848 STAR GROUP

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MARCH. 2. 1983

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STAR GROUP PROPERTY

Gold Hill District
Storey County, Nevada

Continuing Analysis
GEOLOGICAL

David LeCount Evans
March 2, 1983

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST

Foreword:

Submitted to owners on June 26, 1982 was our report covering the Star Group. The property was considered favorably and exploratory drilling, preceeded by some geophysical studies, was recommended.

Prepared for personal files was a February 1, 1983 memorandum, ("Further Analysis") with copies provided owners. The writer, continuing with his appraisal of this very interesting area, added to his conclusions with a series of notes, accompanied by improved maps and cross sections.

An opening statement merits repeating, to wit:

> " Probably the June study's most contentious proposals were (1) the introduction of two overthrust faults to the regional structural picture; the one following Crown Point ravine and the second, crossing the region of concern, proceeding from the Imperial pit area and past the footwall of the Belcher mine; and (2) the continuation to the west of the Comstock major-structure (long accepted as a normal fault) by the proposed Crown Point structure, a thrust fault."

Purposes were outlined as follows:

> " This up-dating memorandum is submitted not for purposes of reneging on the above, but to further explore earlier suggestions, using the same field observations, taking full advantage of P.C.Calkin's geological surface-map (1944), and backing the reasoning with additional Star Group sections, as well as, Comstock sections with which to compare the two areas.

A copy of the original June-1982 report accompanies this second "continuing analysis." No copy of the February 1 effort is included, since its content is fully repeated herein.

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Urged is reference to the original report which, with its standard headings, provides Location, Conditions, Title, History of District, Geology of the Comstock and Star areas, Samples, Resume, et cetera.

Conclusions and Recommendations are reconsidered at the end of this up-dated analysis.

Supporting Illustrations:

Plates I

Plates I and I-b (Comstock area) provide the location of the location of the Star block, the distribution of major structures, and an index of all cross sections

Plate I-c (regional) shows the position of the Comstock area with respect to bordering regional geology, major petrologic units, and Tertiary volcanic members, bleached and otherwise affected by intense alteration. Formations are shown as follows:

Color	Member	Geol. Period	MYBP	Symbol
Blue	Meta-sediments	Triassic	207	St
Olive Green	Meta-volcanics	Triassic	207	VOL
Lavender	Granite intrusives	U. Cretaceous	110	Kgd
Uncolored	Hartford Hill flows	L. Miocene	22.7	Tr
Ochre	Alta & Kate Peak altered volcanics	M. Miocene & U. Miocene	16.5 12.49	Ta TKa
Pink	Kate Peak granodiorites	U. Miocene-L. Pliocene	12.49 12.2?	TKa TKi
Purple	Mt. Davidson granodiorite	Late Tertiary	?	Tgd
Uncolored	Mineralization	U. Miocene	12.2	Occidental & Comstock?

Plate I-d, the Star Group area enlarged to 400 scale, shows thrust fault interpretation, an indicated mineralized trend meriting exploration, and assay values provided by owners.

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Plates II Through VI

Plates consist of projections of major structures and postulated mineralization to various data (levels). All projections are developed from cross sections.

Plates VII Through X

Provided are cross sections through Comstock loci of exceptional Bonanza-type production, namely: VII - - - the Con. Virginia-California, VIII - - - the Hale-Norcross, IX - - - the Yellow Jacket and X - - - the Belcher.

Plates XI Through XV

Also furnished are sections through the Star Group, starting WITH Section H (closest to the Belcher) and continuing west to Section L, at the western edge of the block.

Comments which follow are listed under standard headings, as additions to, like categories, listed in the June 1982 report.

Further Considerations by
Standard Headings:

Geology

One:

Note that in this analysis the Comstock-Crown Point curving trend remains, as shown, on Plate 7 of the June report, but that our second thrust has been moved slightly south, on the basis of Triassic distribution and structures shown on Calkins map.

Two:

In June 1982, under Mineralization on page 9, reference was made to the Sutro unit of the Alta, as follows:

> "Except for scattered clusters of bright red Jasper, accompanied by some white opaque chert, the unit is without mineralization or alteration."

These clusters, some as large piles, occuring at the ridge crest on Volcano and Moonlight claims are also shown on Section B (Plate XIII). Anomalous gray opaque cherts occur, down slope, in talus to just above the "pit" on Section B, to within about 1500 feet of outcrops of Meta-volcanics, of Triassic age, moving up slope.

Red jasper and other cherts have been reported as characteristic of much of the Triassic-Lower Jurassic of North central Nevada (Carlin et cetera). Suggesting that these chert masses are Triassic would provide the basis for the flat 20° thrust interpretation, from the Tyler-Globe area, shown on submitted Plates XI through XV.

Three:

References to "footwall" and "hanging wall" are rather constant but not too specific in Comstock literature. However, the quotes, listed below, are rather definite and have been used in support of personal interpretations on Comstock sections and projections.

Mining and Scientific Press (San Francisco, Sept. 30, 1871), summarizing Mr. Clarence King's (USGS) "Geological Exploration of the 40th Parallel", reports:

> "The lode is bounded by two walls, running north and south, which, inclining together, the western at an angle of 45° to the east, the eastern being steeper, form a V-like section. This wedge is some 20,000 feet long, 200 to 800 feet wide at surface, and 800 to 1200 feet deep. Throughout the greater part of the lode, below the junction of the two walls, explorations show no vein. But at the Hale-Norcross the contact does notoccur, the east wall curving into parallelism with the west. The great ore-channel is along the eastern fissure.

The description fits the V between Comstock structure and dip of the Bonanza, itself. It does not ~~infer~~ suggest our parallel 45° to less Comstock-type structure, of Sections VII through X.

On the other hand, according to Carl Stoddard, describing the Con. Virginia (Univ. of Nevada, G amd M Series No. 49, 1950), the upper

limits were defined by what the miners described as "cap rock", as follows:

> " The base of the ore body rested in the vein matter of the Comstock lode, approximately 250 feet at right angles to the footwall and 500 feet below the cap rock."
>
> " The position of the so-called 'cap-rock', conforms to a plane, having a strike parallel to the lode, and inclined to the east at an angle of 32°. It probably marks the position of a fault."

Four:

Regarding the normal versus thrusting interpretations, Vincent Gianella (1936) suggested two periods of faulting, ie: a pre-mineral Comstock fault closely followed by the Lode, and then a much-later post mineral "Comstock-Davidson fault." Considering the Silver City branch south from the Belcher area, such he correlated with the Pre-Mineral fault. The main Comstock fault and a branch to the southwest, past American Flat, he believed, experienced both periods of movement.

With reference to attached I-b, Stoddard's map (1950) shows a solid line for the Comstock-Davidson fault to the Baltimore mine, from whence it is faintly "dashed" as a weak projection another three miles to the south before disappearing. It is from ~~this same~~ the Baltimore that this analysis proposes a continuation to the west, using other structure shown by Calkins, as well as, the distribution of Triassic meta-volcanics.

Samples

Samples, listed on pages 9 through 12 of the June 1982 report, lack specific locations in the case of the Star Group series. Owners' efforts have now provided sample locations. For those samples pertinent to actual mineralization values are shown on Map I-d.

With reference to Midnight Star, an average of 0.34 oz/T Au and 0.36 Oz/T Ag (from 9 samples) is significant, in view of the writer's

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0.54 oz/T Au and 0.80 Oz/T analysis for a series of evenly spaced, vertical cuts.

Concerning the Bright Star area (2800 feet southeast of the Midnight Star) values are low (0.1 ounces gold)) but equally significant, since the tunnel, serviced by the air-shaft, had reported, scattered $60 per ton values ($20 gold and $1 silver).

The 2800 feet of interval between "shows", theoretically, just at or slightly beneath the overiding thrust plate, is considered an exploration "must"; as is the indicated westerly continuation through the Silver Star and its lone surface value of 0.14 Oz/T Au and 0.19 Oz/T silver.

Resume'

Purposes are not to upset basic Comstock geology, the product of many serious efforts since the 1860's.

Gianella's petrology (1936) is basic, the work of an expert and invites no changes. Differences, however, in structural interpretation have always existed and this analysis proposes yet another alternative.

Gianella's classic approach is considered, in many ways, the "Bible" and is shown below as the"Gianella Time Table", as summarized by Stoddard (1950).

Comparison is provided in a parallel column by this writer's "Alternative Time Table."

Fig. 1

Alternative Time Table	Gianella Time Table
Hartford Hill Rhyolite; 23 MYBP	
(1) Middle Miocene volcanism; Alta formation; 18 to 15 MYBP.	(1) Middle Miocene volcanism before faulting; Alta formation.
(2) Davidson Diorite intrusion	(2) Davidson Diorite intrusion.
(3) Early Comstock to Silver City fault.	(3) The Comstock fault.
(4) Barren to low grade(?) quartz	(4) Barren vein quartz
(5) - - - - - - - - - - - - - - - - - -	(5) More faulting in hanging wall section (largely) veins and ore-deposits.
(6) Probable heavy erosional period	(6) Long period of erosion; bevelling with Comstock fault as escarpment.
(7) Initial Kate Peak volcanic flows 12.9 MYBP	(7) Early Pliocene, Kate Peak flows, followed by Late Pliocene Knickerbocker flows.
(8) More faulting, mainly thrusts of regional extent; possibly overlapping with Kate Peak. (see Gianella (5)).	
(9) Major mineralization, possibly associated with Kate Peak intrusives and following thrusts into inclined strain openings between thrusts, ie: East wall--a thrust. 12.2 MYBP.	
(10) Little Bonanzas may be roots of eroded Big Bonanzas.	

- - - - - - - - - - -

With reference to the above table, differences are as follows:

(1) Although agreeing that there were two periods of faulting the Gianella second period, at between Alta and Kate Peak or about 14 MYBP is as contrasted to Kate Peak time of the Alternative or 12.9 MYBP.

(2) Gianella places the major period of mineralization as between Alta and Kate Peak or about 14 MYBP, which is in contrast with the 12.2 MYBP, a product of K-AR dating. It must be remembered that absolute dating of igneous rocks and mineralization was not accepted practice in the 30's.

(3) The simple normal faulting, long accepted as standard Comstock structure, is replaced, at least, for an indicated east-hanging wall structure.

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(4) The alternative suggests a relationship between major mineralization and the Kate Peak intrusives.

