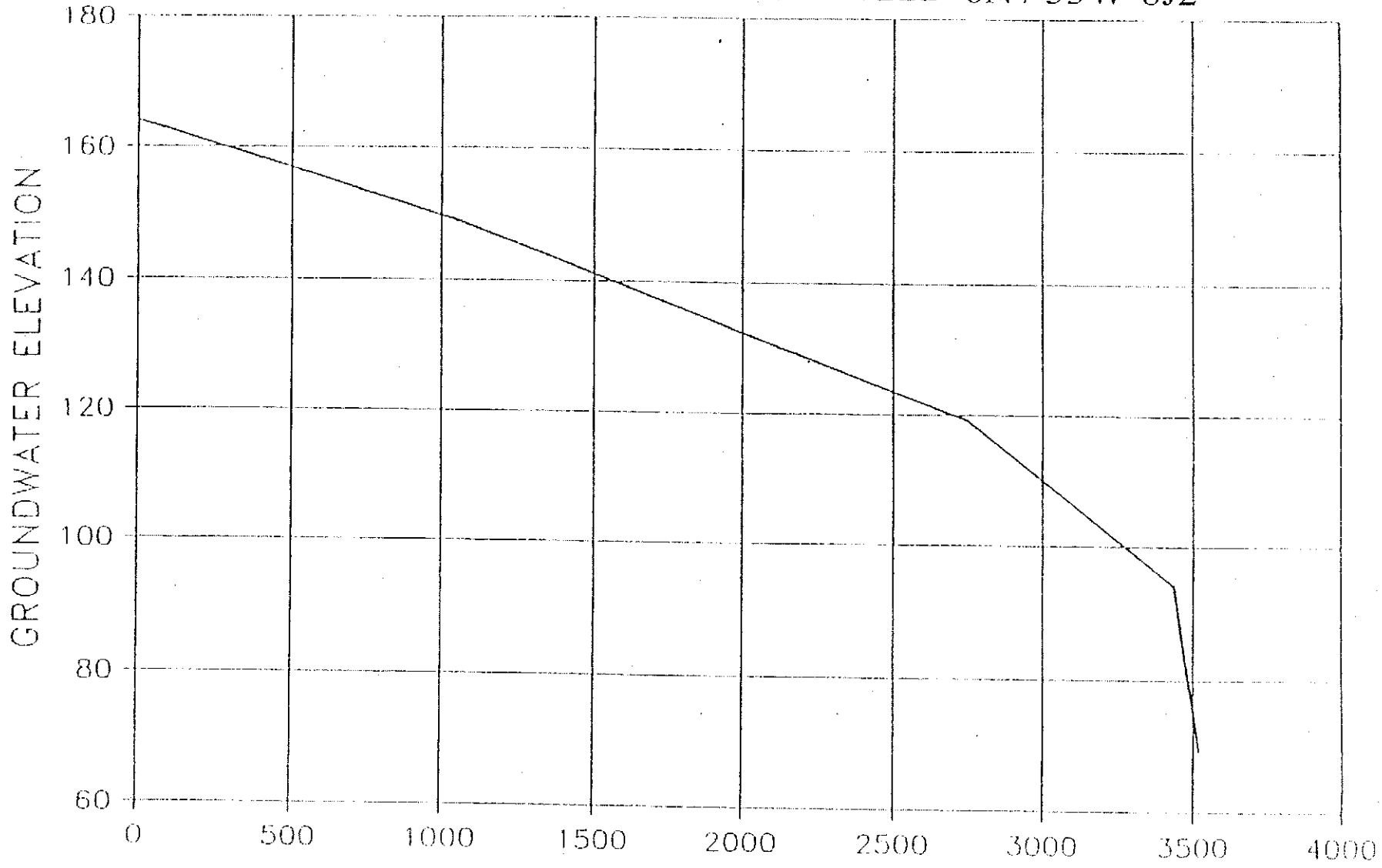
NODE 5 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 153 FEET WELL 6N/33W-8E4



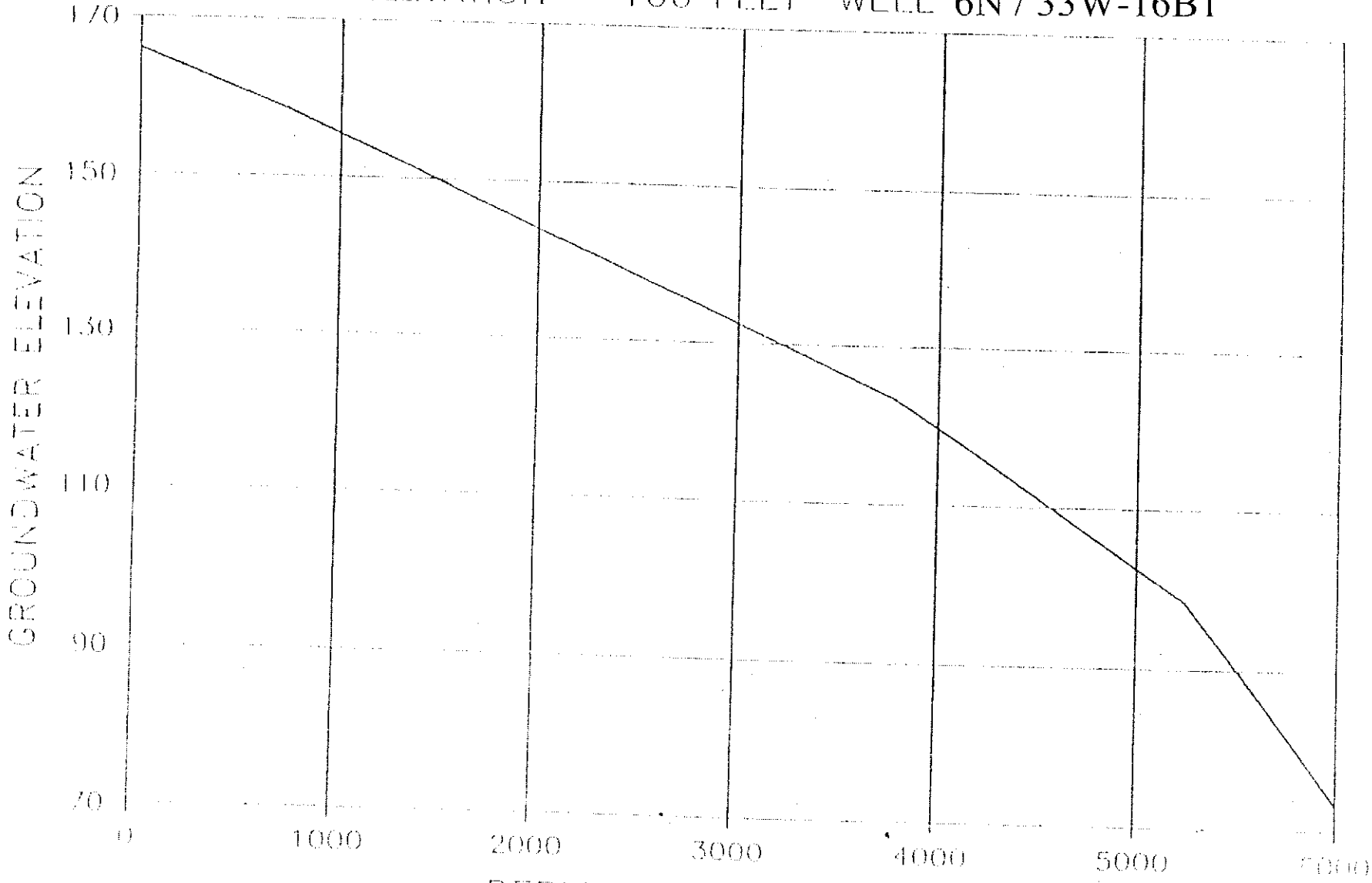
NODE 6 GROUND–WATER STORAGE CAPACITY

FULL ELEVATION – 164 FEET WELL 6N / 33W-8J2



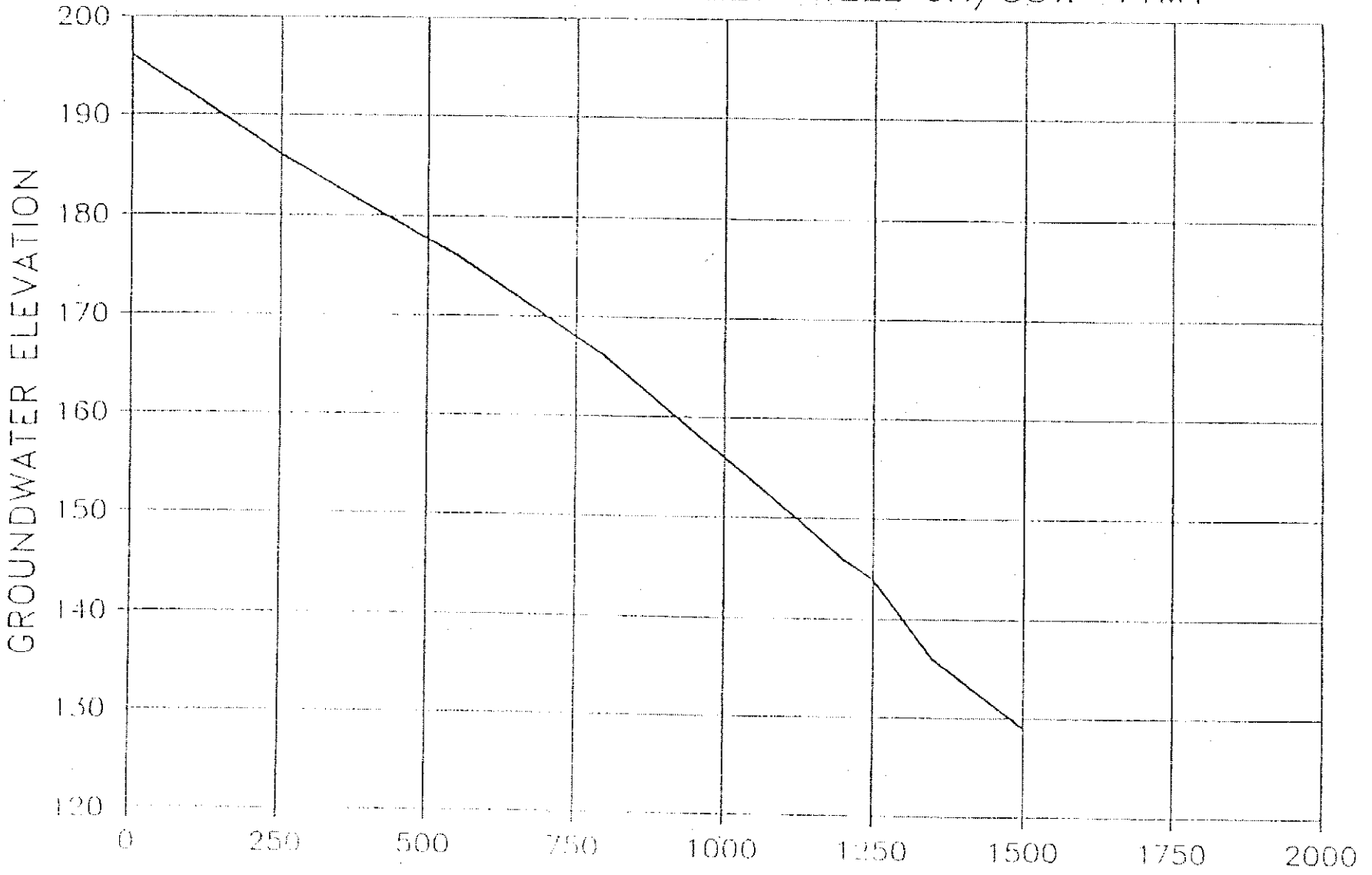
NODE 7 GROUND–WATER STORAGE CAPACITY

FULL ELEVATION – 166 FEET WELL 6N/33W-16B1



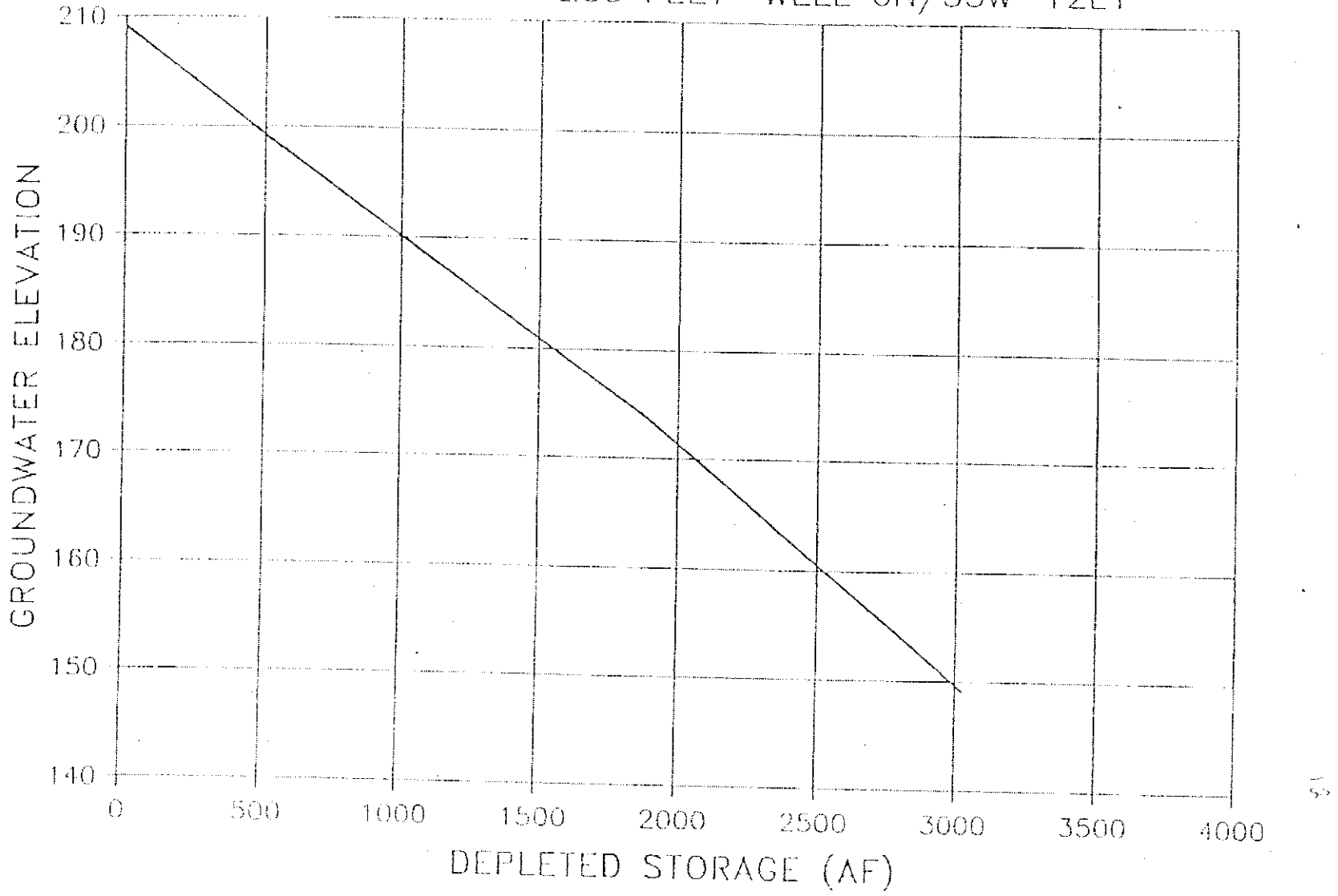
NODE 8 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 196 FEET WELL 6N/33W-11M1