(5) The alternative at (3) refers to the "Early Comstock Fault", leaving the door open for normal or thrust interpretation. Reference is made to ~~Figure 2, at the back of text.~~ Figures IX6 -IXC and XI-XC

Recapitulation:

From 1859 through 1924, Comstock production amounted to 13,526,700 tons, averaging 0.568 Oz/T gold and 13.9 Oz/T silver. 58% of the total represented high-grade (0.76 ounces gold and 18.47 ounces silver) from the Bonanza-type ore bodies. The remainder was from lower grade ores, stope fills and dumps. The period of decline (1924-1950) representing 5,055,200 tons at 0.095 Oz/T gold and 1.57 Oz/T silver represented open-pit, block caving and top-slice lower grade production.

The S15°W production trend from the Ophir to Belcher, with scattered mineralization, amounts to 10,000 feet. From the beginning the Lode presented continuous complexities which, with mining geology and mining methods, both in an early, formative period, remained only partially resolved.

The entire 10,000 feet, in plan, was explored by expensive horizontal workings and some 4000 feet of depth by three lines of shafts for the Comstock proper with some success, to the turn of the century, and dwindling to no success, thereafter. Extending the trend, southeast to Silver City, produced only small occurrences and no additonal Big-Bonanza-fype ore bodies. The same can be said for exploration along the southwest continuation along the west flank of American Flat, to the Globe-Tyler area, a trend suggested by Gianella and others.

In short, exploration since 1881, based on the premise that the normal Comstock fault, continuous from the Ophir, south to Silver City and the major ore control, would provide more Big-Bonanzas, has been without success. Now, some 100 years later, another attempt, following the

same "fairway" has been abandoned, while others move in to continue with the same type of exploration.

The above suggests a change in interpretation based on more interpretive field mapping and the recognition of structural growth, other than the long over-used normal faulting and other Basin and Range 'crutches'; and proposes interest and exploration for an area, in line with Comstock structure, providing interesting alteration and scattered surface values, which have never been tested at depth.

Much has been learned regarding the importance of thrust faults in Nevada, over the last 20 years, and a study of that wedge between the Furnace Creek-Las Vegas fault system and the Sierra Nevada front suggests an abundance of such thrusting.

The area of interest, starting 2000 feet southwest of the Belcher Mine (Belcher-Crown Point area production = $63,600,000) and continuing 7000 feet to the northwest, flanked by flat thrust faults, offers probable Comstock extension and is recommended.

Proposal:

Proposed is a program, consisting of the steps, listed below.

(1) Detailed geological mapping should be considered, and systematic soil sampling employed, where needed.

(2) Considering the 2800 feet, indicated as a possible continuous trend, strip at regular intervals dozer, removing talus and other cover, to further expose mineralization, and sample.

(3) Test the 2800 foot unit at depth by drilling angled holes from Ohir-grade road, or closer, using Down-Hole HAMMER equipment:

a- start opposite best values, working both ways (west and east) at 100' or 200' intervals; SEE PLATE XIV-B.

b- indicated is about 3000 ~~2000~~ feet of hole per section; estimated is about $10 per foot for drilling costs, alone.

c- considering the possibility of 150 feet of mineralization per hole or 300' per section, and sample every five feet, assay cost per section would be $900.

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(4) Upon completion of four sections, a review of results and consideration of next steps would become a 'must'. However, the above are only suggestions, and changes in proceedure, at any time, remains an expectancy.

(5)assaying for gold and silver should be by fire-assay, performed, preferably, by Metallurgival Laboratories of San Francisco, chemists of excellent repute.

March 2, 1983

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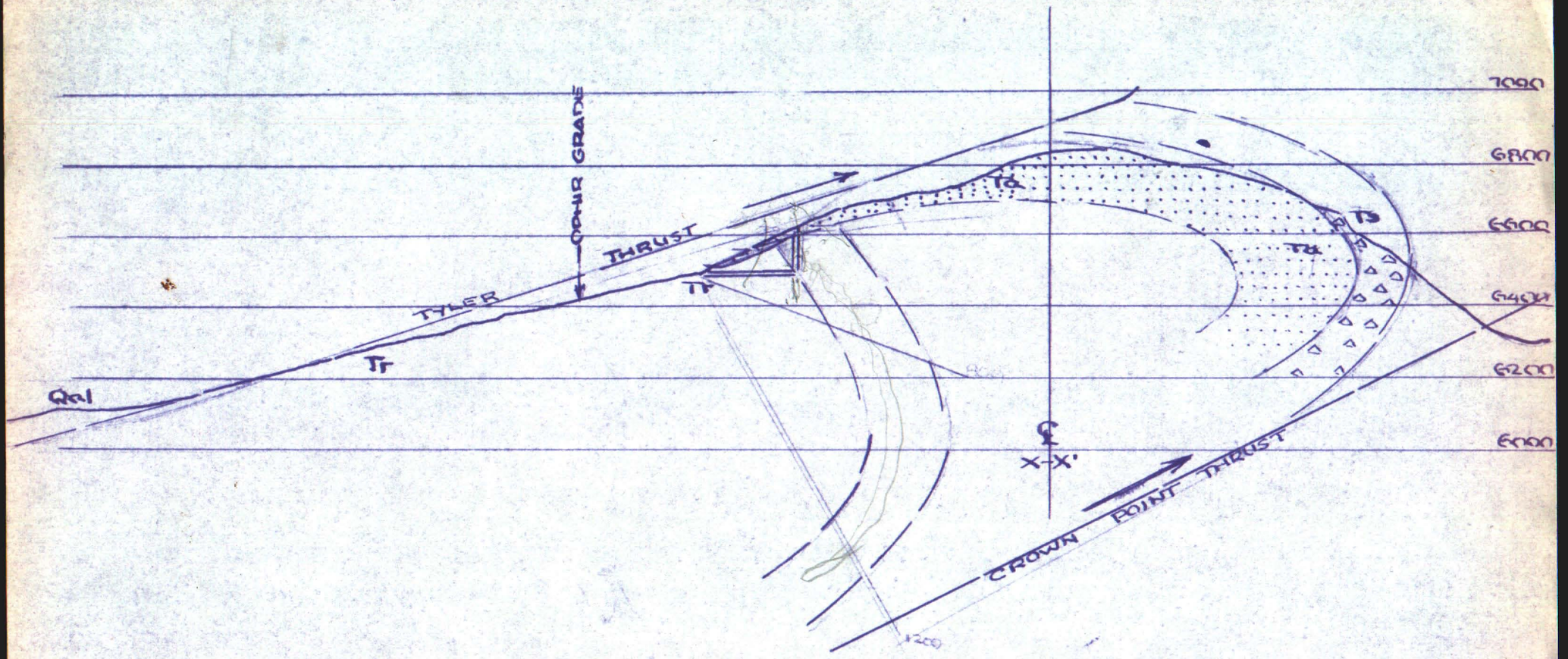


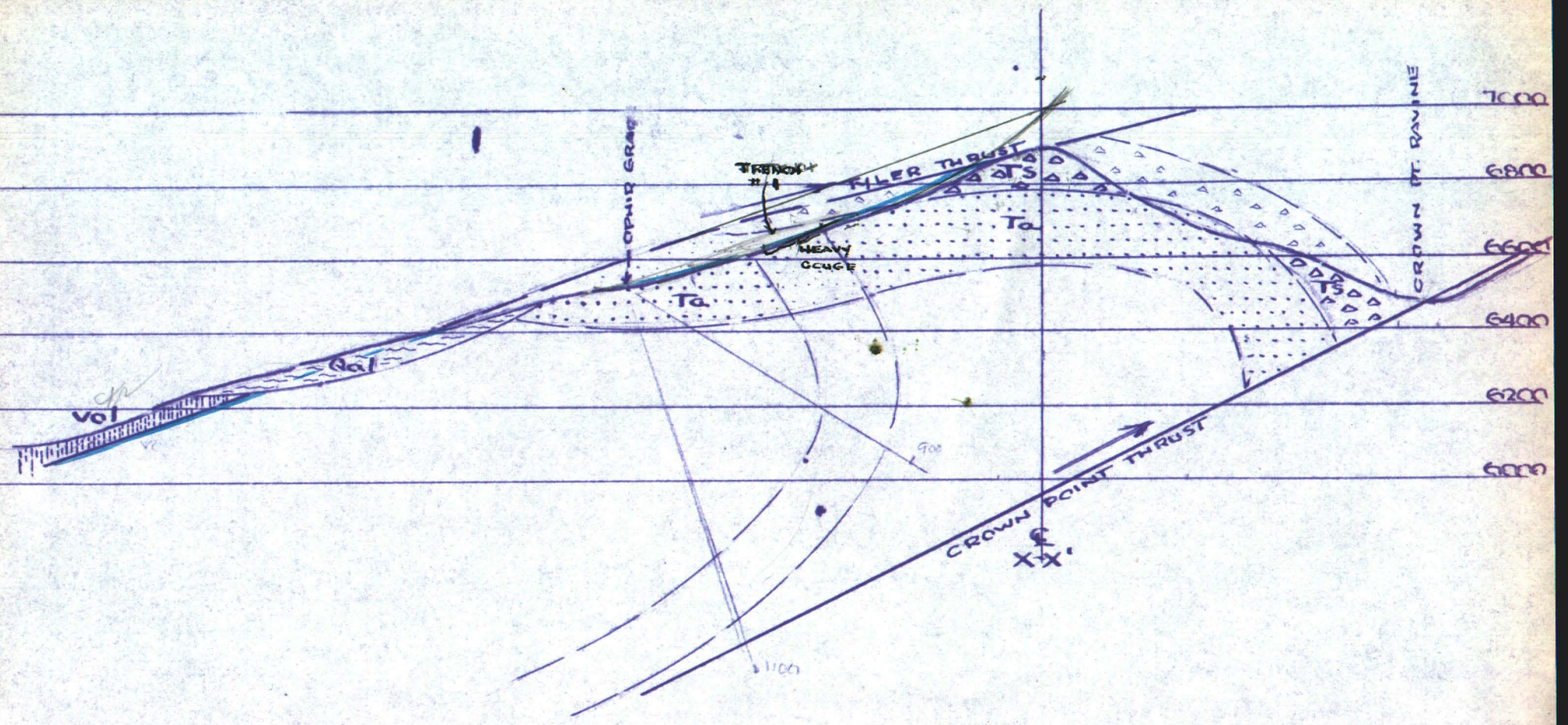
SECTION A-A'
STAR GROUP
1 IN. = 400 FT.
EXPLORATION

David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration



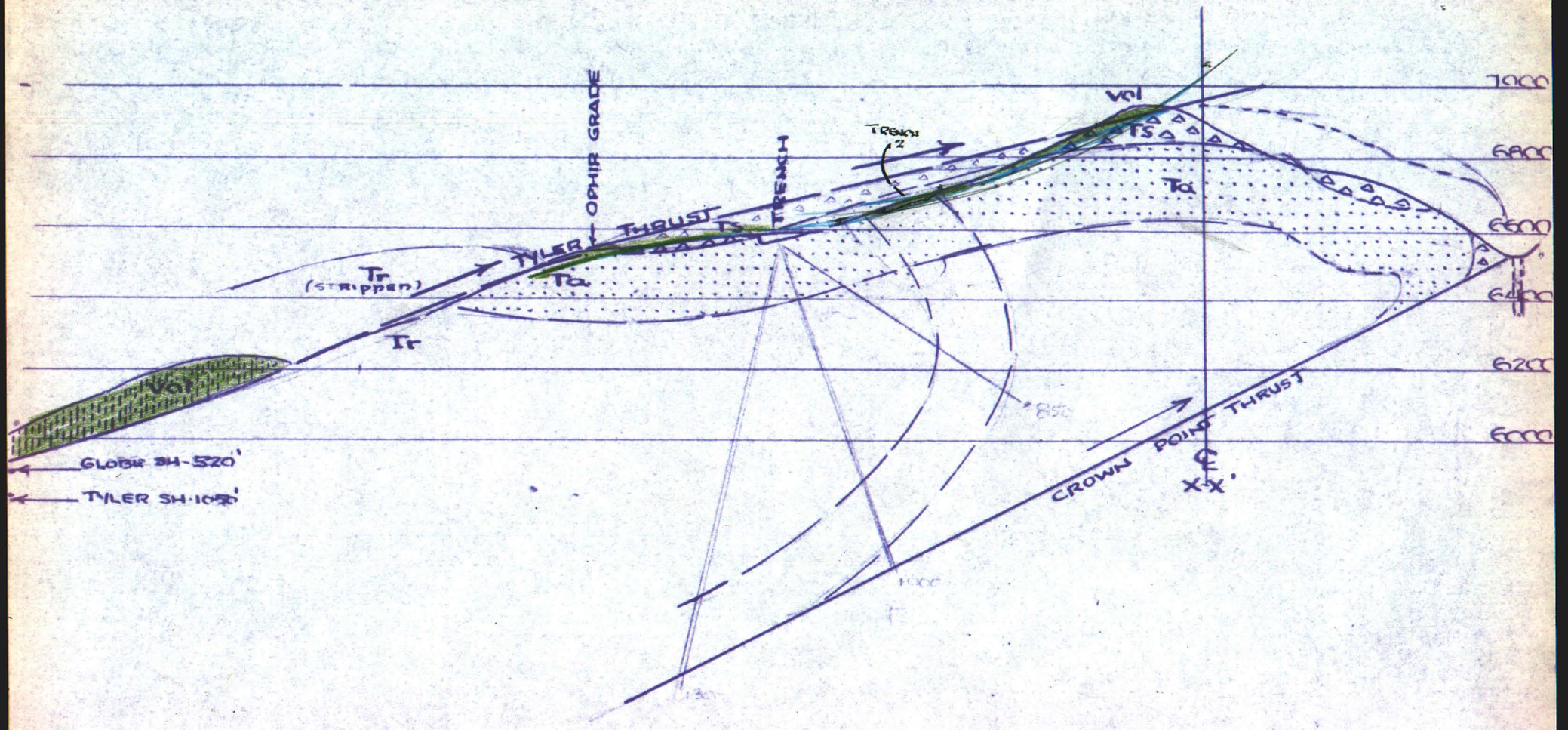
SECTION A-B
STAR GROUP
1 IN. = 400 FT.
EXPLORATION

David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration



SECTION B-B'

STAR GROUP

1 IN = 400 FT.

EXPLORATION

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Consulting Geologist
March 2, 1983

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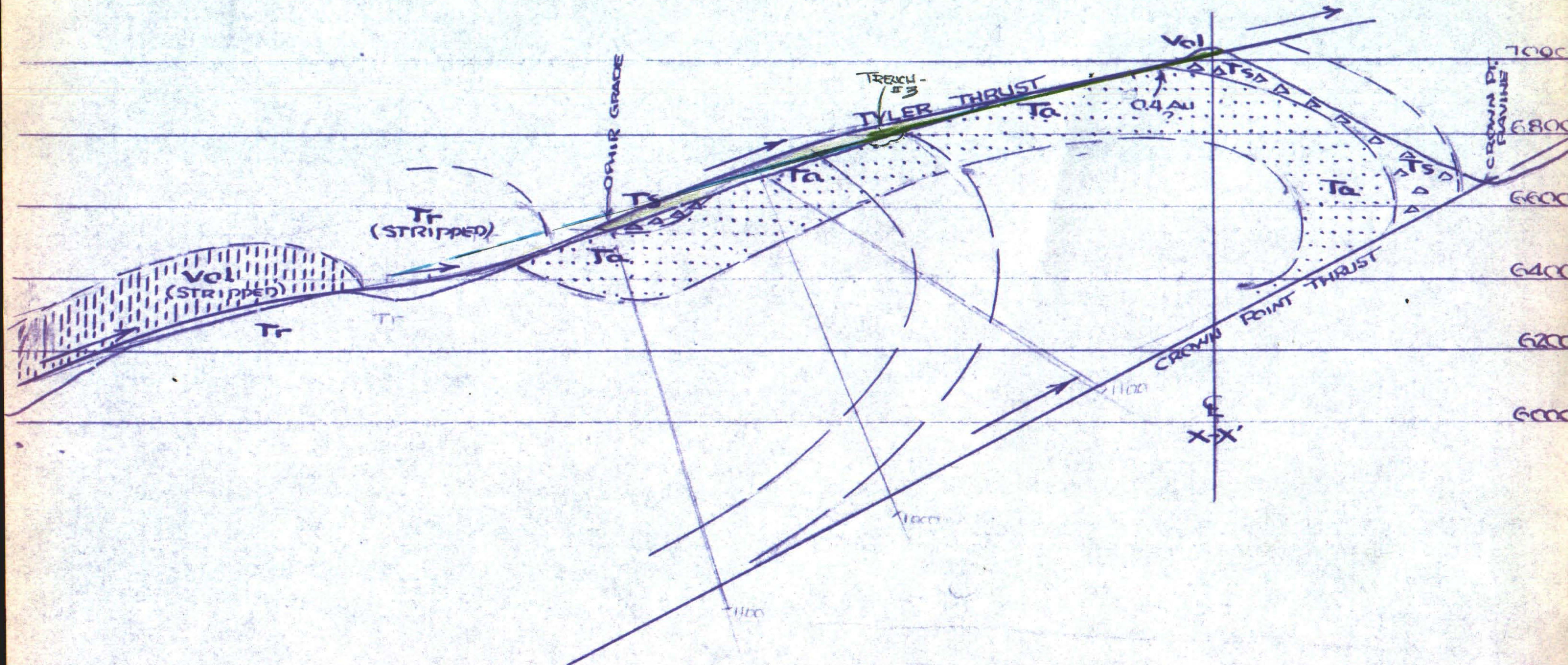
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration



SECTION C-C'
STAR GROUP
1 IN. = 400 FT.

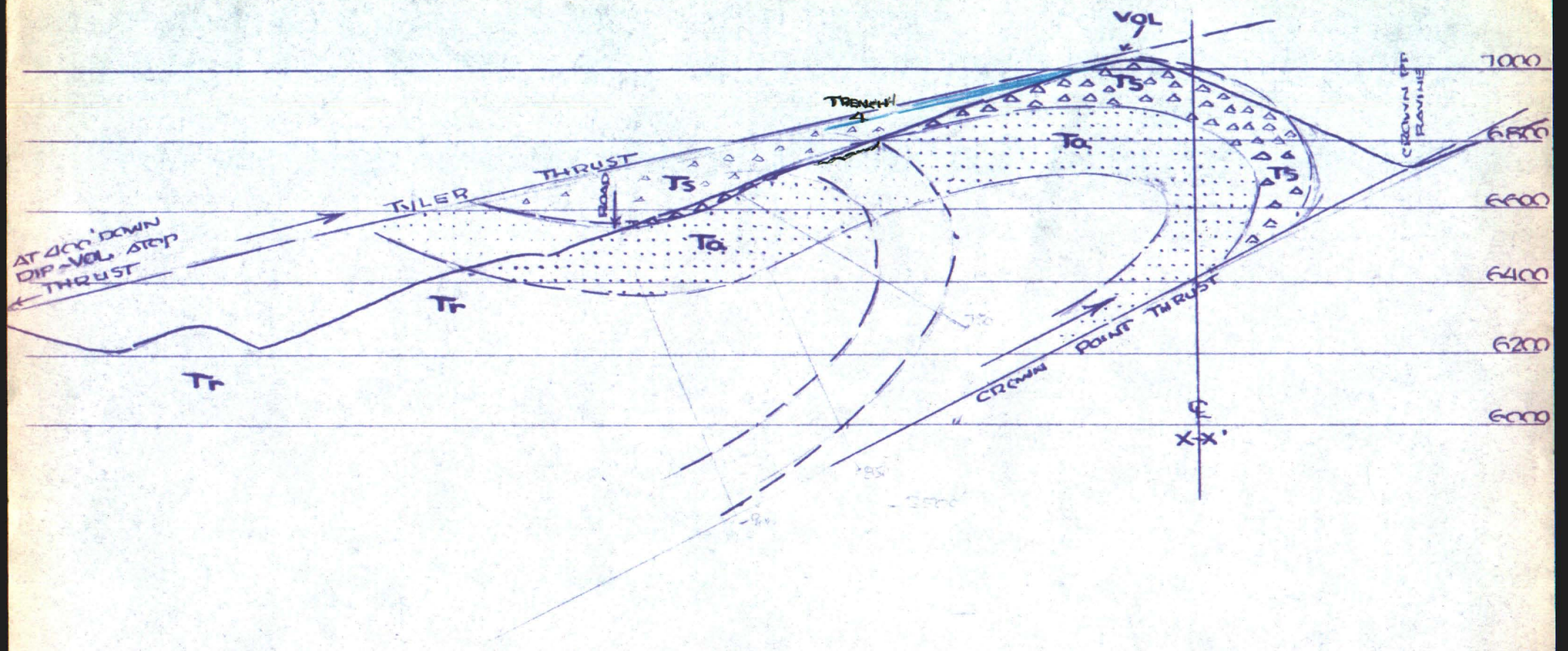
EXPLORATION

David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
<u>Storey County, Nevada</u>