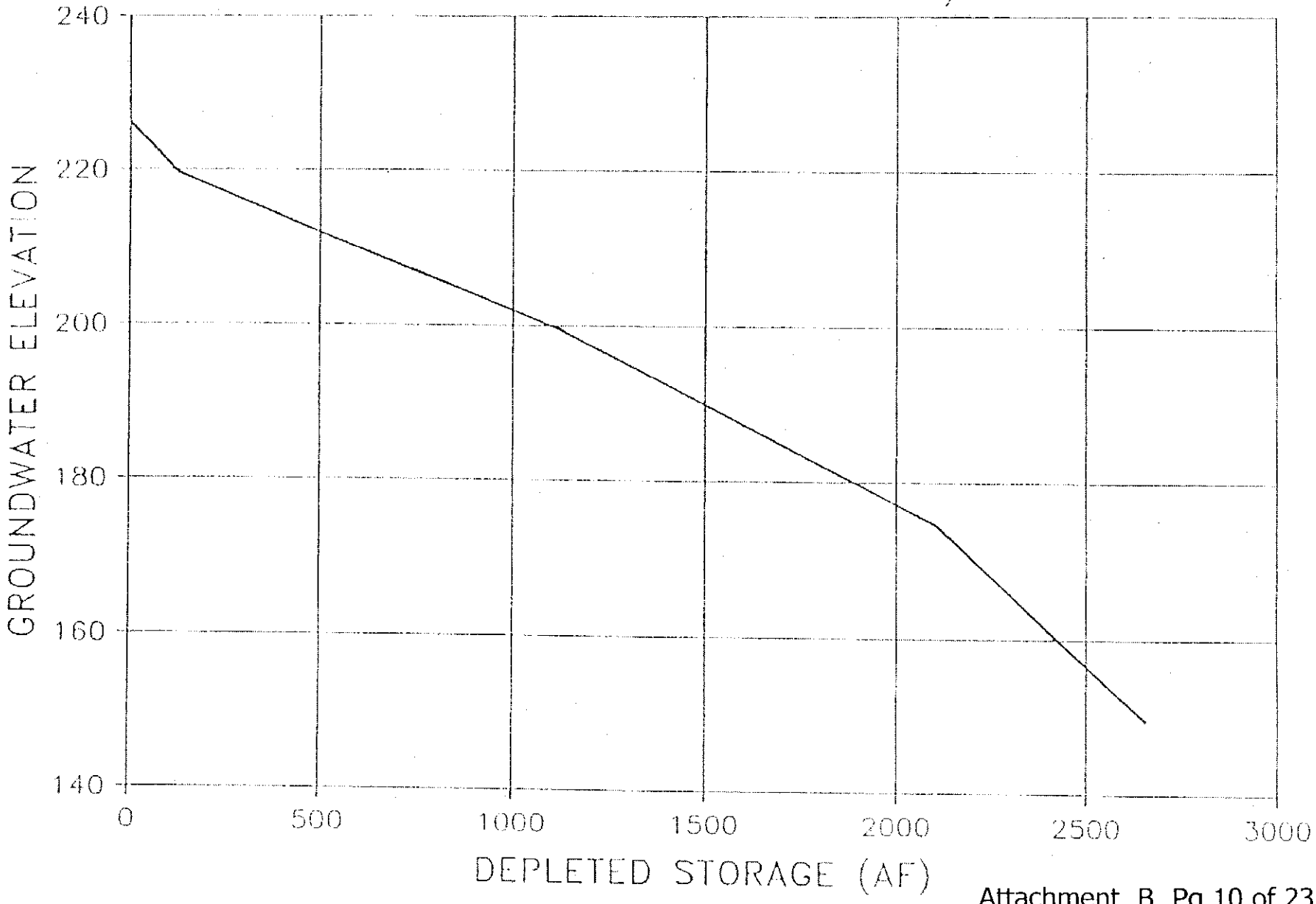
NODE 9 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 209 FEET WELL 6N/33W-12L1



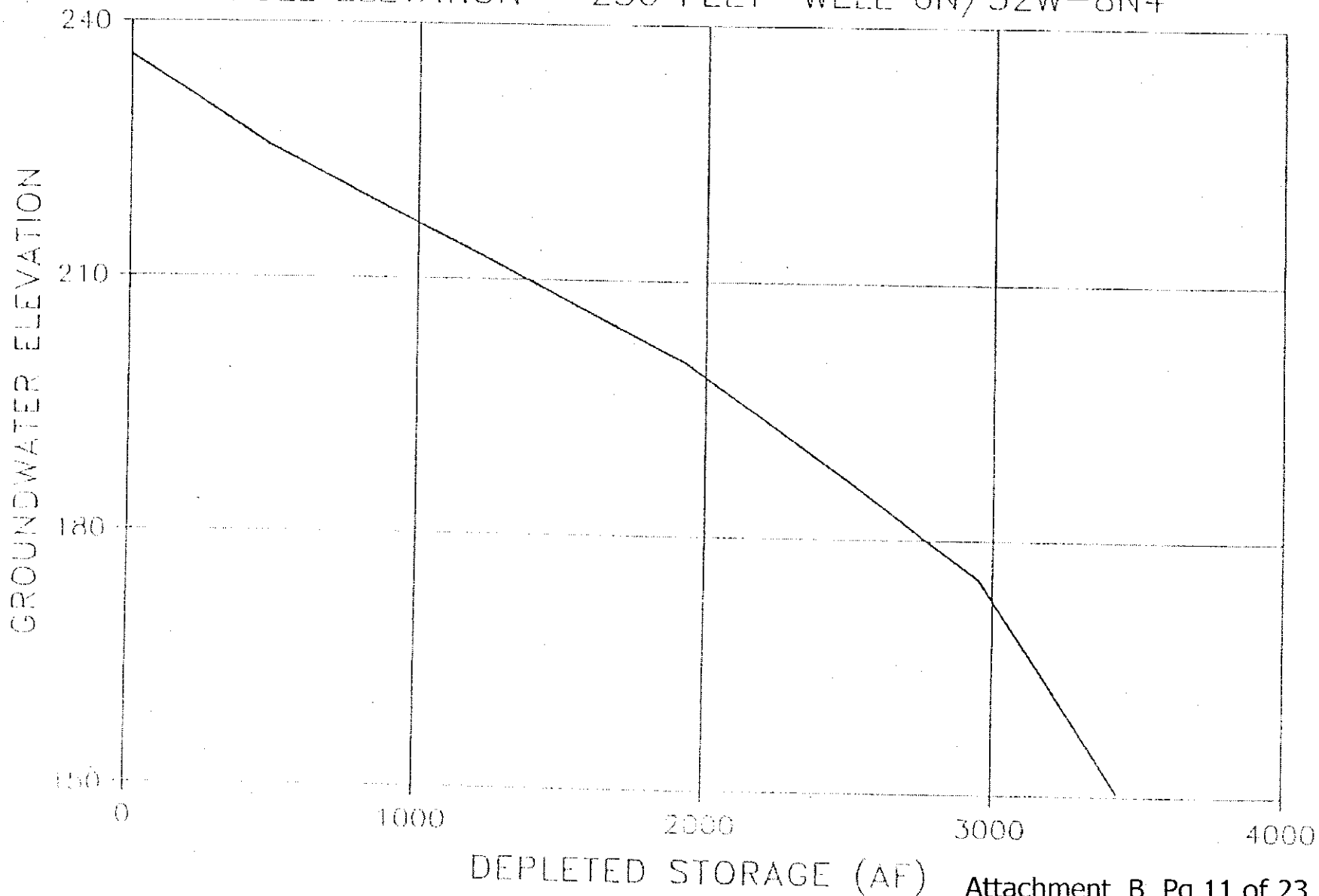
NODE 10 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 226 FEET WELL 6N/32W-18C2



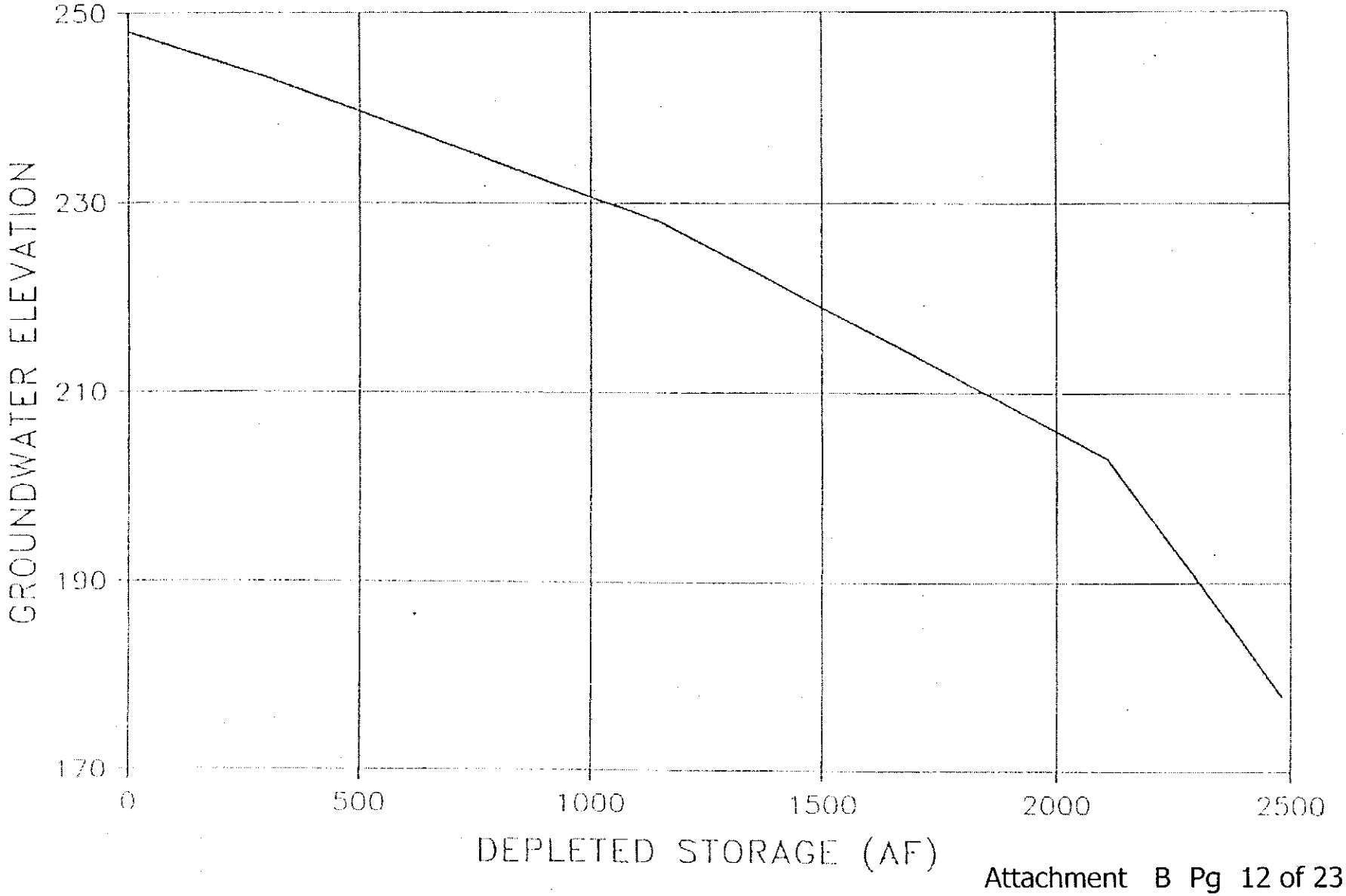
NODE 11 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 236 FEET WELL 6N/32W-8N4