<u>MAJOR STRUCTURAL CONTROLS</u>

A Consideration



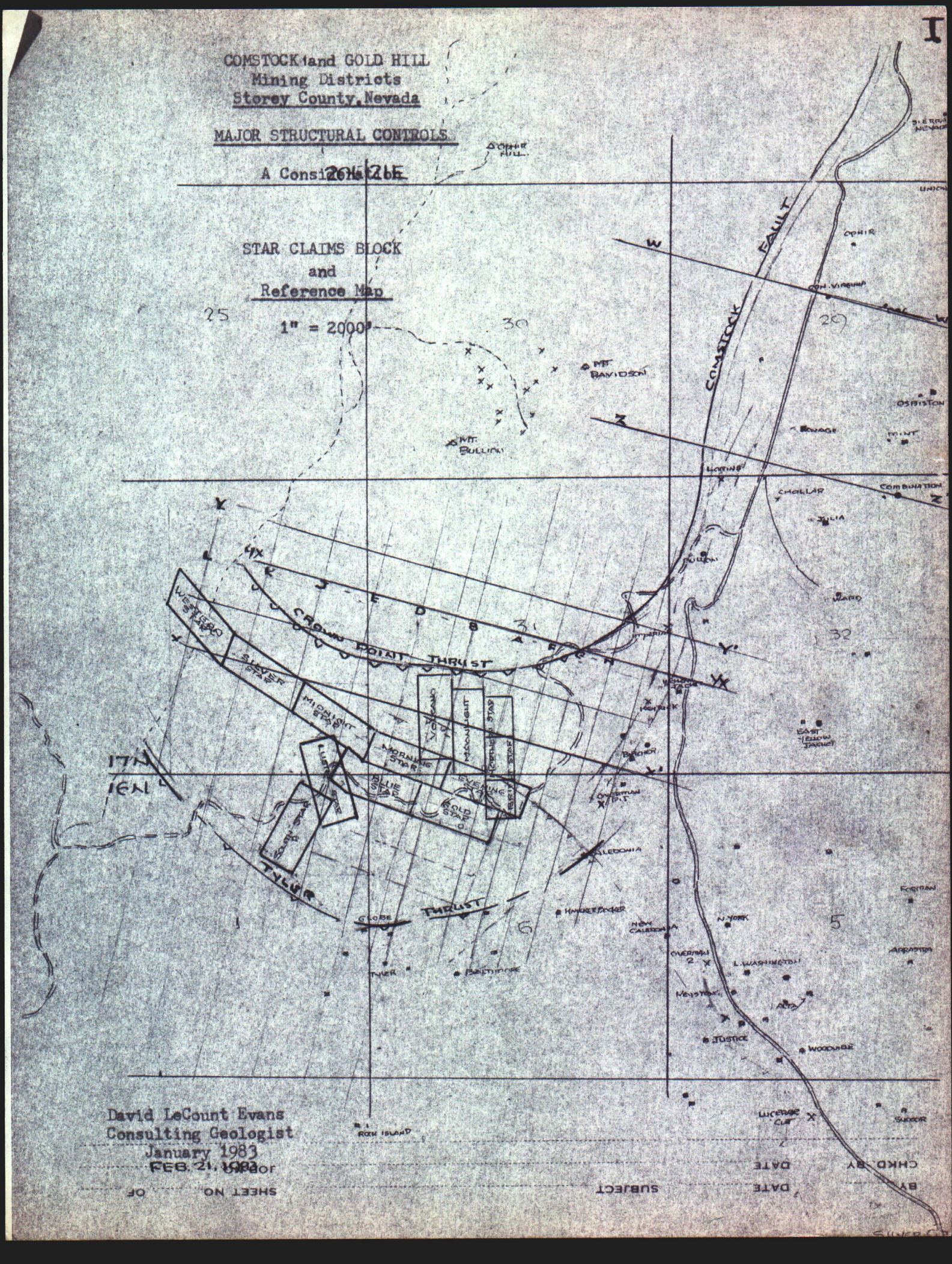
SECTION D-D'
STAR GROUP
1 IN. = 400 FT.
EXPLORATION

David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration



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January 1983
FEB. 21, 1983

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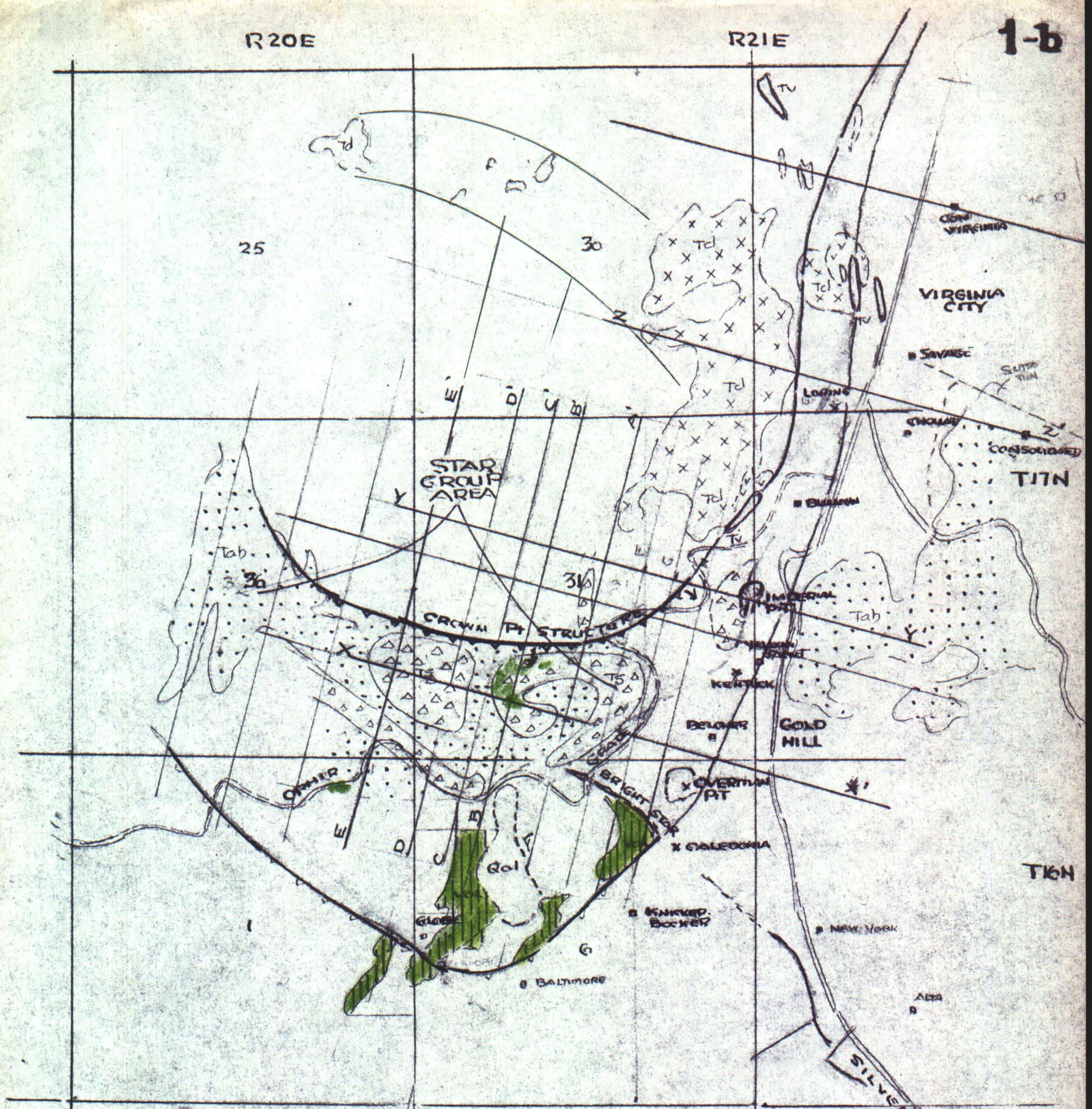

STAR GROUP

GOLD HILL MINING DIST.
STOREY CO., NEVADA

COMSTOCK AREA INDEX MAP

1 INCH = 2000 FT.

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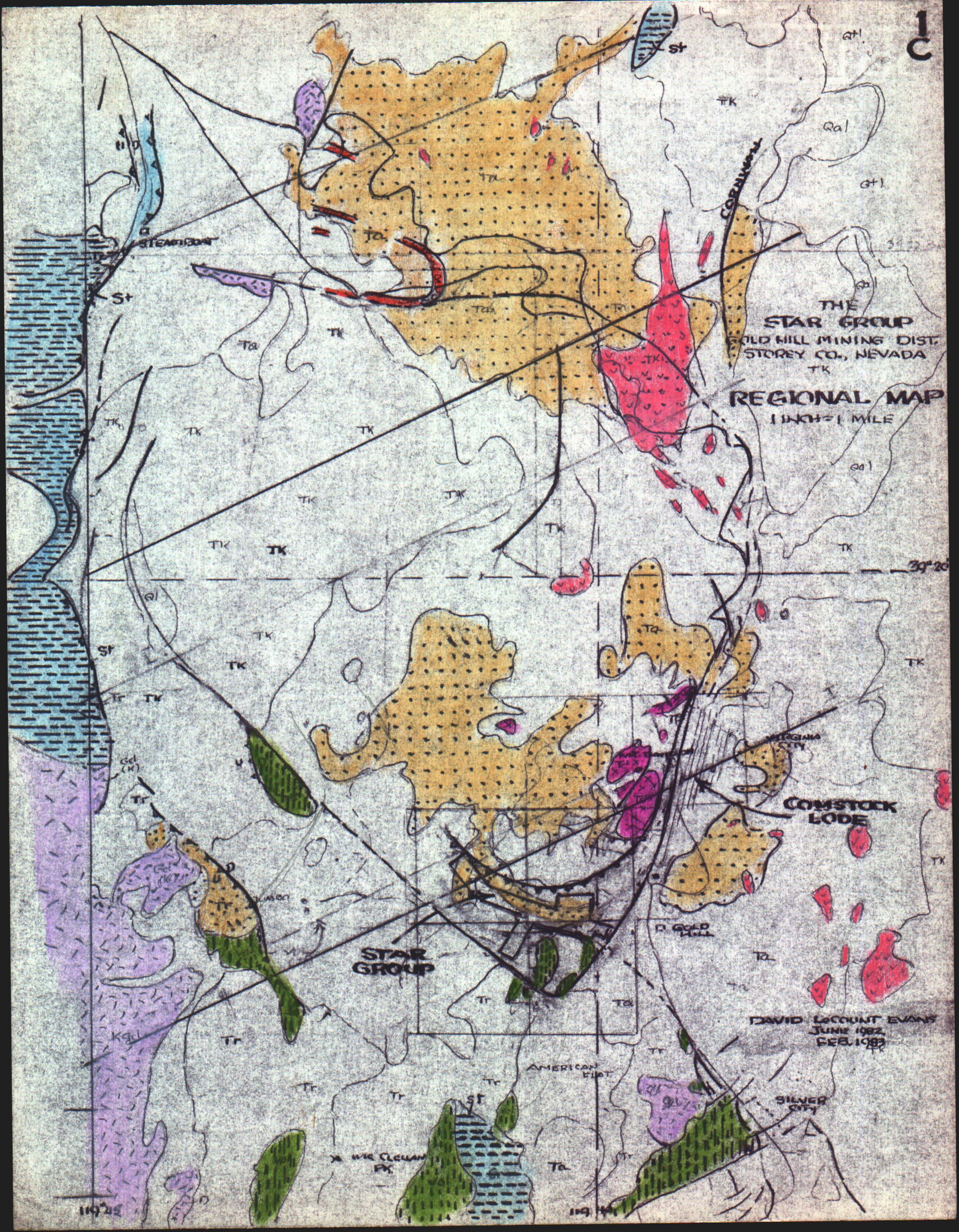
CONS. GEOL.
JUNE 1982
FEB. 1983


1C
THE
STAR GROUP
GOLD HILL MINING DIST.
STOREY CO., NEVADA
REGIONAL MAP
1 INCH = 1 MILE
STEAMBOAT
COMSTOCK
LODE
STAR
GROUP
VIRGINIA CITY
GOLD HILL
AMERICAN FLAT
SILVER CITY
DAVID LeCOUNT EVANS
JUNE 1982
FEB. 1983

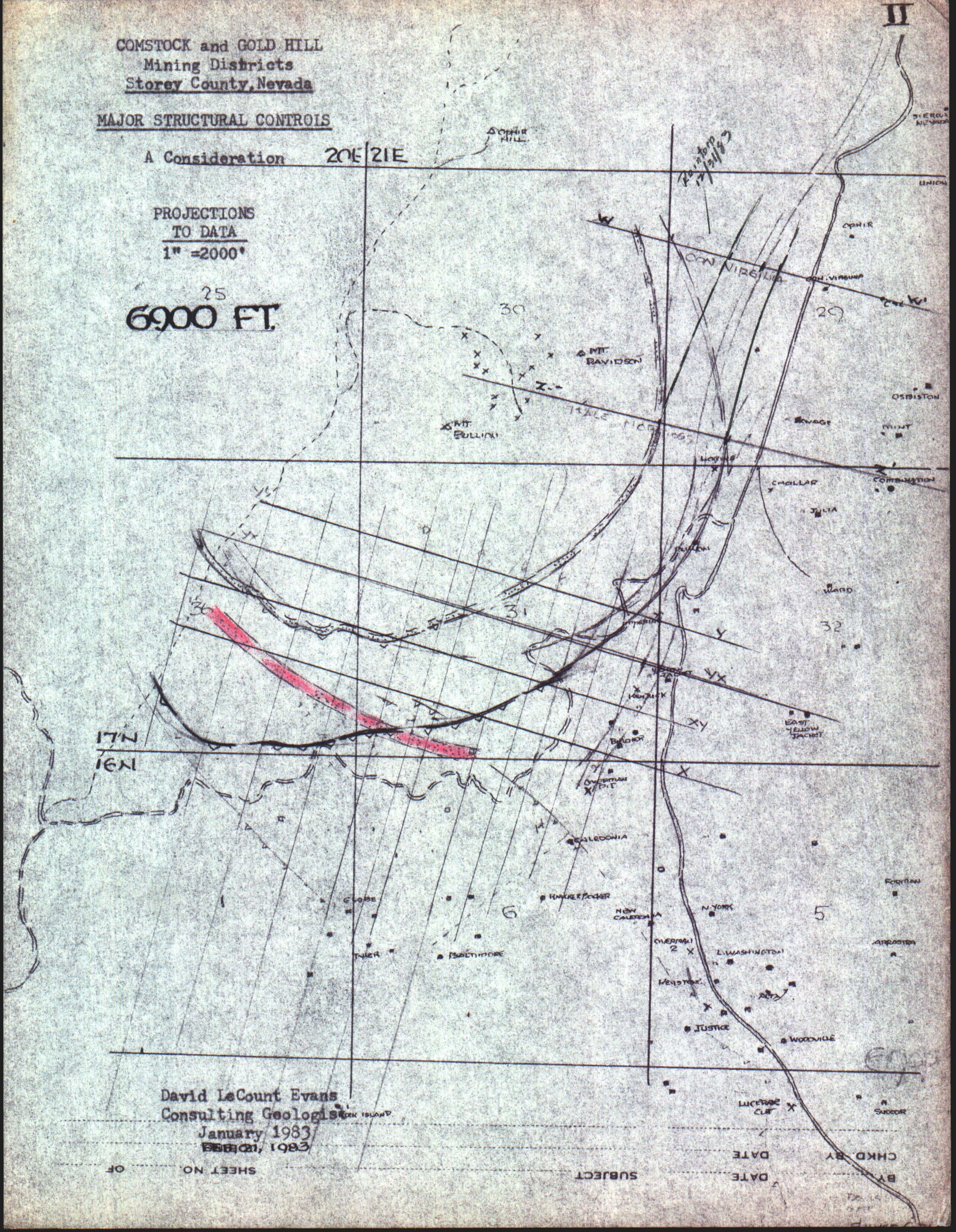
COMSTOCK and GOLD HILL Mining Districts Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS TO DATA

1" =2000'



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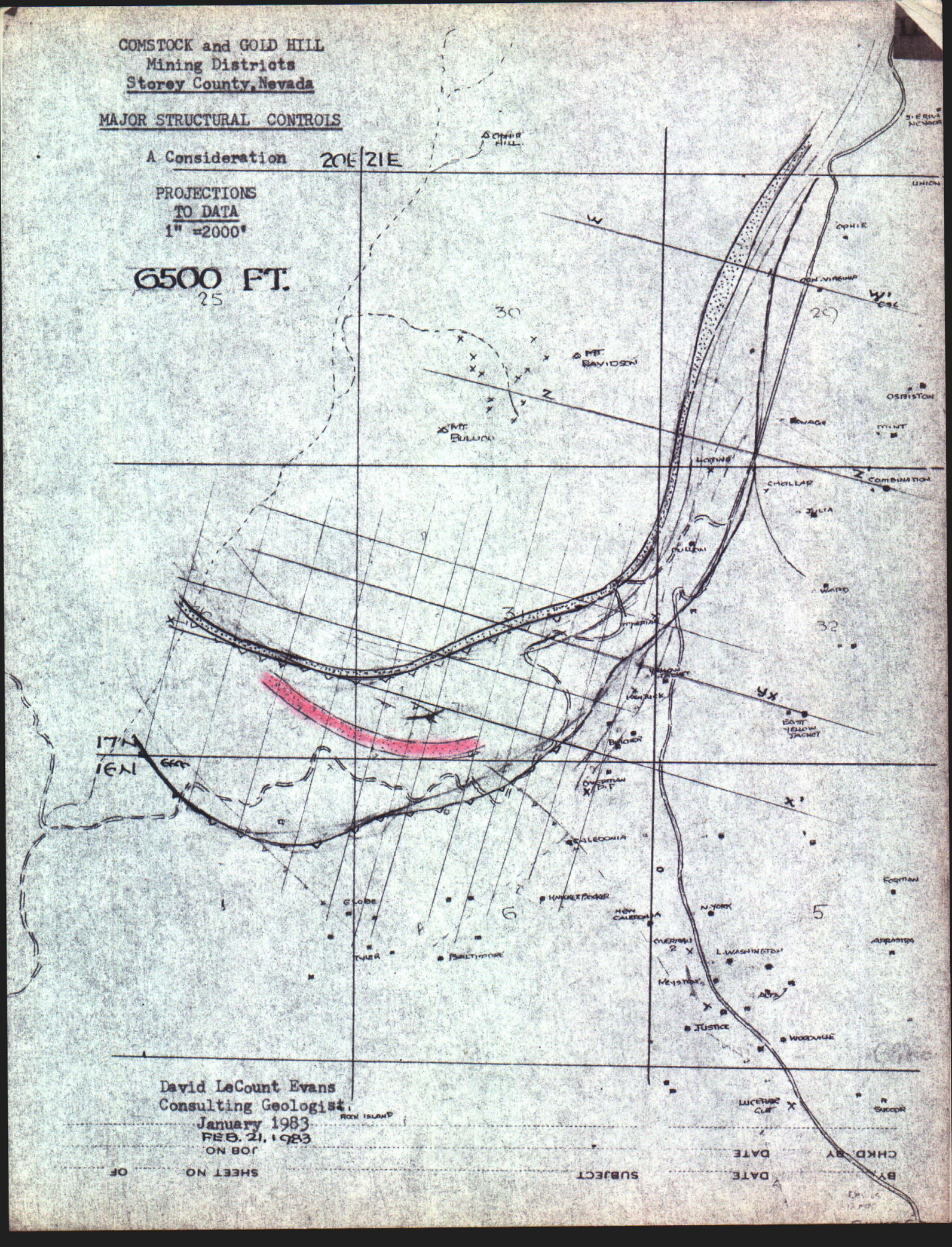
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS
TO DATA
1" =2000'