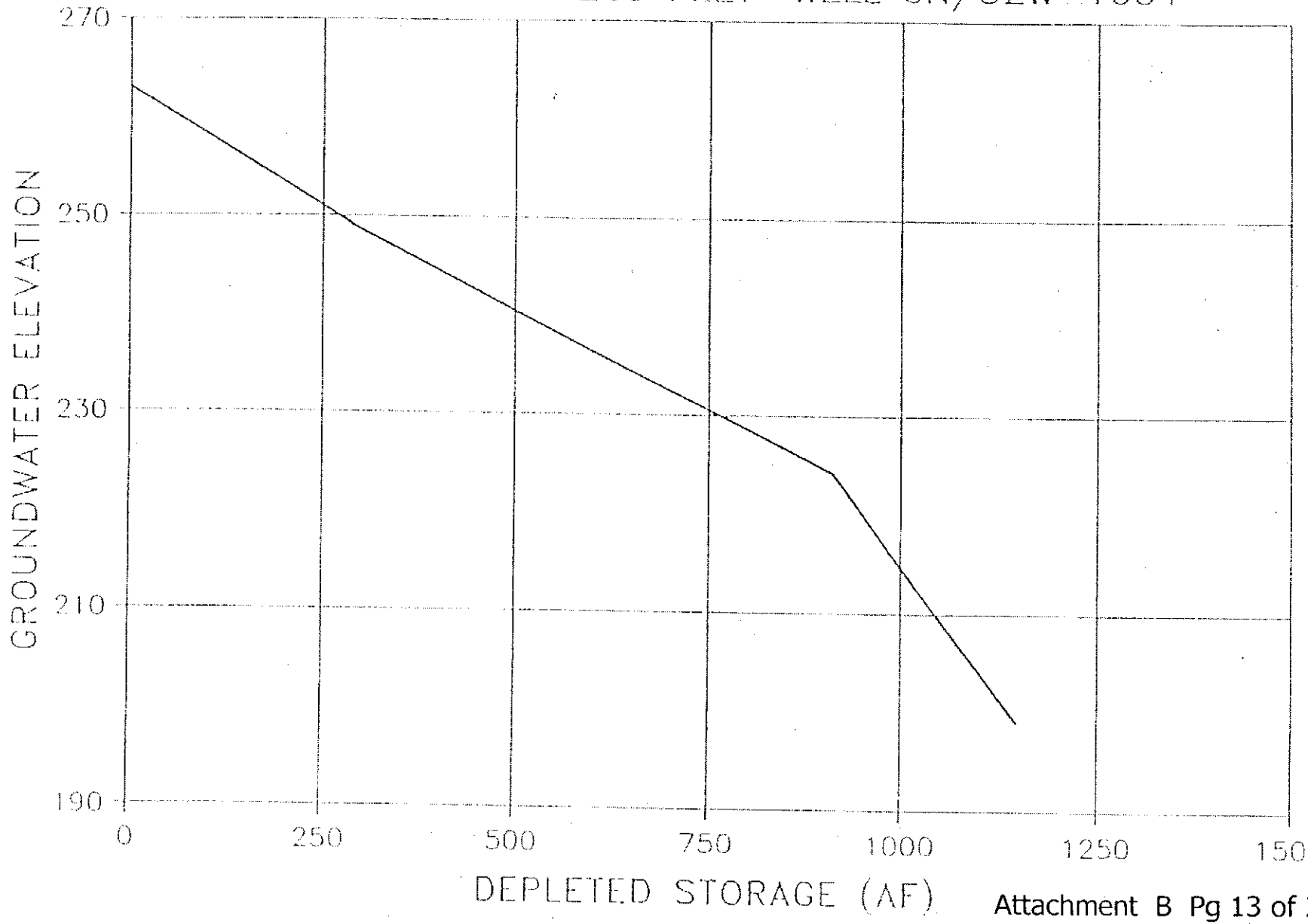
NODE 12 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 248 FEET WELL 6N/32W-17J2

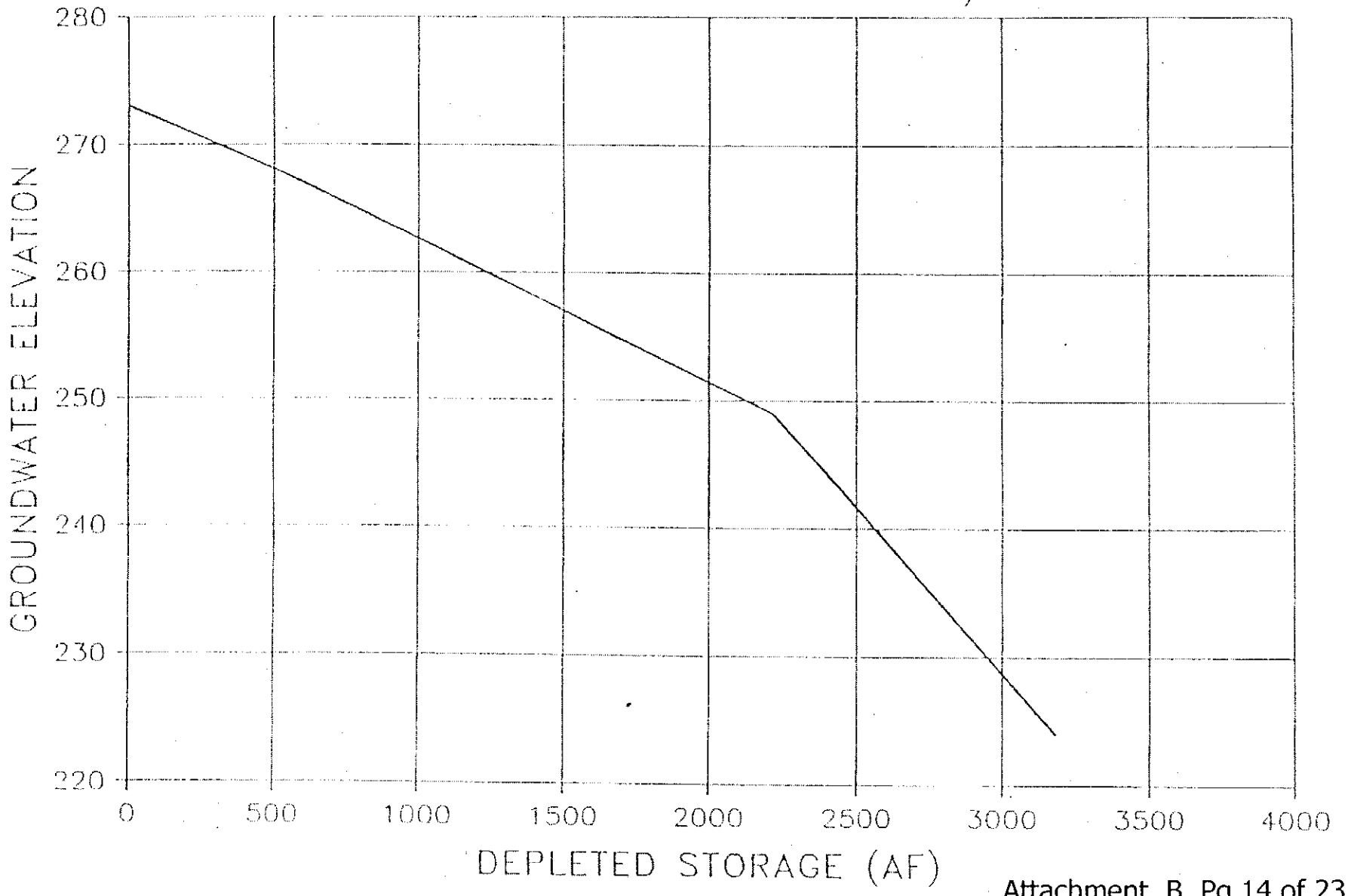


NODE 13 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 263 FEET WELL 6N/32W-16G4