6500 FT.



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January 1983
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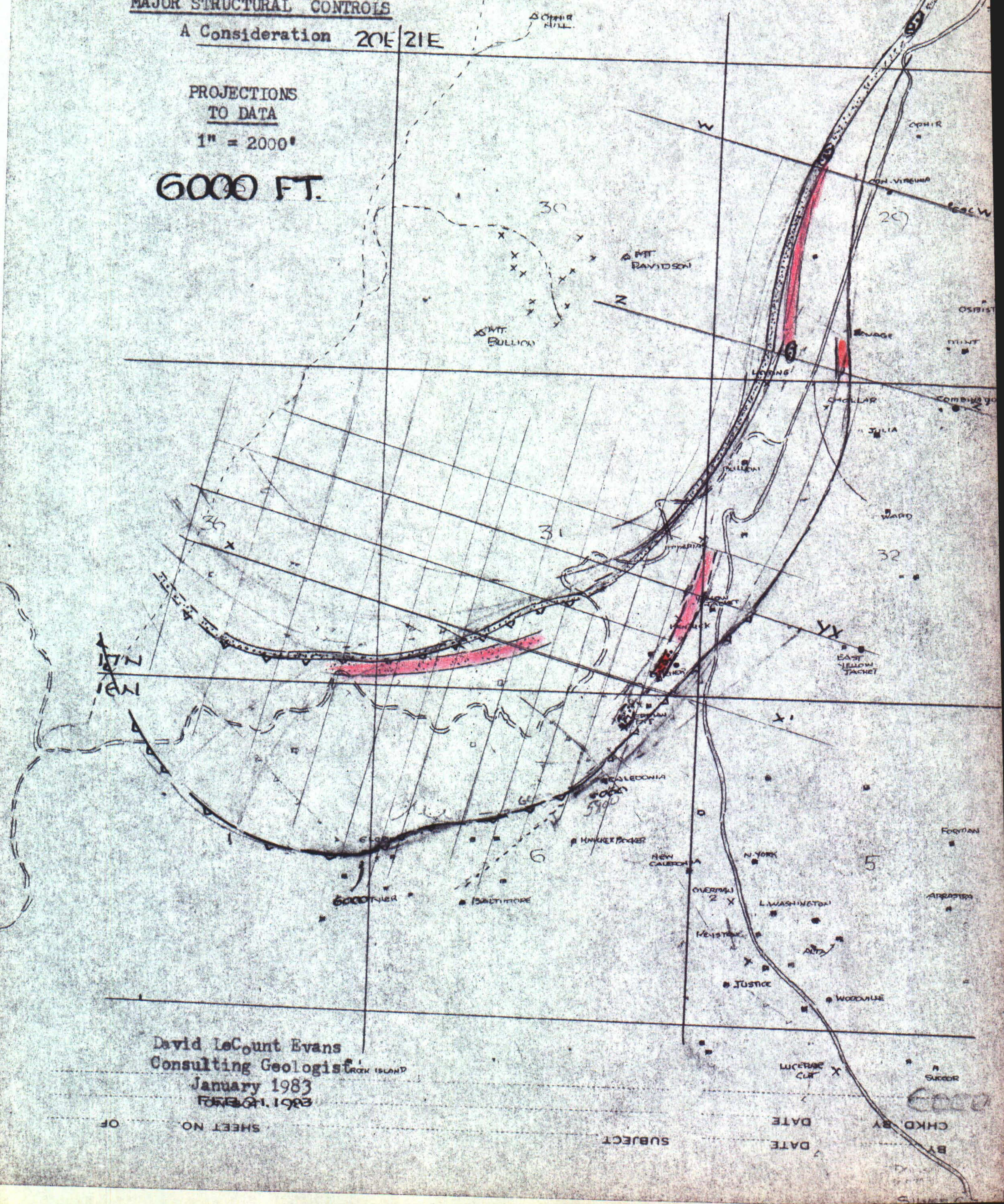
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS
TO DATA
1" = 2000'

6000 FT.



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Consulting Geologist
January 1983
FEBRUARY 1, 1983

V

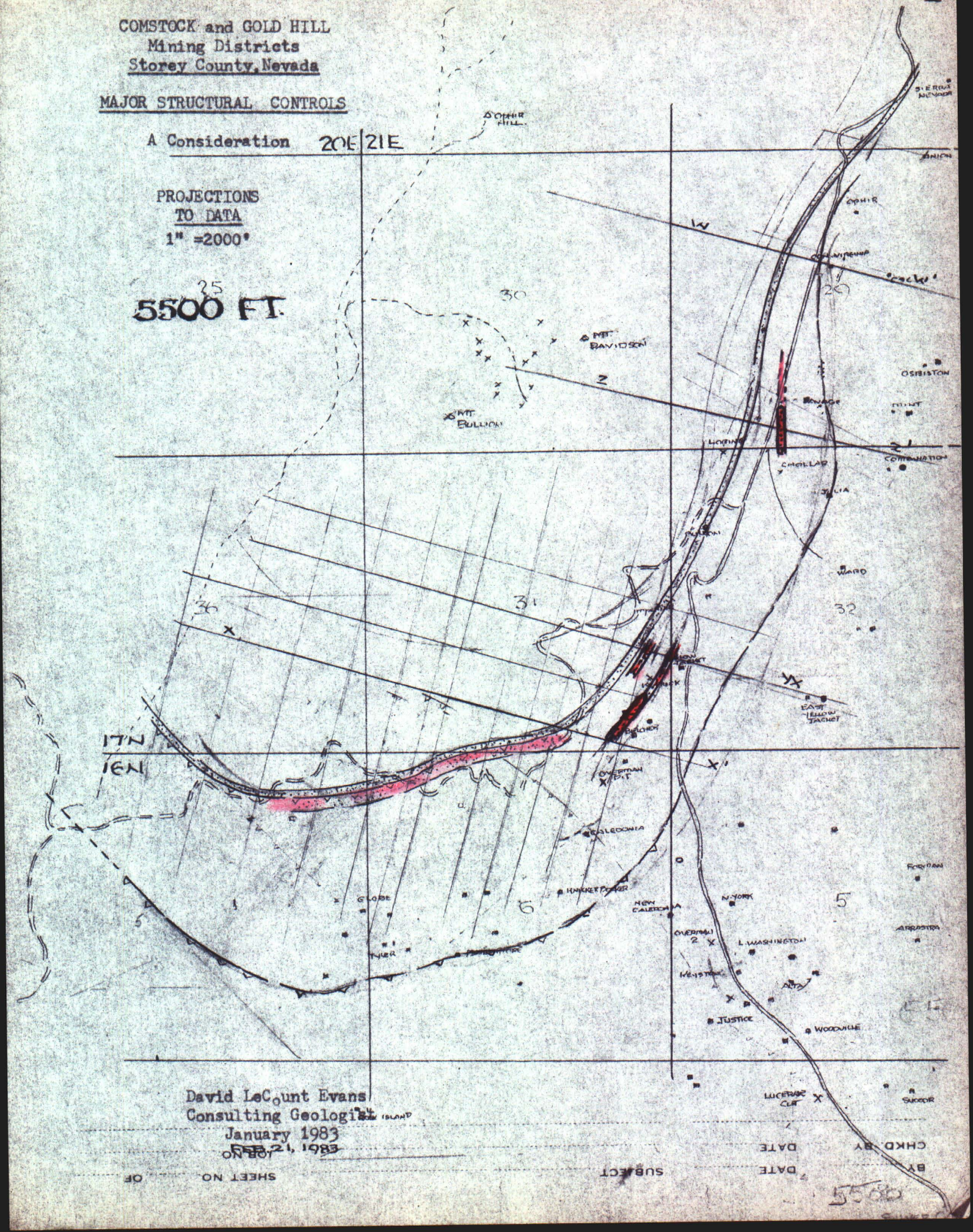
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS
TO DATA
1" =2000'

5500 FT.



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January 1983
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VI

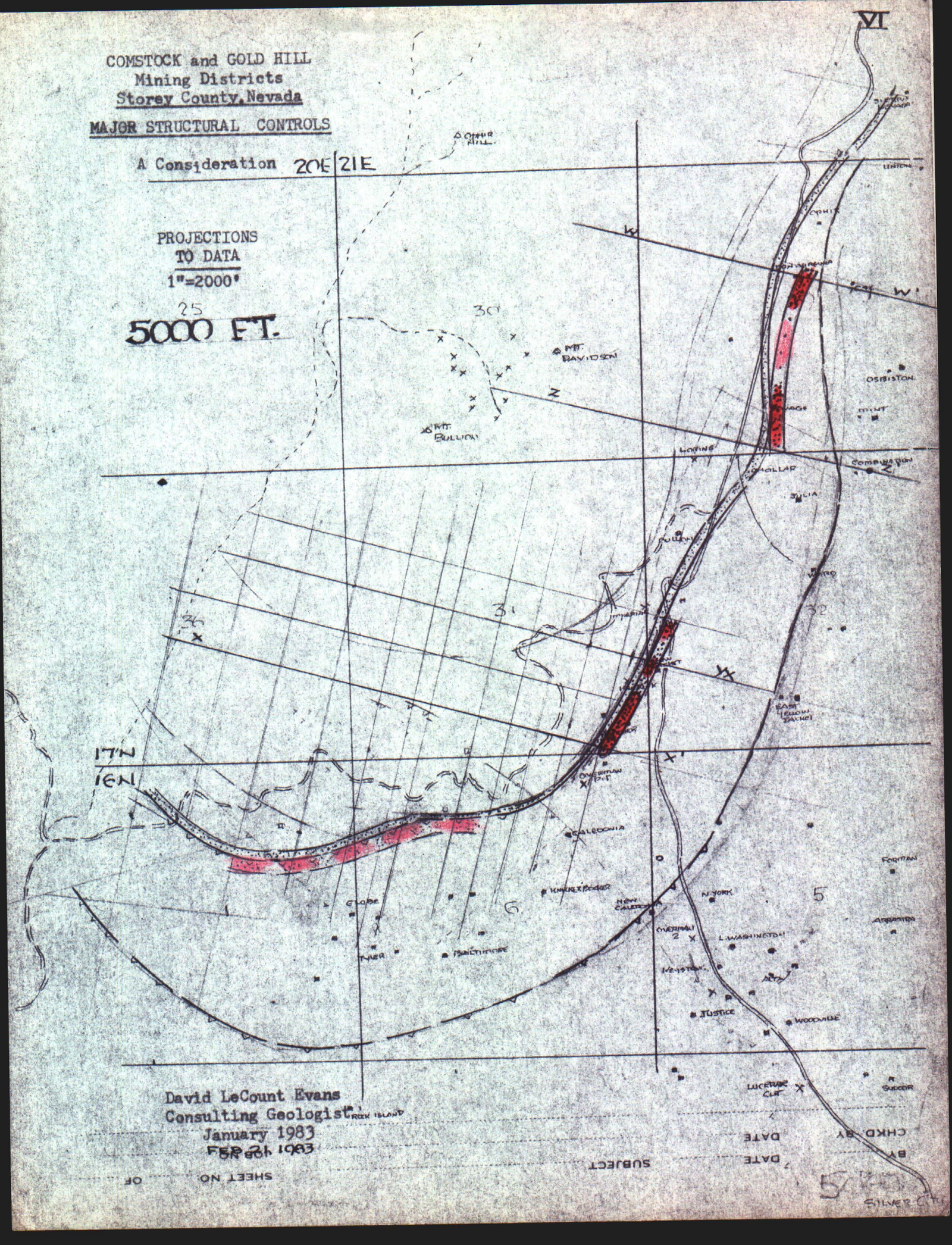
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS
TO DATA
1"=2000'

5000 FT.



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Consulting Geologist
January 1983
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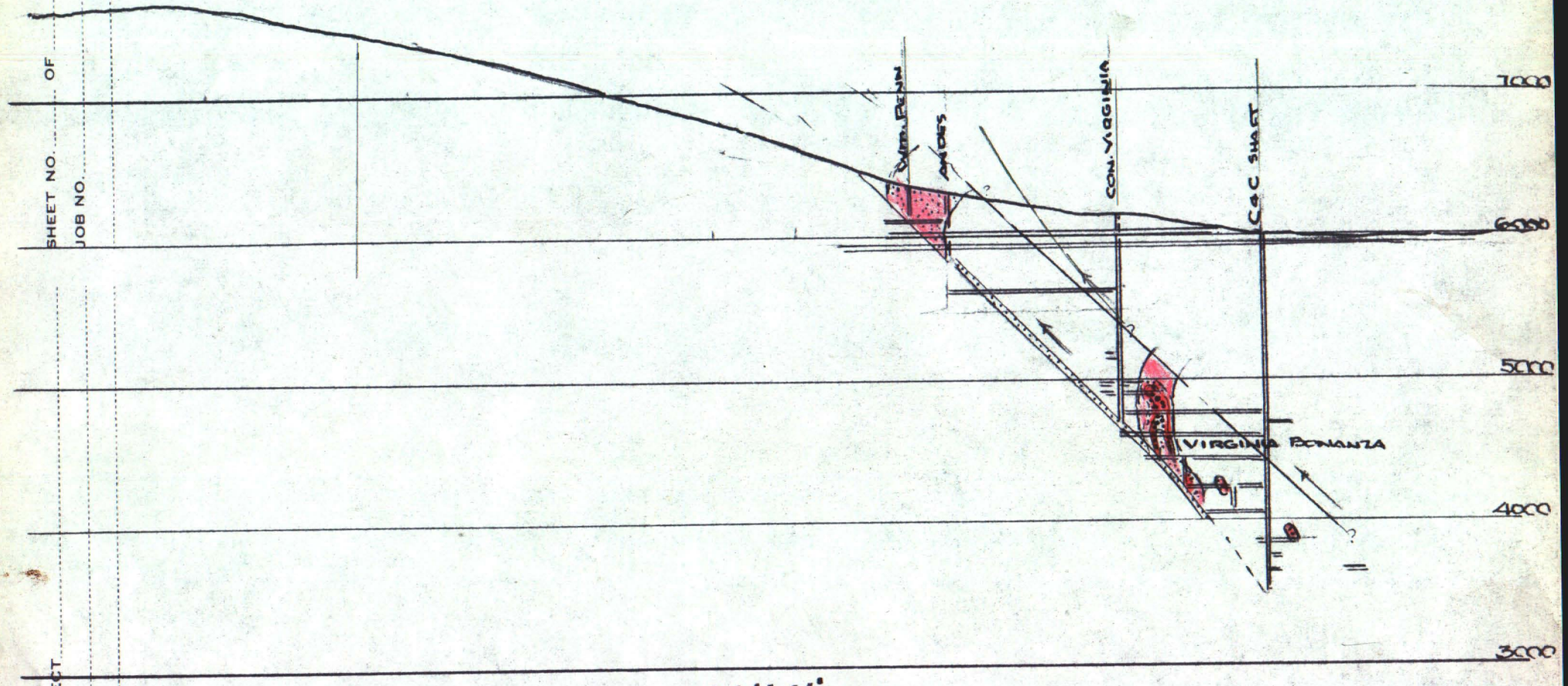

W-W'

CON-VIRGINIA

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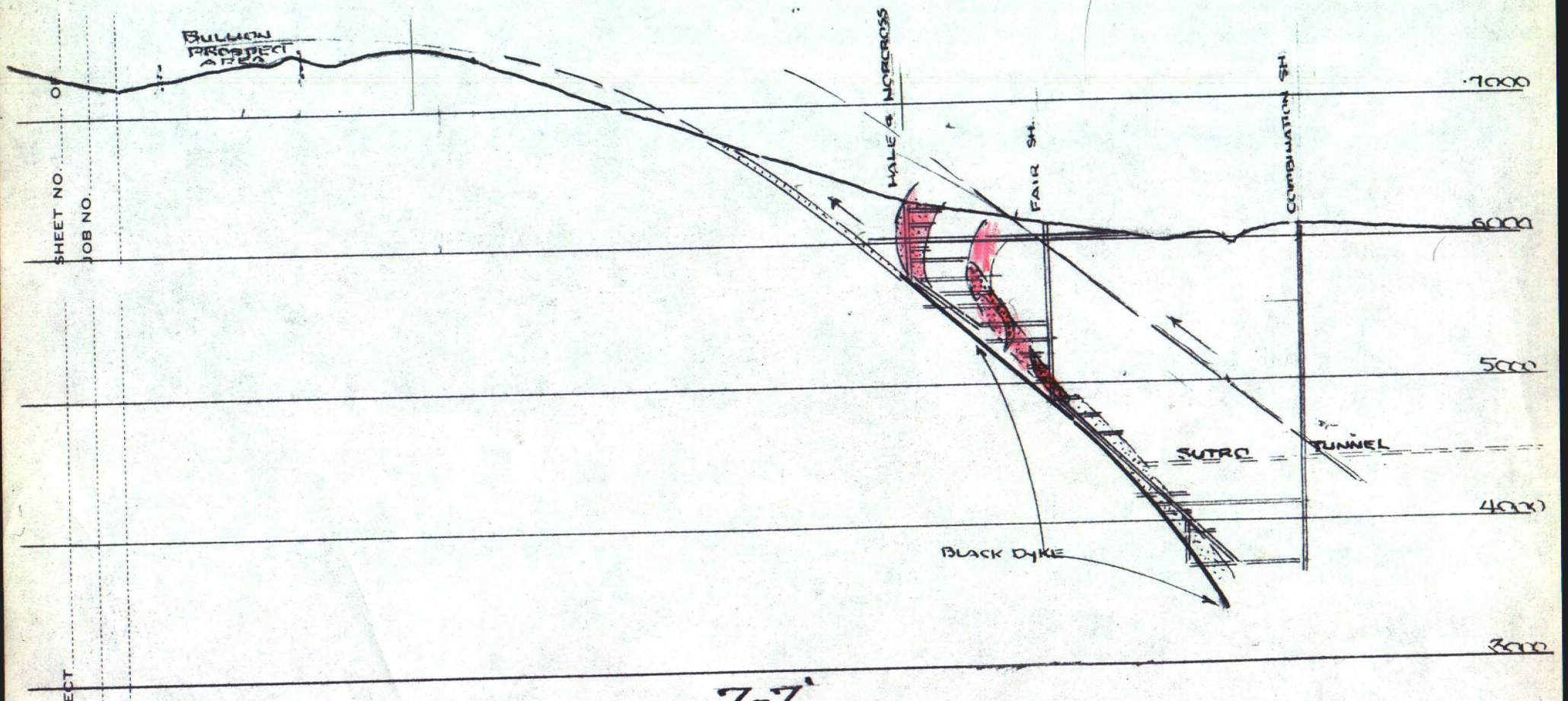
Consulting Geologist
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration
CROSS SECTIONS
1" = 1000'

VII



Z-Z'