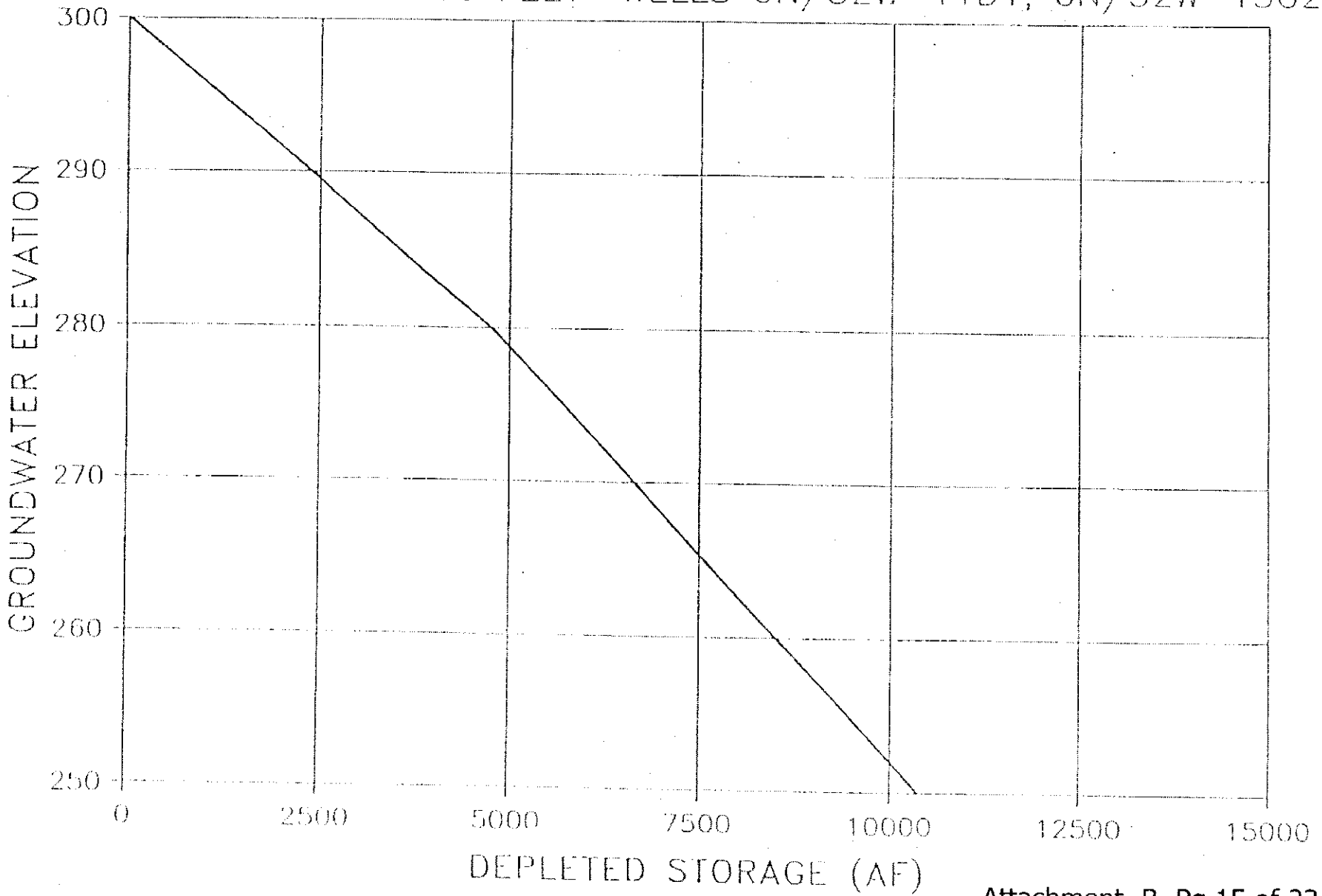


NODE 14 GROUND-WATER STORAGE CAPACITY

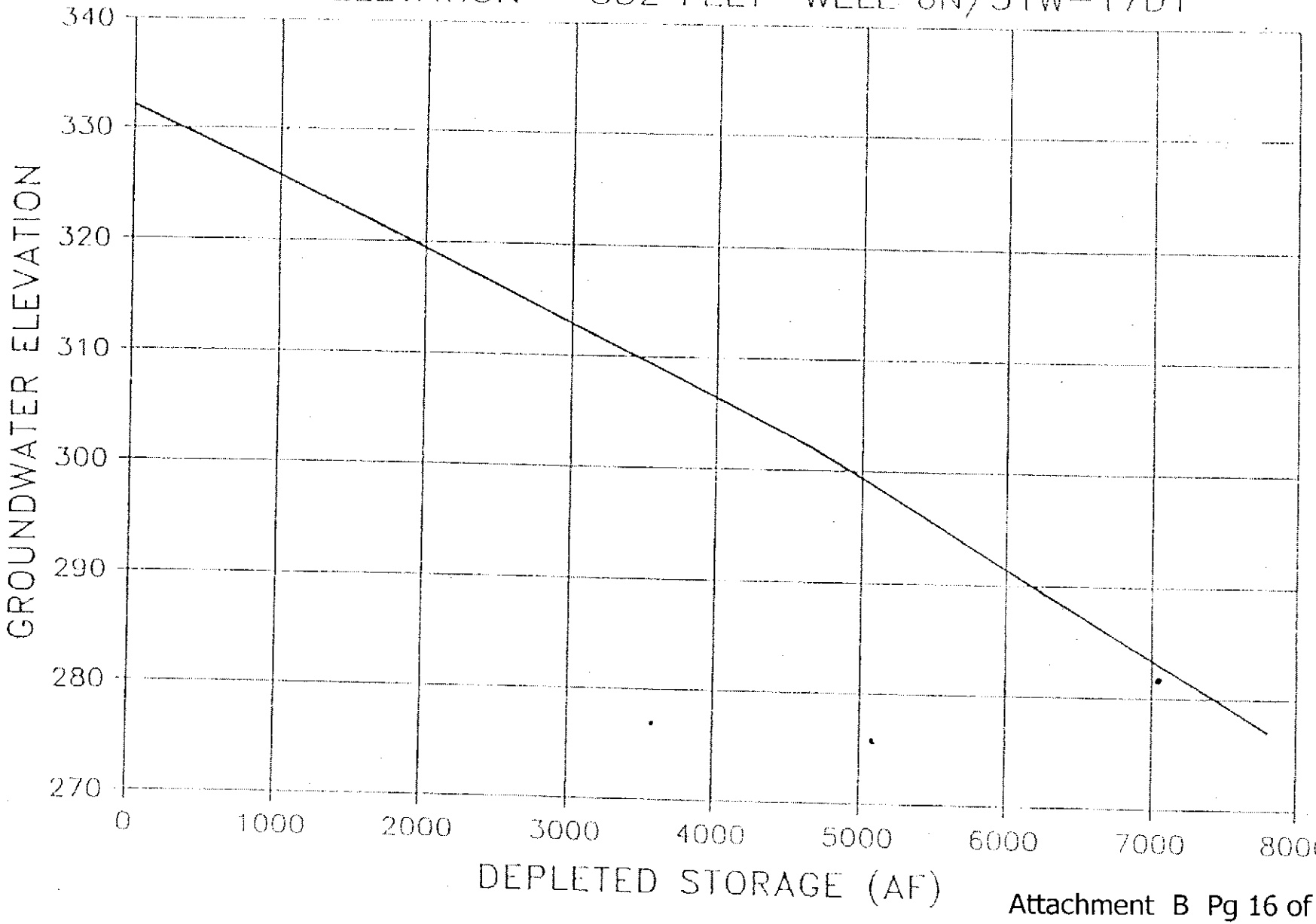


NODE 15 GROUND-WATER STORAGE CAPACITY

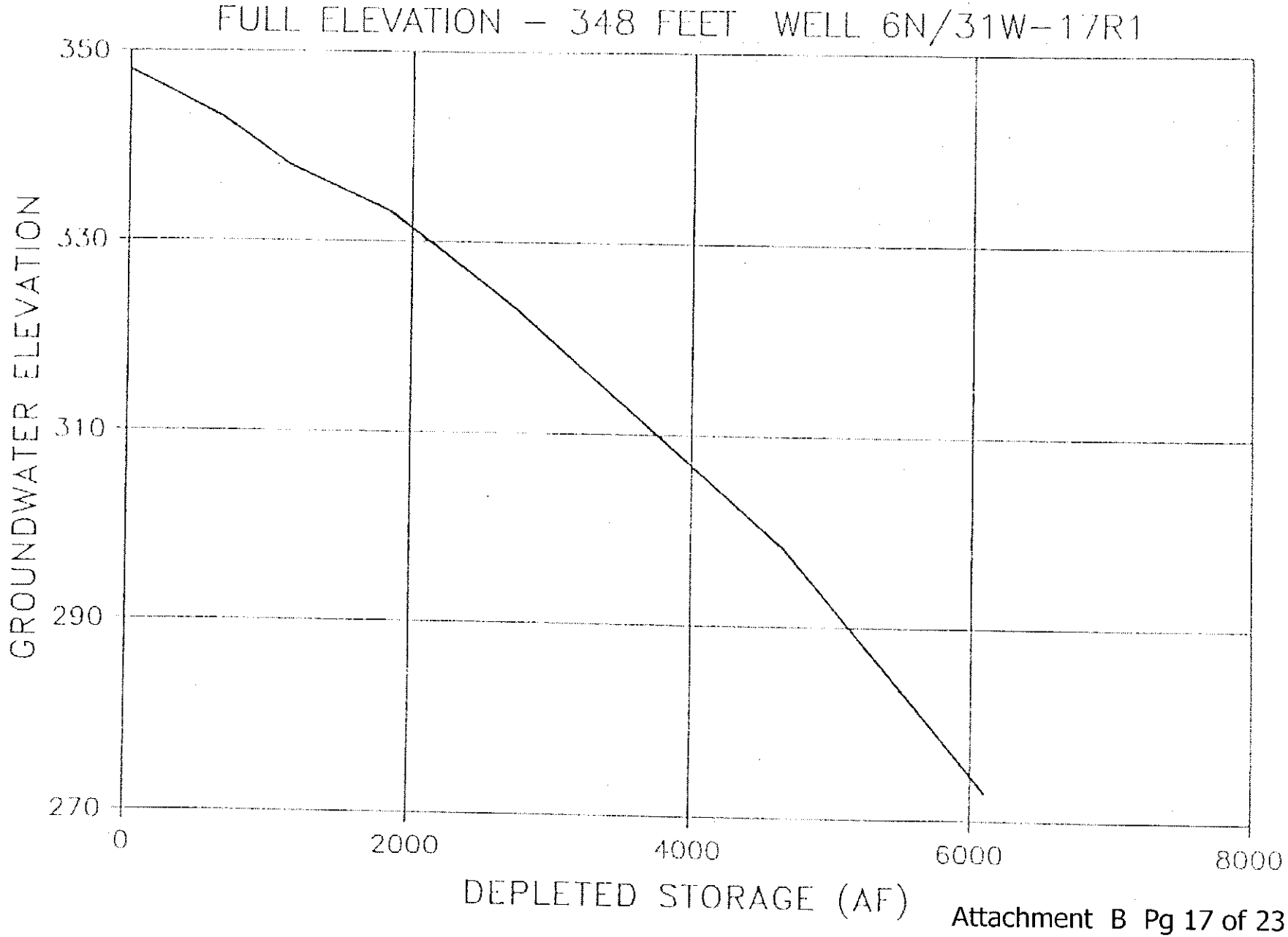
FULL ELEVATION - 300 FEET WELLS 6N/32W-11D1, 6N/32W-13G2



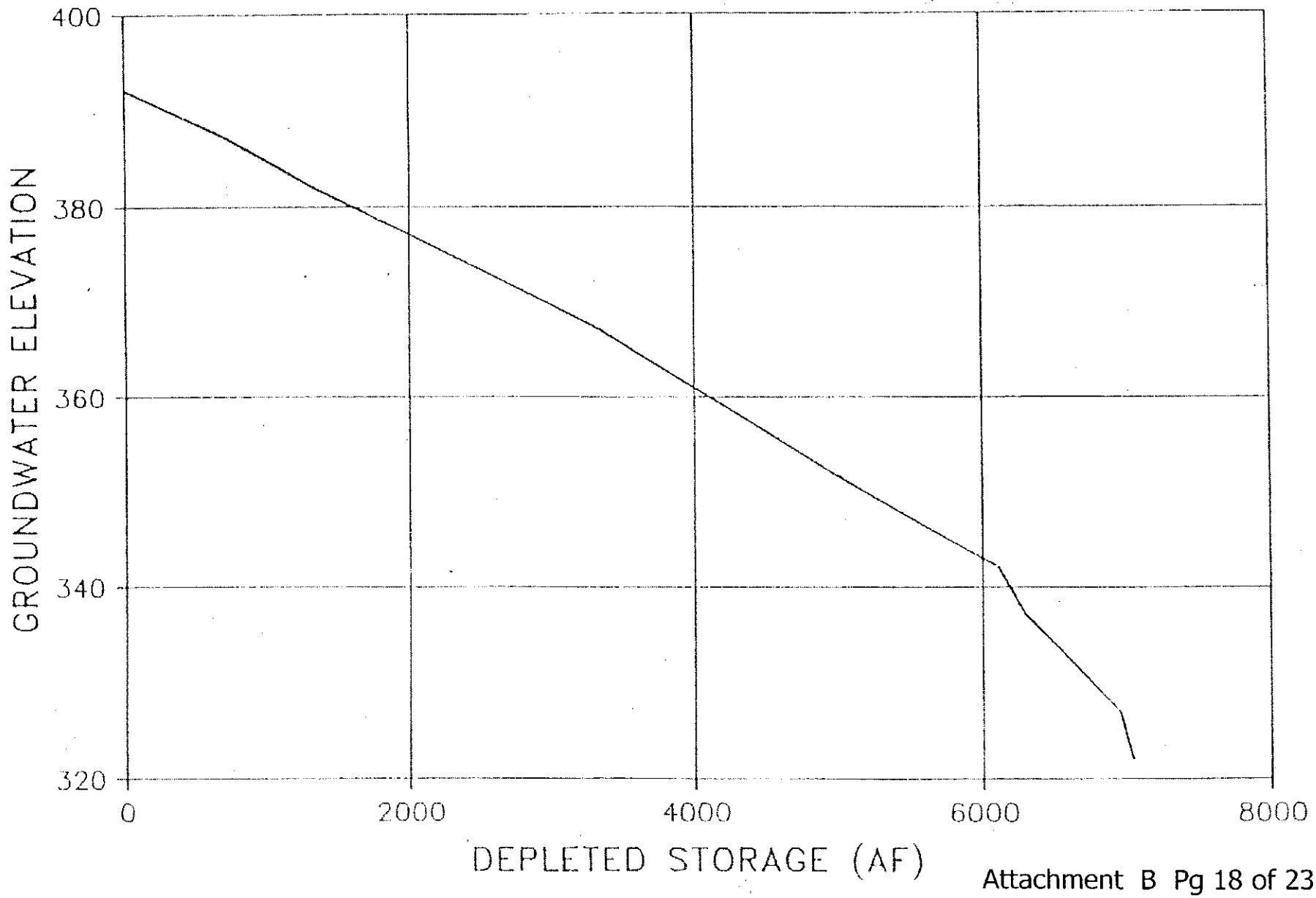
NODE 16 GROUND-WATER STORAGE CAPACITY



NODE 17-18 GROUND-WATER STORAGE CAPACITY

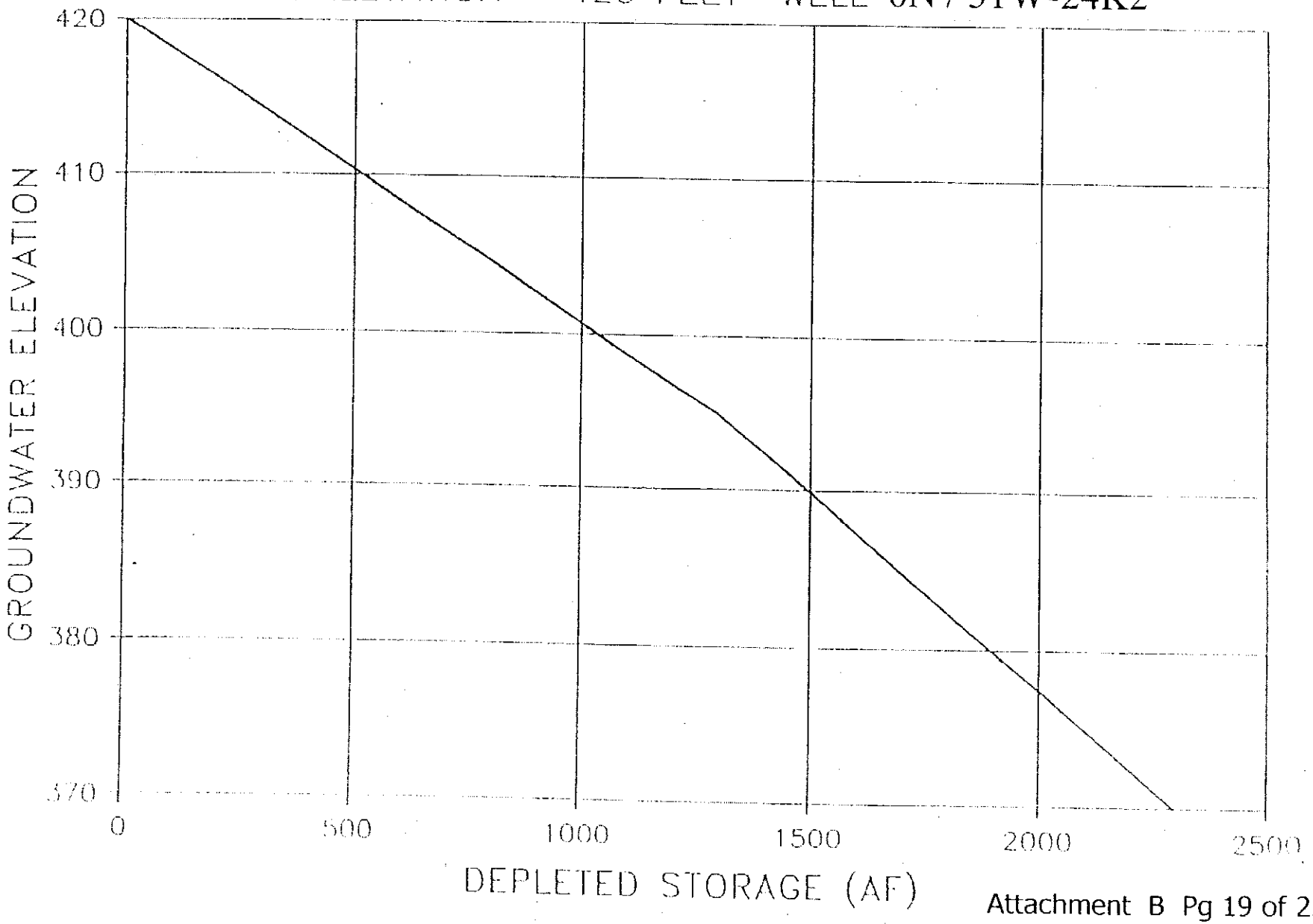


NODE 19-20 GROUND-WATER STORAGE CAPACITY



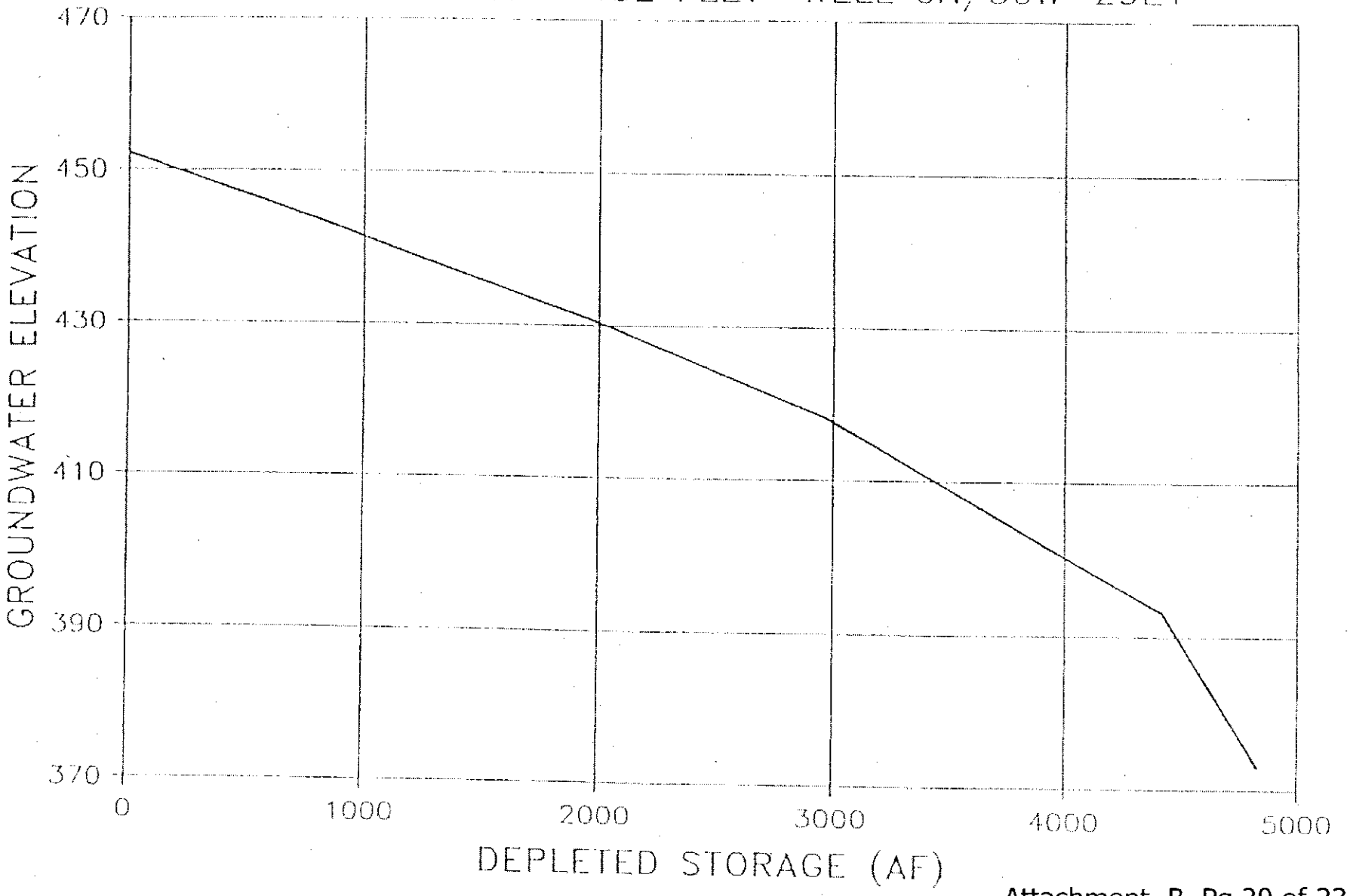
NODE 21 GROUND–WATER STORAGE CAPACITY

FULL ELEVATION – 420 FEET WELL 6N / 31W-24K2



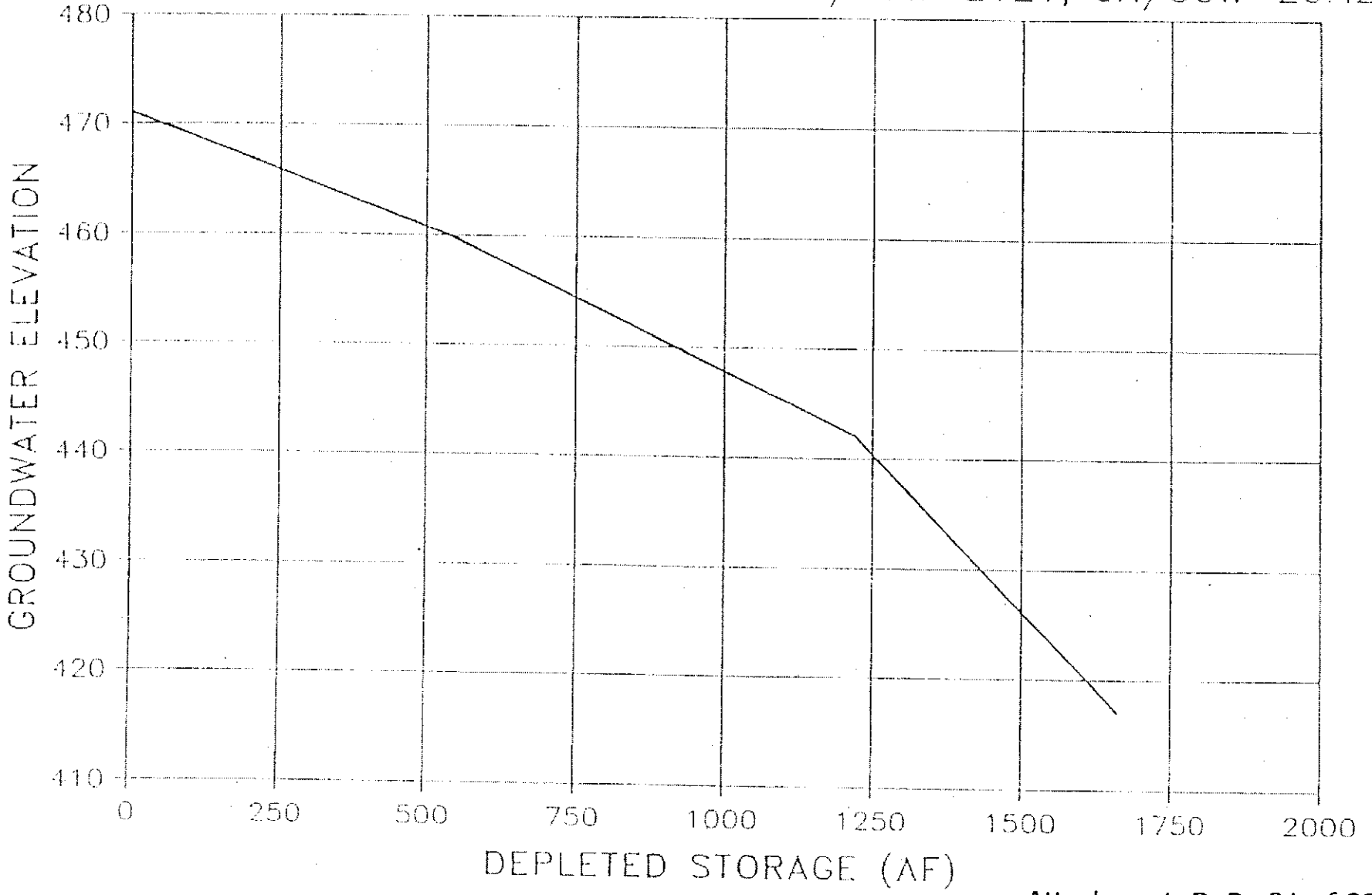
NODE 22 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 452 FEET WELL 6N/30W-29E1



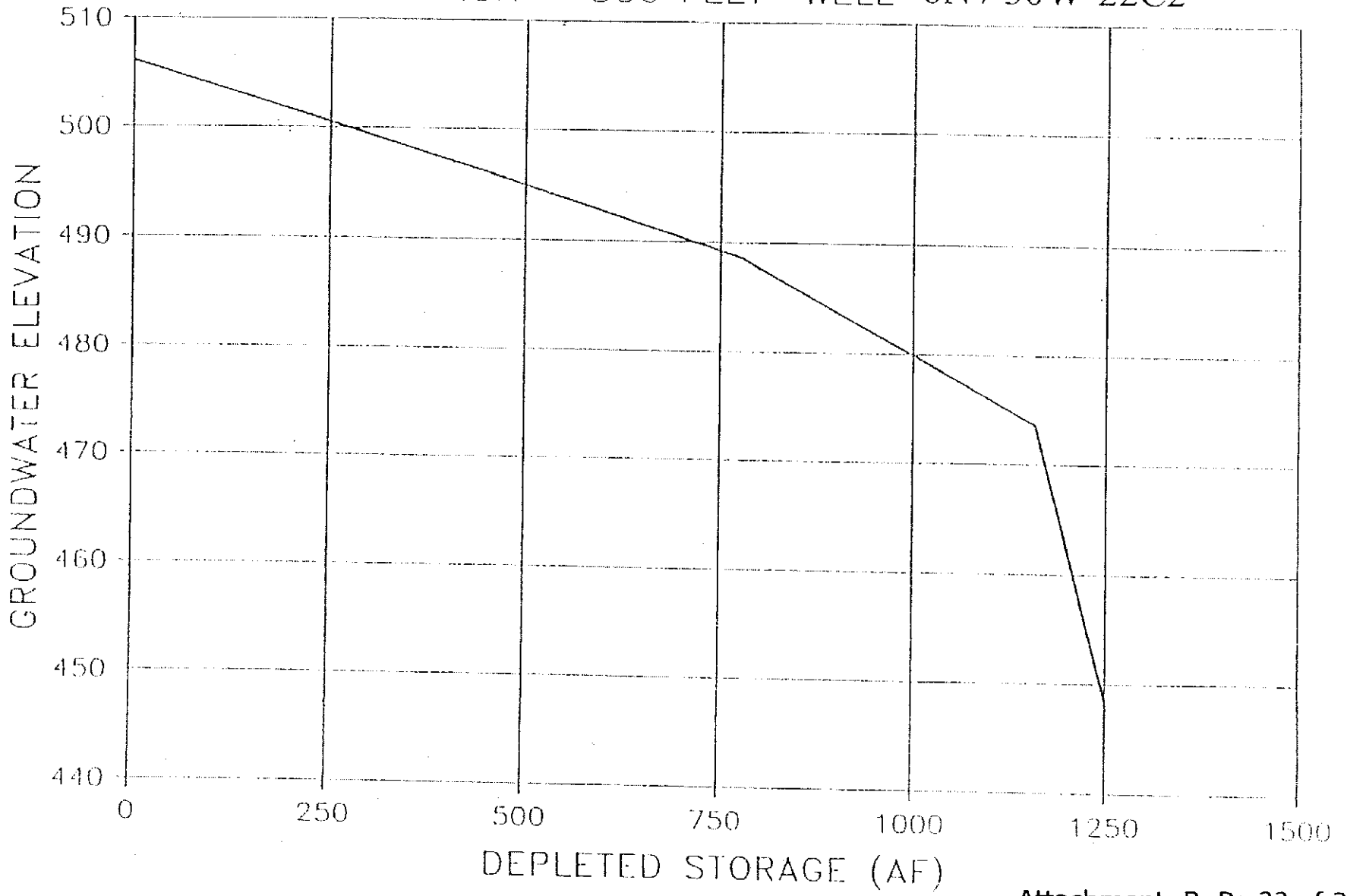
NODE 23 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 471 FEET WELLS 6N/30W-21E1, 6N/30W-20H2



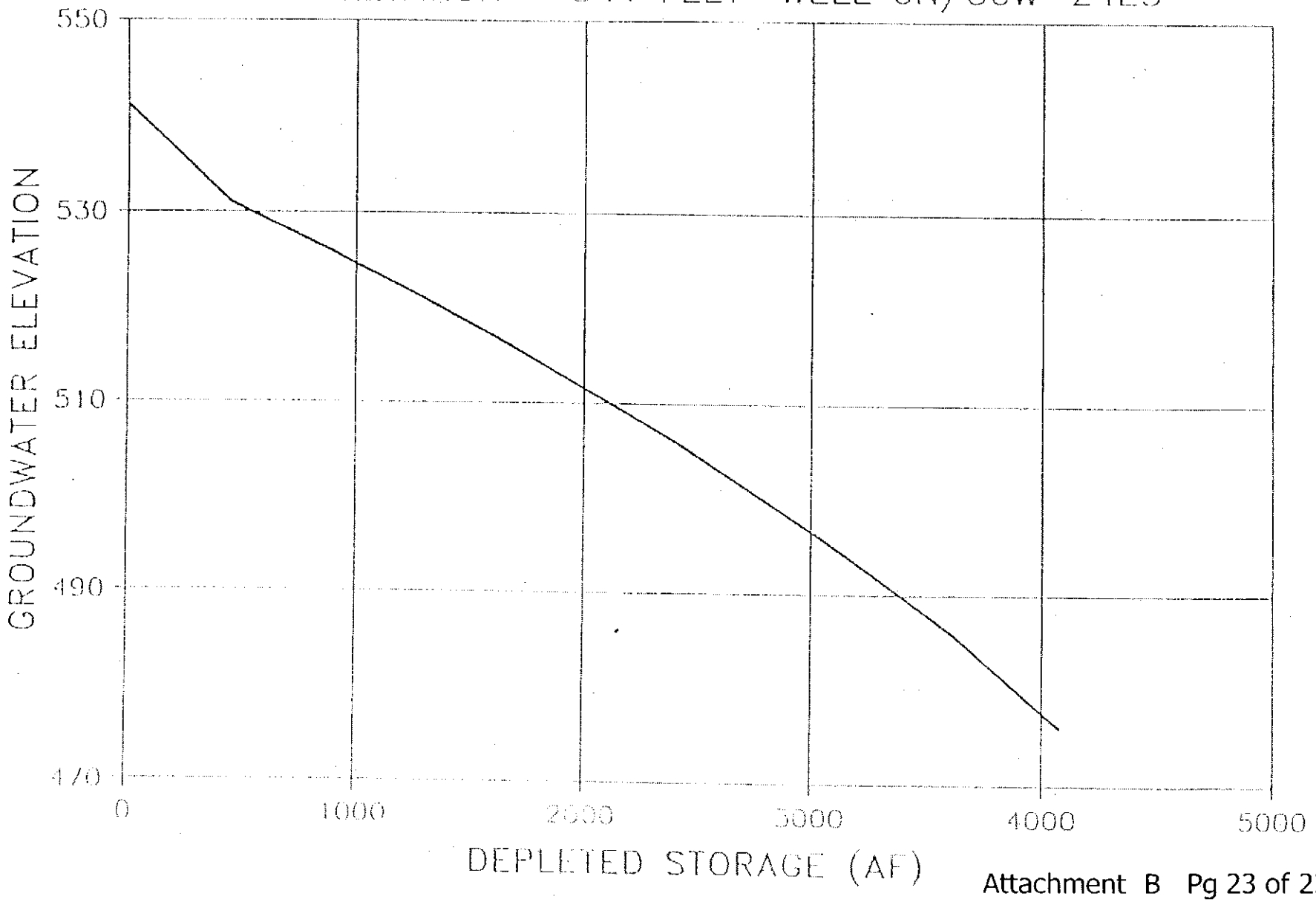
NODE 24 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 506 FEET WELL 6N/30W-22C2



NODE 25 GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 541 FEET WELL 6N/30W-24E5



INDICATOR WELLS BELOW NARROWS

NODE	WELL NUMBER (T., R., Sec.)	GROUND SURFACE ELEVATION	"FULL" ELEVATION *
A	7N/34W-22M6	100.0	73
B	7N/34W-26B4	108.4	78
C	7N/34W-27F9	97.4	72
D	7N/34W-26Q5	111.3	83
E	7N/34W-25F3	133.4	81
F	6N/34W-4G4	97.5	70
G	7N/34W-34R1	112.0	78
H	7N/34W-35K9	101.0	89

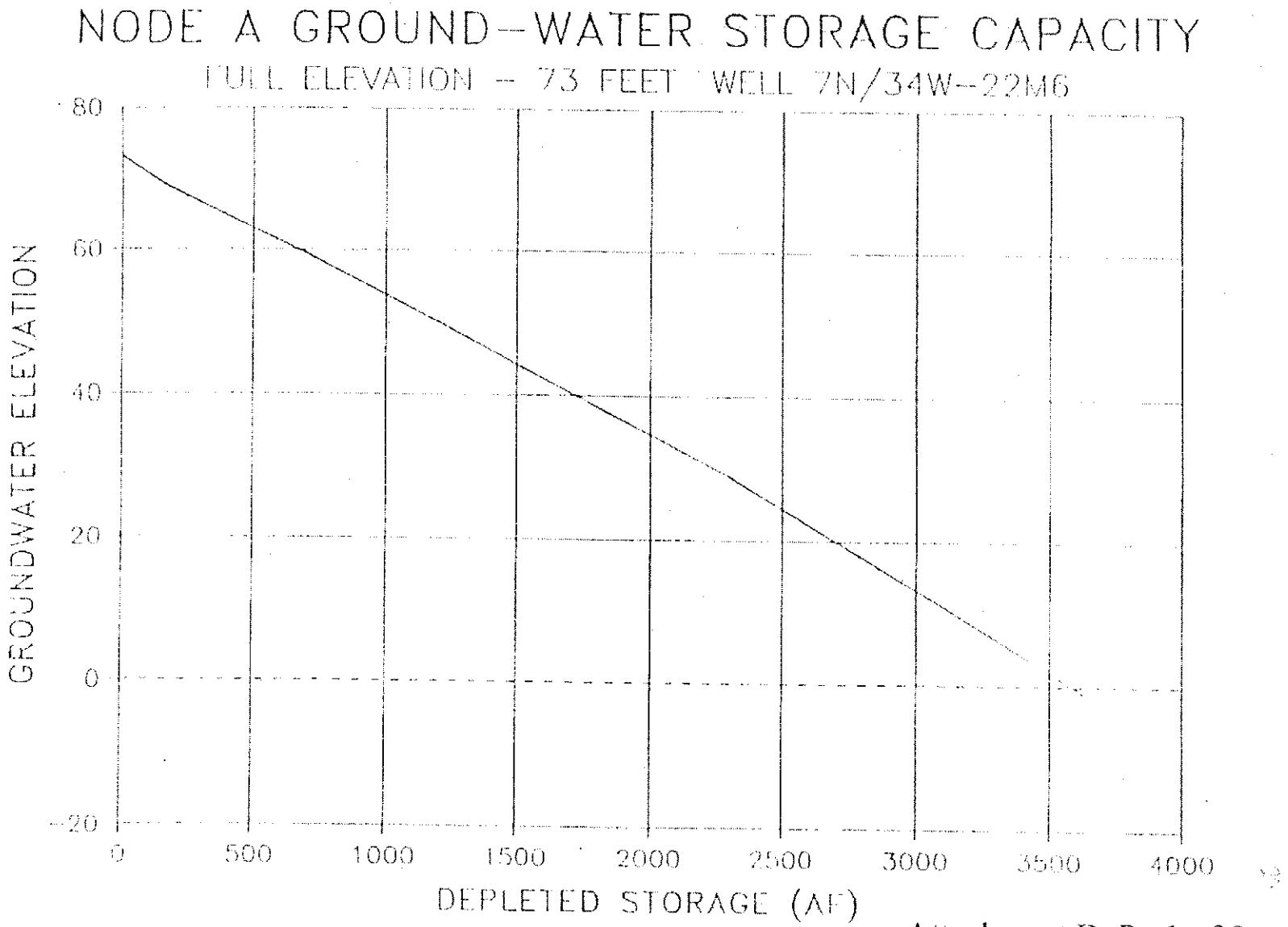
* The full basin ground-water surface elevations for below Narrows are considered as the piezometric surface of the deep water body as of April 1941.

Attachment C
Revised USBR Exhibit 1
February 1, 2003

STORAGE CAPACITY CURVES FOR INDICATOR WELLS

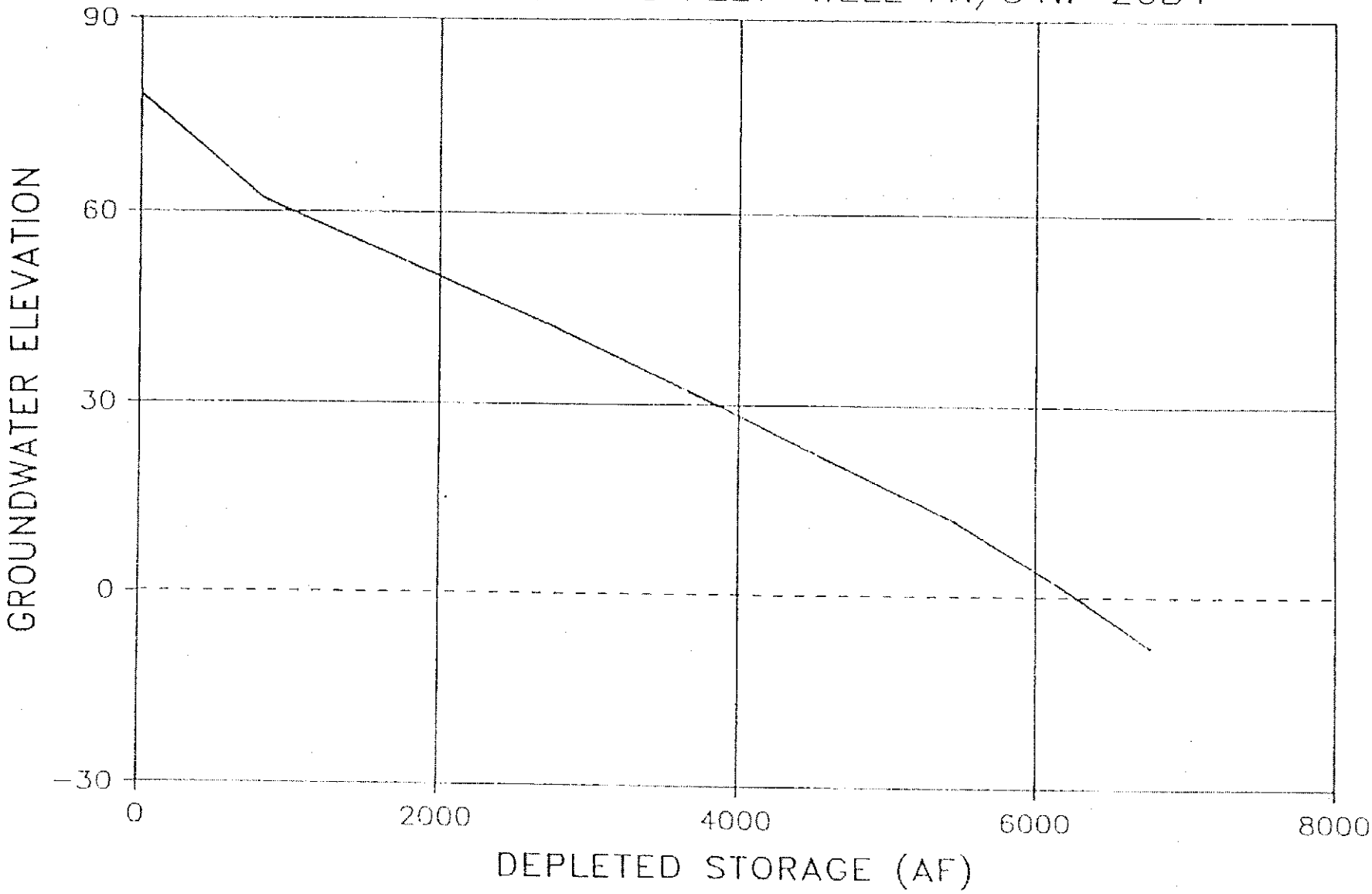
BELOW NARROWS

Attachment D (8 pages)
Revised USBR Exhibit 1
February 1, 2003


NODE A GROUND--WATER STORAGE CAPACITY
FULL ELEVATION -- 73 FEET WELL 7N/34W--22M6
GROUNDWATER ELEVATION
80
60
40
20
0
-20
0
500
1000
1500
2000
2500
3000
3500
4000
DEPLETED STORAGE (AF)

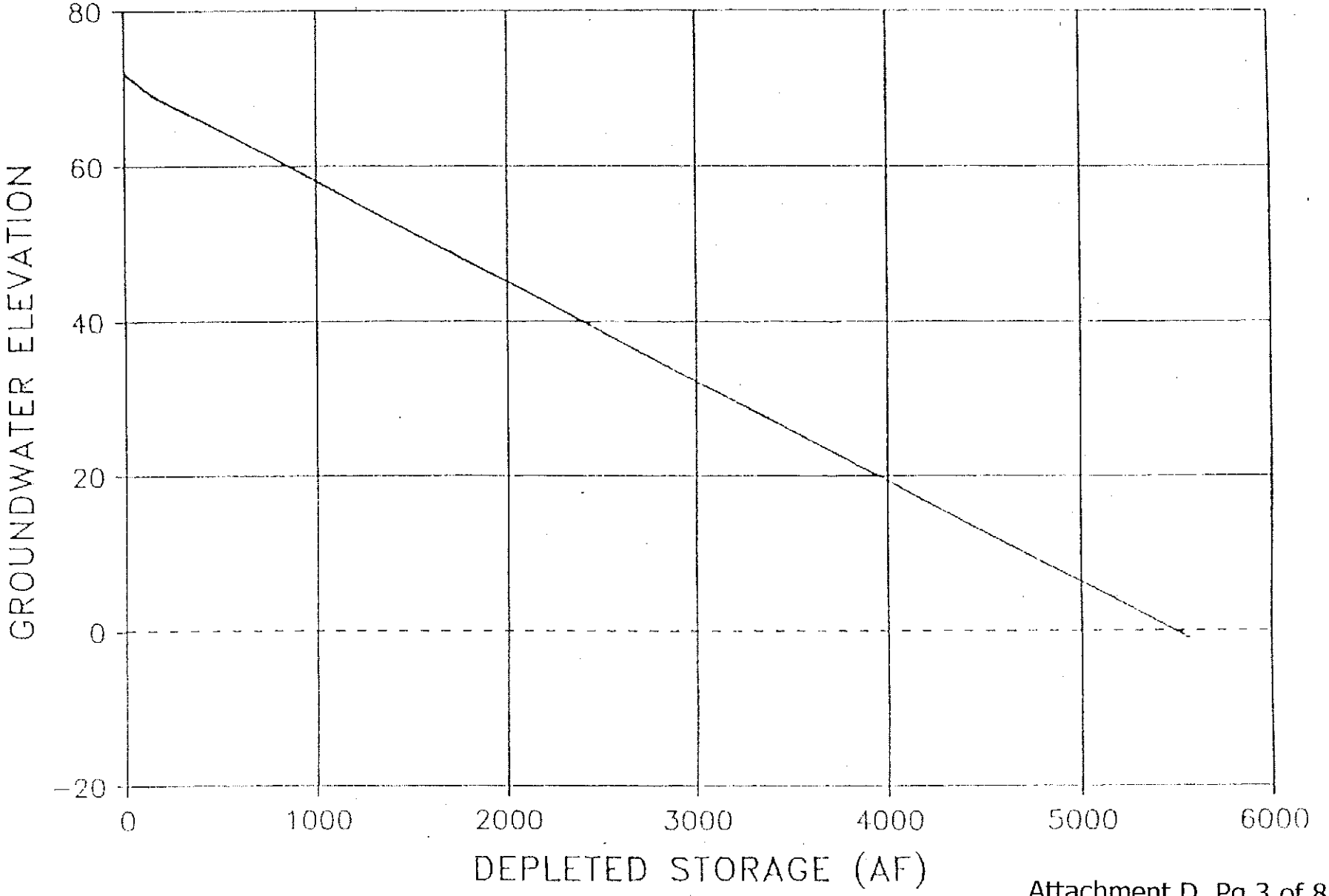
NODE B GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 78 FEET WELL 7N/34W-26B4



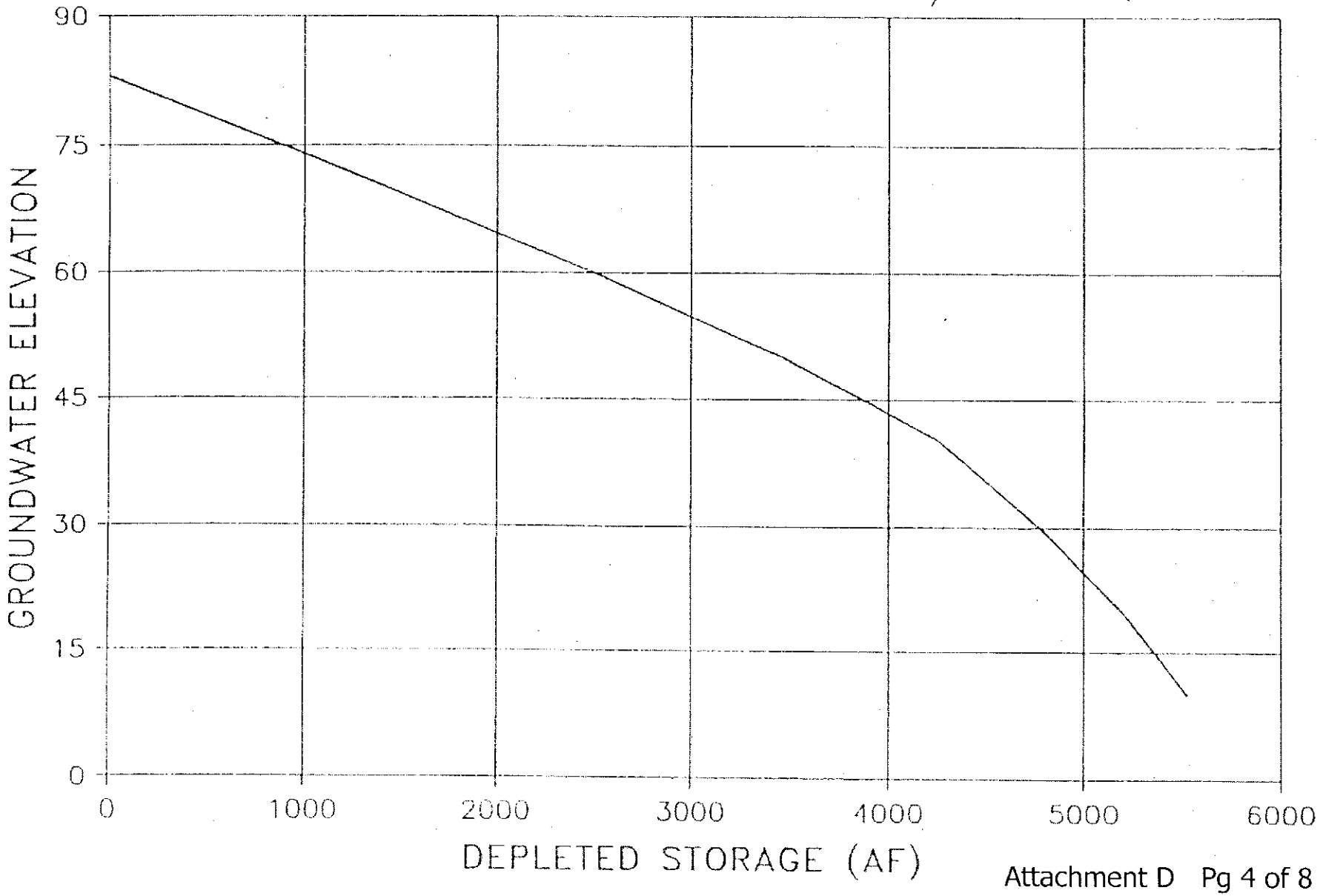
NODE C GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 72 FEET WELL 7N/34W-27F9



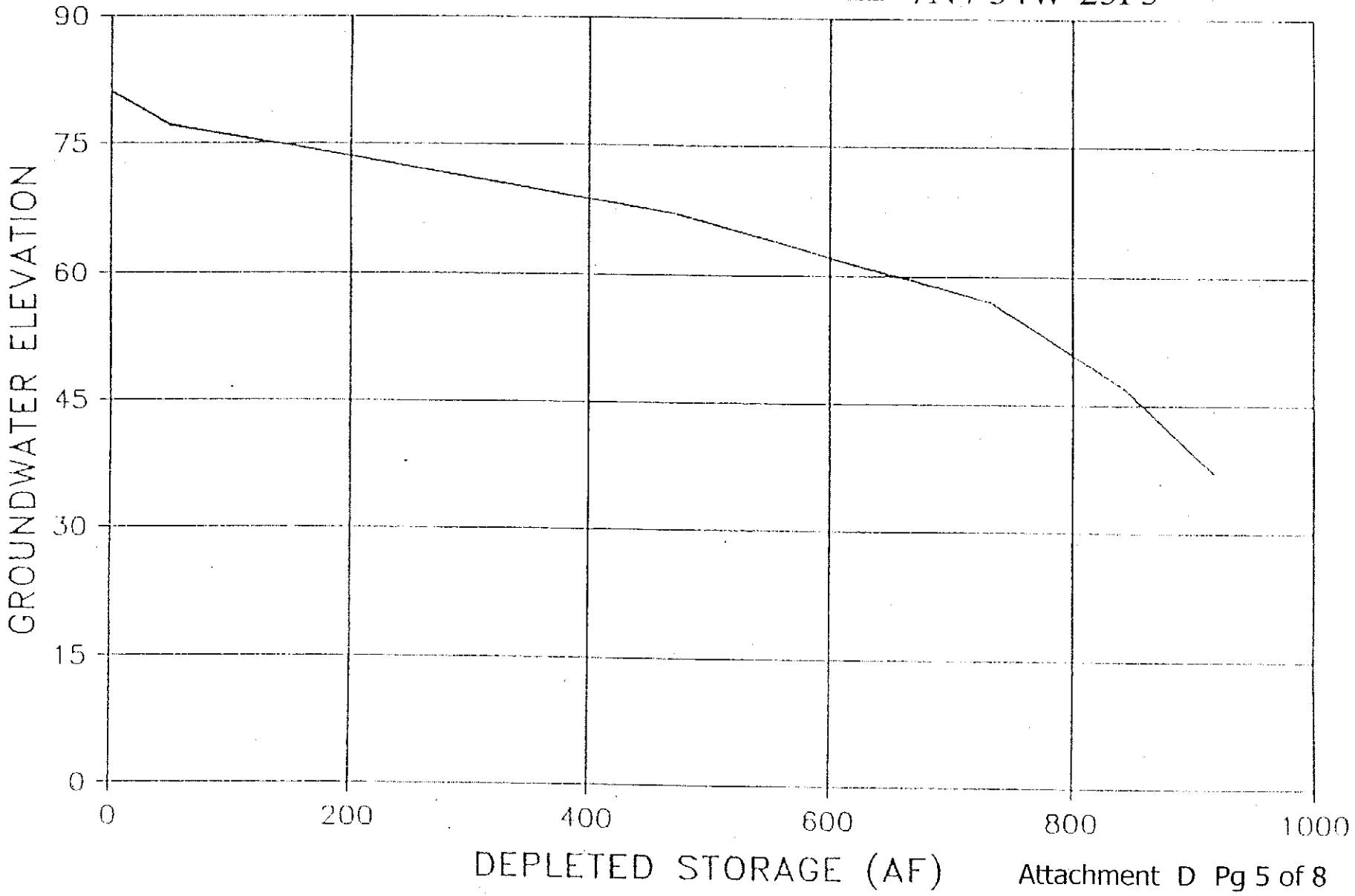
NODE D GROUND-WATER STORAGE CAPACITY

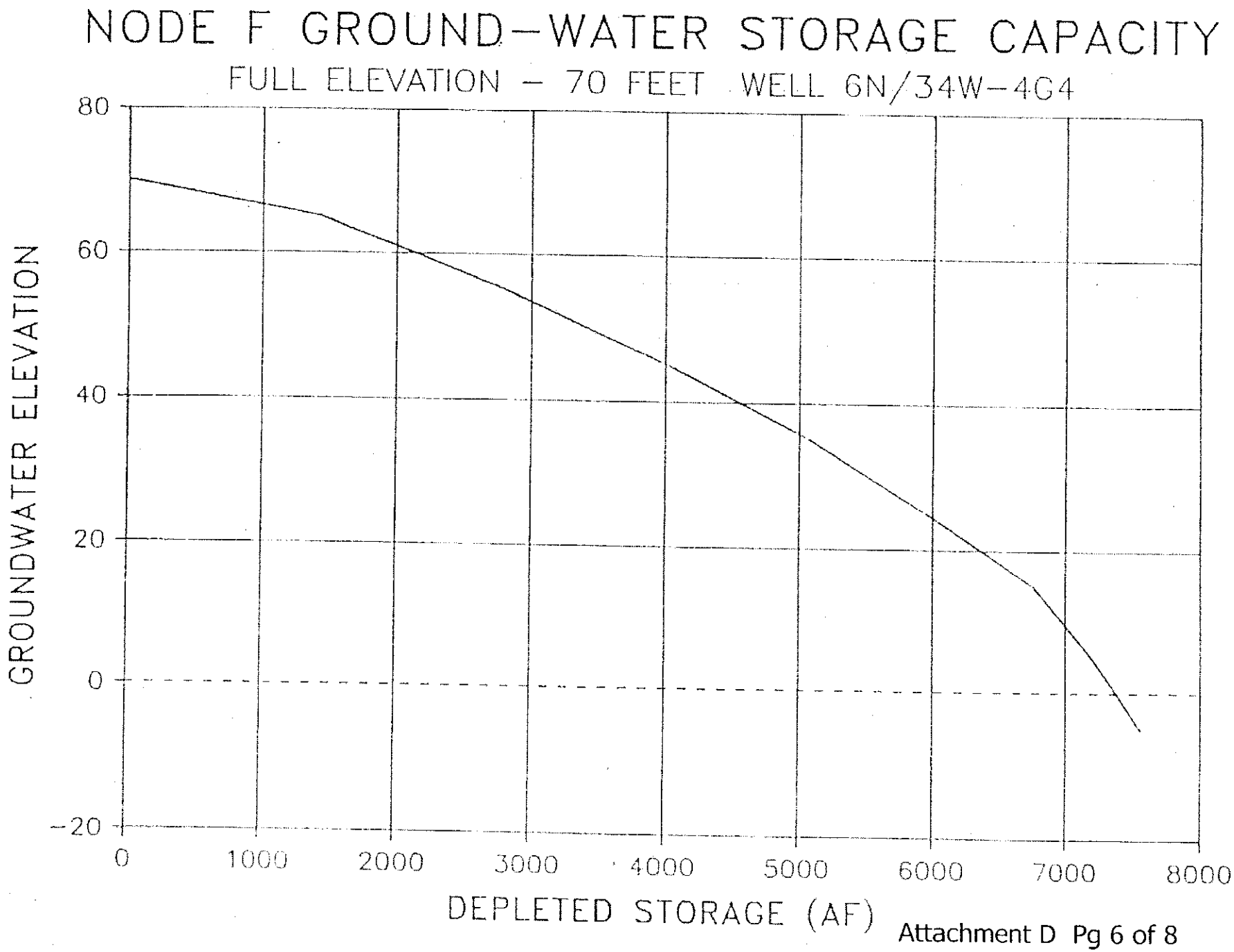
FULL ELEVATION - 83 FEET WELL 7N/34W-26Q5



NODE E GROUND–WATER STORAGE CAPACITY

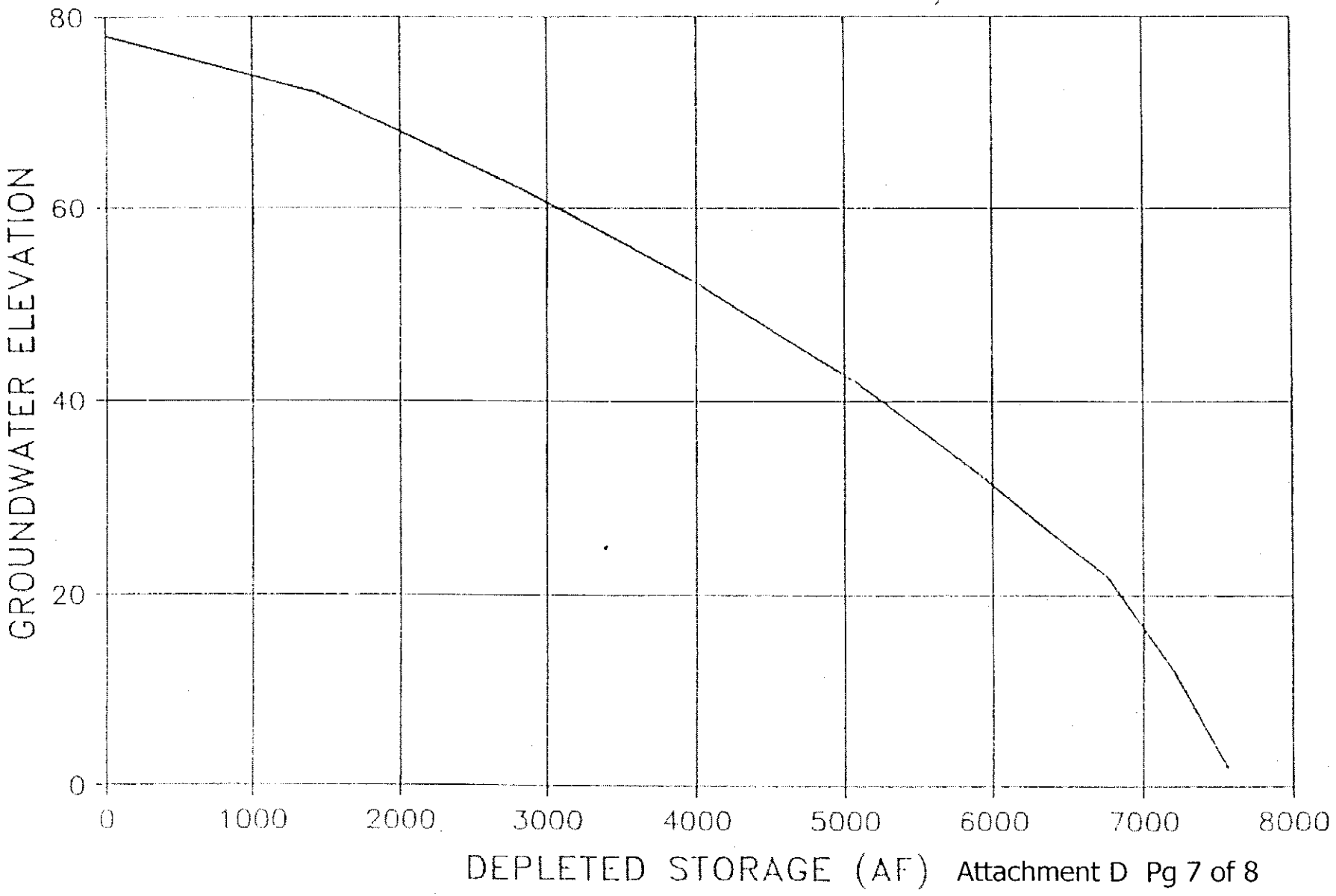
FULL ELEVATION – 81 FEET WELL 7N / 34W-25F3




NODE F GROUND-WATER STORAGE CAPACITY
FULL ELEVATION - 70 FEET WELL 6N/34W-4G4
GROUNDWATER ELEVATION
80
60
40
20
0
-20
0
1000
2000
3000
4000
5000
6000
7000
8000
DEPLETED STORAGE (AF)

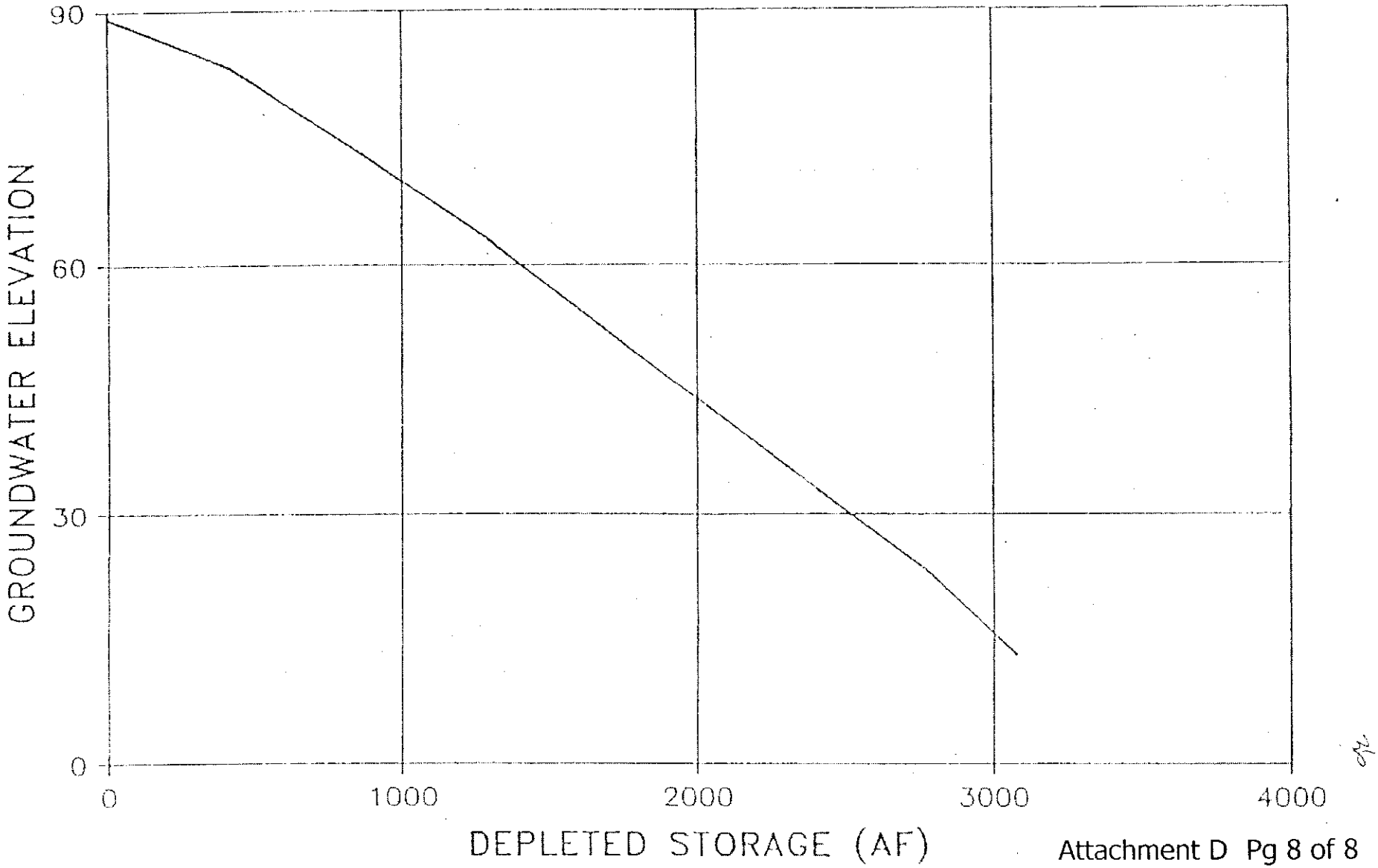
NODE G GROUND-WATER STORAGE CAPACITY

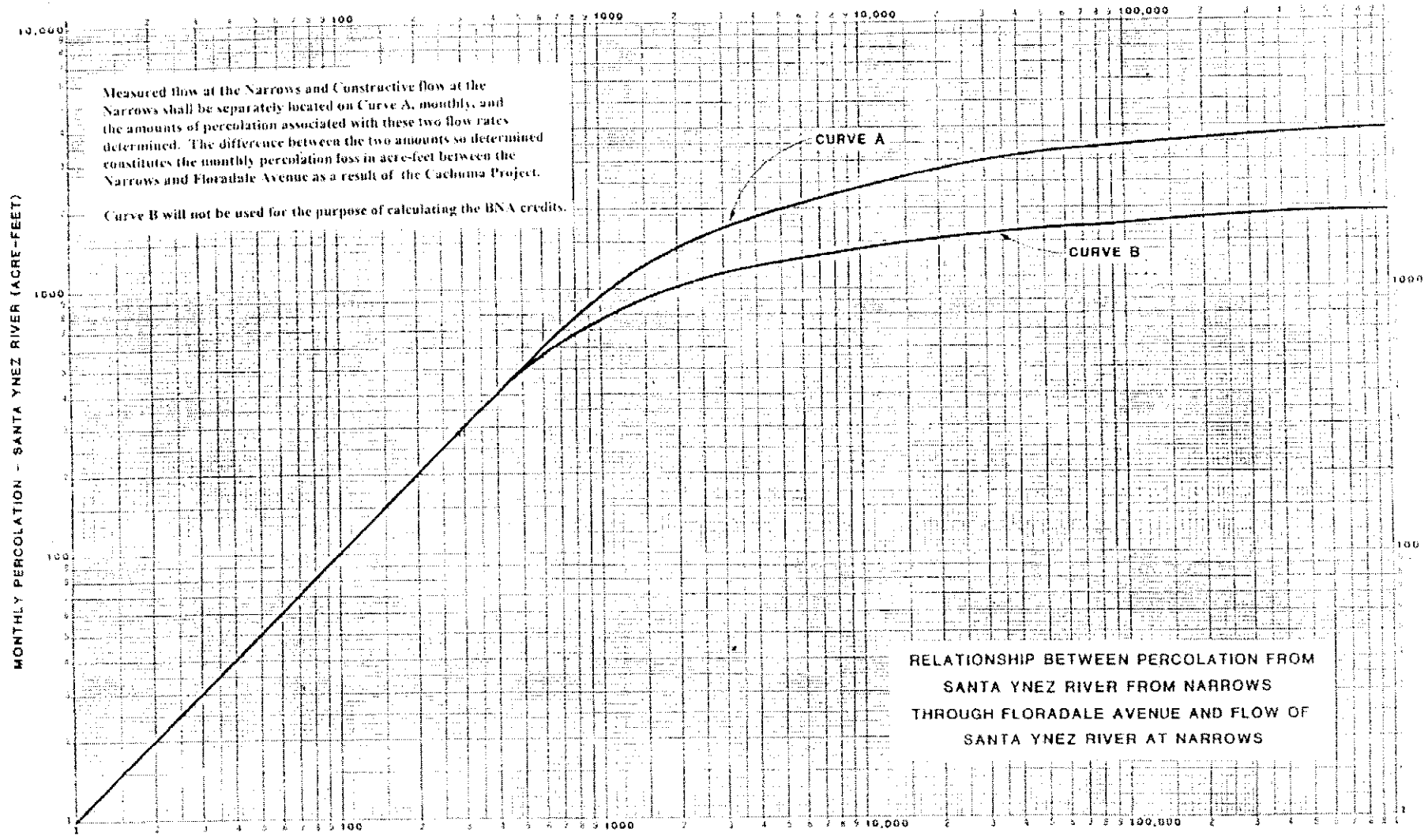
FULL ELEVATION - 78 FEET WELL 7N/34W-34R1



NODE H GROUND-WATER STORAGE CAPACITY

FULL ELEVATION - 89 FEET WELL 7N/34W-35K9





Revised USBR Exhibit 1, dated February 1, 2003, Attachment E

ATTACHMENT F

PROCEDURES FOR CONJUNCTIVE OPERATION OF BELOW NARROWS ACCOUNT

1. With respect to calculation of Below Narrows Account (BNA) credits as provided at Paragraph 2.2 of Condition 5 in WR 89-18, BNA credits shall be computed using the Upper Curve (Curve A) at all times and the credits are accrued to the BNA. (Curve A (Upper Curve) and Curve B (Lower Curve) herein referred to are depicted in USBR Exhibit 1, Attachment E, dated December 1, 1988, referenced in said Paragraph 2.2.)

2. When the accumulated flow at the Narrows at the beginning of a month exceeds 50,000 acre-feet for that Water Year (October 1 through September 30), the use of the Lower Curve (Curve B) is triggered for the purpose herein provided. The difference in the credit amount between the Upper and Lower Curves will be calculated in that month and each subsequent month in that Water Year and is referred to as the "Upper Curve Water" ("UCW").

3. Cachuma Member Units shall accumulate a drought water credit equal to one-half of the UCW, except as provided in Paragraph 6. Such accumulated credits shall be called the Accumulated Drought Water Credit (ADWC) and shall not exceed a total of 3,200 acre-feet.

4. The ADWC shall be reduced proportionately when there is a spill reduction in the Below Narrows Account as provided in Paragraph 2.7 of Condition 5 in WR 89-18.

5. When the storage level in Lake Cachuma is less than 100,000 acre-feet (elevation 714.00 feet[1] m.s.l.), any BNA water in Lake Cachuma up to the ADWC shall be held and made available to the Cachuma Member Units if and when they so notify USBR while the reservoir remains below the 100,000 acre-feet (elevation 714.00[1] foot m.s.l.) level for the purpose of reducing Project shortages. To the extent such BNA water is used to reduce Project shortages, the ADWC shall be reduced .

6. If the BNA water in the Lake is less than the ADWC when the storage level in Lake Cachuma is less than 100,000 acre-feet (elevation 714.00 feet m.s.l.), one-half of BNA credits created while the Lake remains below the 100,000 acre-feet (elevation 714.00[1] feet m.s.l.) level shall be held and made available to the Cachuma Member Units up to the ADWC and consistent with the provisions of Paragraph 5.

7. Upon the effective date of Paragraph 1.3 of the Settlement Agreement, an amount equal to 1,500 acre-feet of the BNA water shall be credited to the Cachuma Member Units as the initial ADWC. After the effective date of Paragraph 1.3 of the Settlement Agreement, and prior to the occurrence of the first spill from Lake Cachuma the initial ADWC shall be reduced to the extent UCW is accumulated in the ADWC pursuant to Paragraph 3. In any event, with the occurrence of such first spill after the effective date of Paragraph 1.3 of the Settlement Agreement, the amount remaining in the initial ADWC shall be reduced to zero.

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1 Lake Cachuma bathymetric survey of year 2000.

Attachment G

USBR Map of the "Ground Water Observation Wells and Stream Gaging Stations" Water Year 2002

A copy of this map will be provided upon request.

ATTACHMENT H

Correlation of Flow at the Narrows to Live Stream Conditions Between the Narrows and Floradale Avenue

The Santa Ynez River flow measured at the USGS gage at the Narrows is utilized to determine whether a live stream condition should exist between the Narrows and Floradale Avenue. A live stream between the Narrows and Floradale Avenue means that there would have been a continuous surface flow from the Narrows through Floradale Avenue, with no less than three cfs flowing at V Street (formerly 13th street), which is considered to be the equivalent to one cfs flow at Floradale Avenue.

The measured flows at the Narrows is averaged over 24 hours representing the daily flow. The correlation of the measured flow at the Narrows to the live stream condition between the Narrows and Floradale Avenue for each day is set forth in the attached tabulation. The criteria for determination of existence or non-existence of the live stream condition in Santa Ynez River between the Narrows and Floradale Avenue for each day are based on: (1) the daily flow measured at the Narrows; (2) the accumulated daily flows from October 1 through the preceding day measured at the Narrows; and (3) the accumulated daily flows for the preceding ten (10) days measured at the Narrows.

When water releases are made for maintenance of habitat, adaptive management and passage flows in the Santa Ynez River ("fish water releases") and there is a visible stream of water flowing on the surface of the Santa Ynez River bed at the San Lucas Bridge (river mile 45.7), at the Mission Bridge near Solvang (river mile 38), at U. S. Highway 101 Bridge near Buellton (river mile 34.31), at the Santa Rosa damsite (river mile 25.3) and at Robinson Bridge near Lompoc (river mile 12.9), the flow measured at the Narrows for the current day is reduced by: (i) an amount equal to one half of fish water released from Lake Cachuma during the same day or (ii) the amount of flow measured near the Mission Bridge (Solvang) during the same day, whichever is less. If the adjusted measured flow at the Narrows for the current day is less than zero, it is deemed to be zero. The adjusted daily flow measured at the Narrows is used as the measured flow at the Narrows for the current day in the attached tabulation. The accumulated daily flows from October 1 through the preceding day measured at the Narrows and the accumulated daily flows for the preceding ten (10) days measured at the Narrows are not adjusted for the fish water releases and they are based on measured flows at the Narrows. The adjustment for the fish water releases provided in this paragraph is not applicable if there is a spill from Lake Cachuma during the current day.

Criteria for Determination of live Stream Condition
in the Santa Ynez River Between the Narrows and Floradale Avenue

Measured flow at the Narrows for current day is:	Accumulated daily flows at the Narrows from October 1 through preceding day is:	Accumulated daily flows at the Narrows for preceding ten (10) days is:	Condition of Santa Ynez River between the Narrows and Floradale Avenue for current day is:
15 cfs or less	not applicable	not applicable	no live stream
between 15 and 20 cfs	2,000 cfs or less	not applicable	no live stream
between 20 and 50 cfs	2,000 cfs or less	200 cfs or less	no live stream
between 20 and 50 cfs	2,000 cfs or less	in excess of 200 cfs	live stream
between 15 and 50 cfs	In excess of 2,000 cfs	not applicable	live stream
in excess of 50 cfs	not applicable	not applicable	live stream