HALE-NORCROSS

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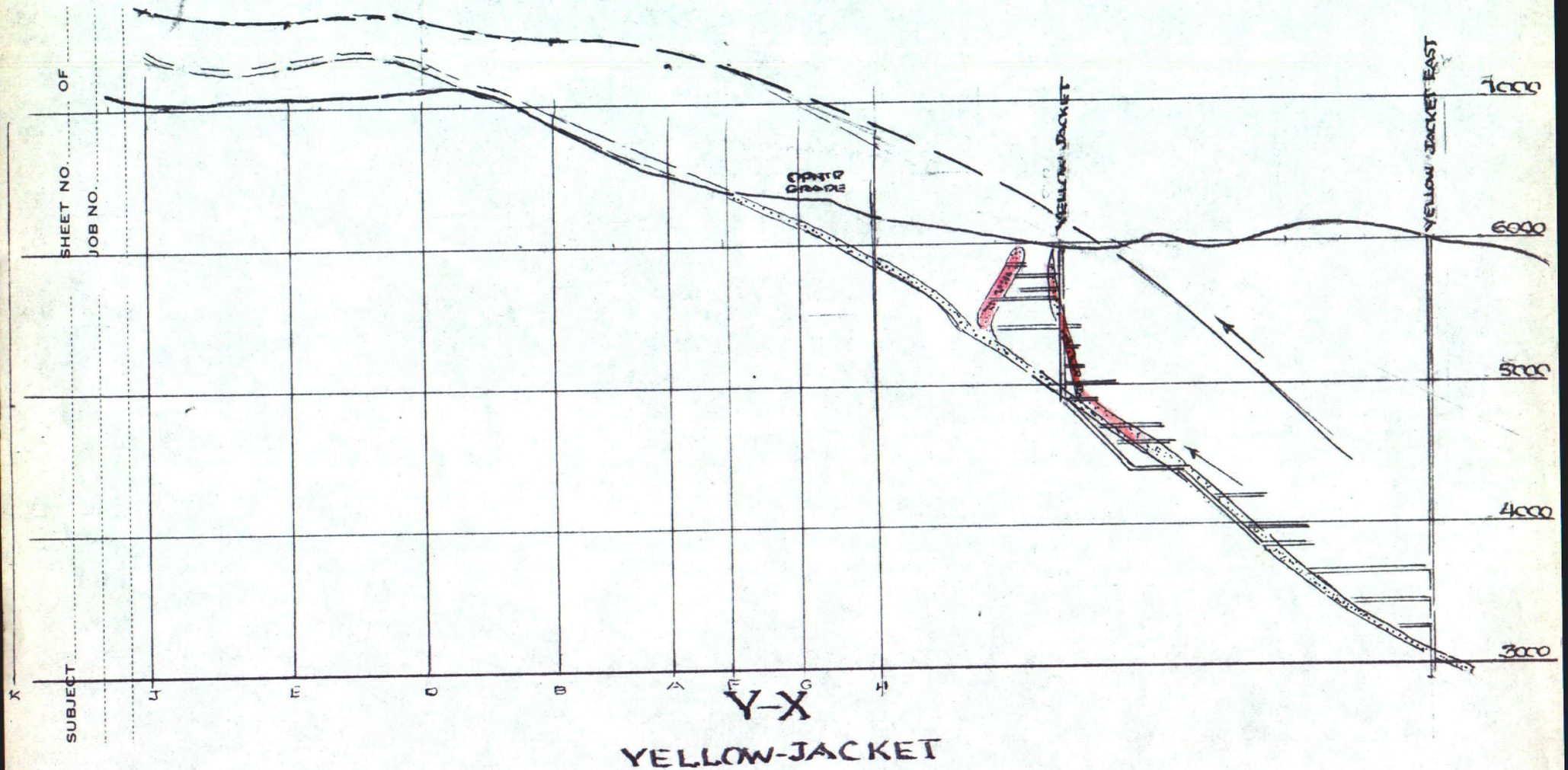
Consulting Geologist
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS
A Consideration
CROSS SECTIONS
1" = 1000'

VIII



Y-X

YELLOW-JACKET

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January 1983
FEB. 21, 1983

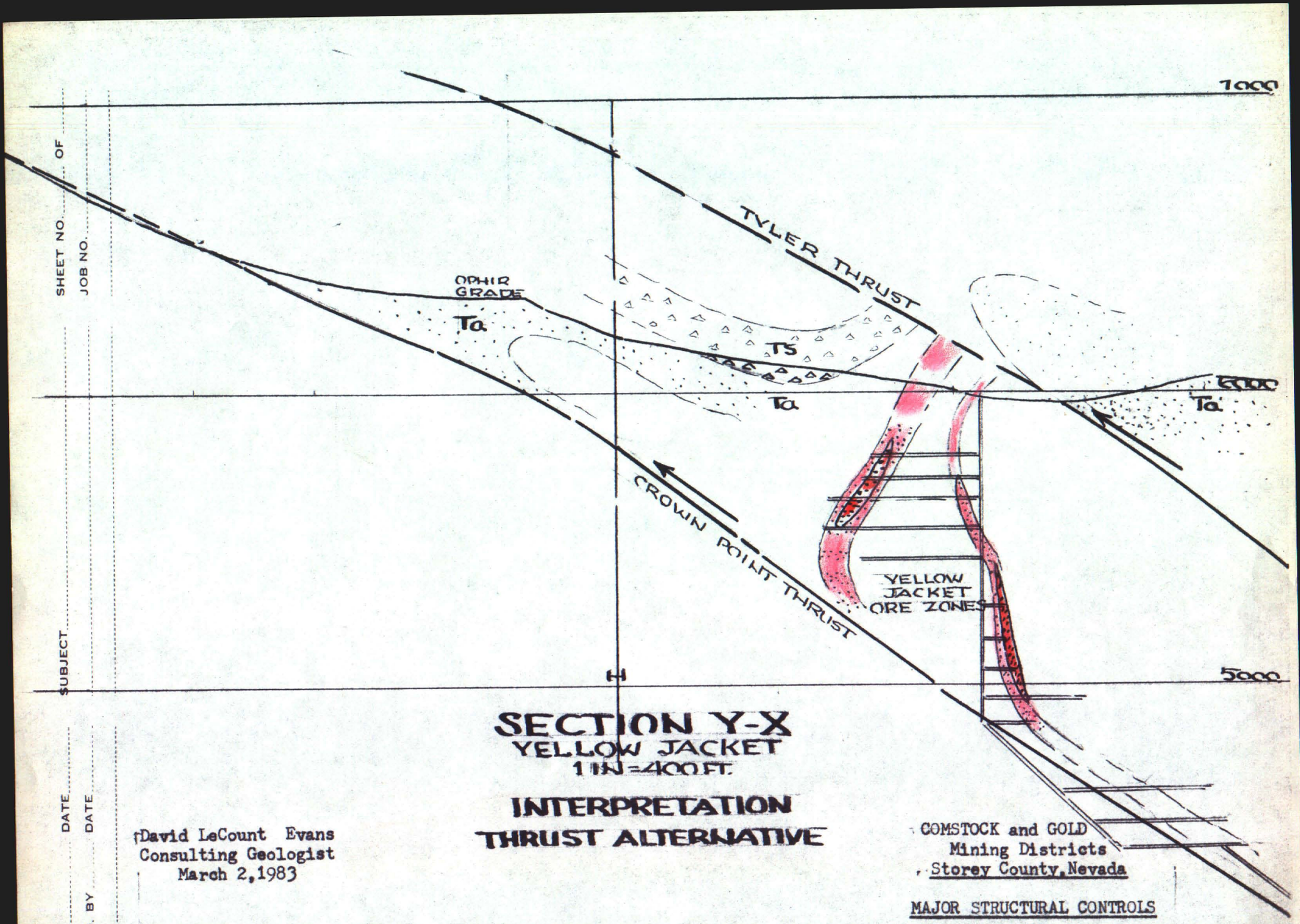
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

CROSS SECTIONS
1" = 1000'

XI



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BY ..... DATE .....
CHKD. BY ..... DATE .....

SECTION Y-X
YELLOW JACKET
1 IN = 400 FT.

INTERPRETATION
THRUST ALTERNATIVE

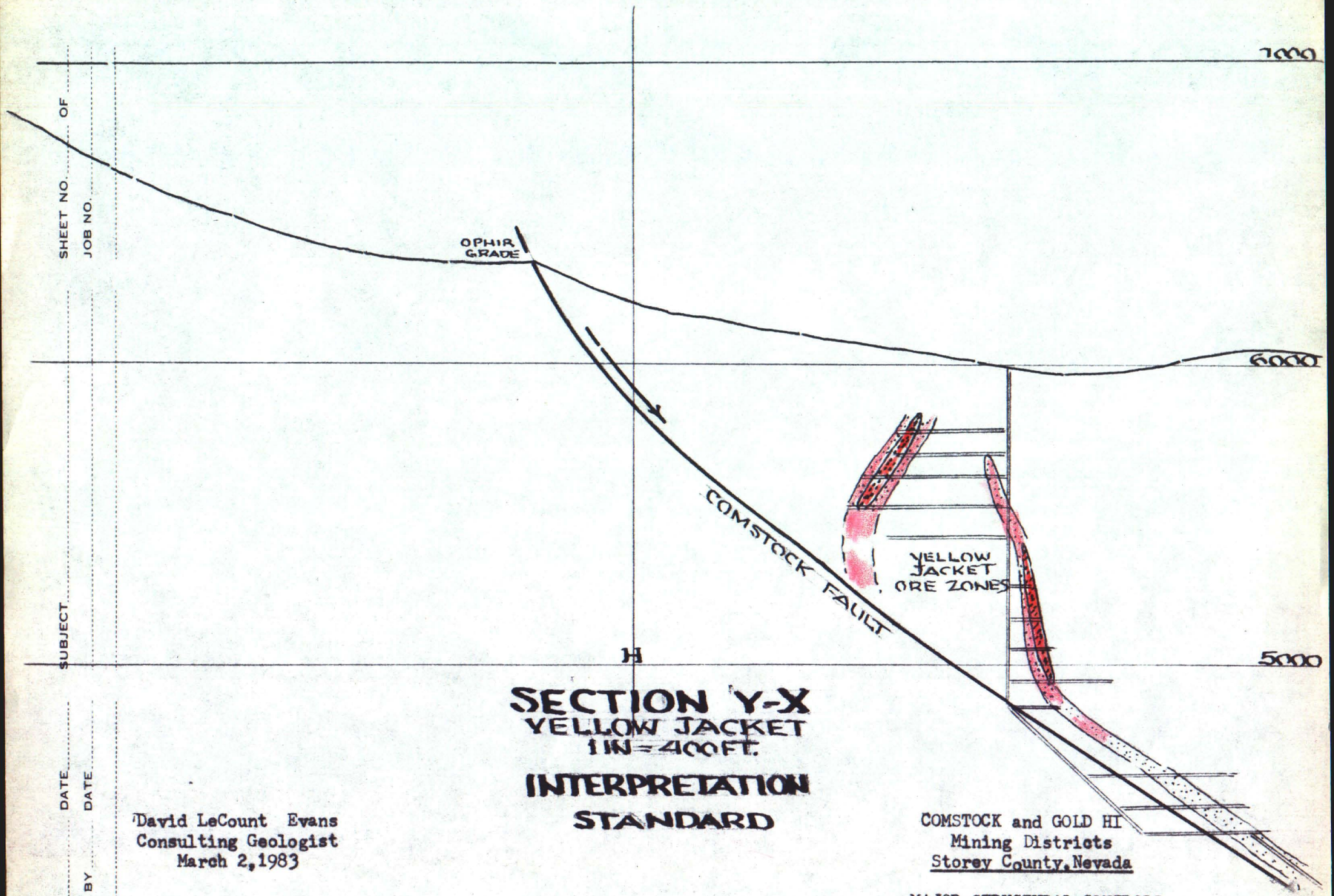
David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

IX-b



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JOB NO. .....

SUBJECT .....

BY ..... DATE .....

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SECTION Y-X
YELLOW JACKET
1 IN = 400 FT.
INTERPRETATION
STANDARD

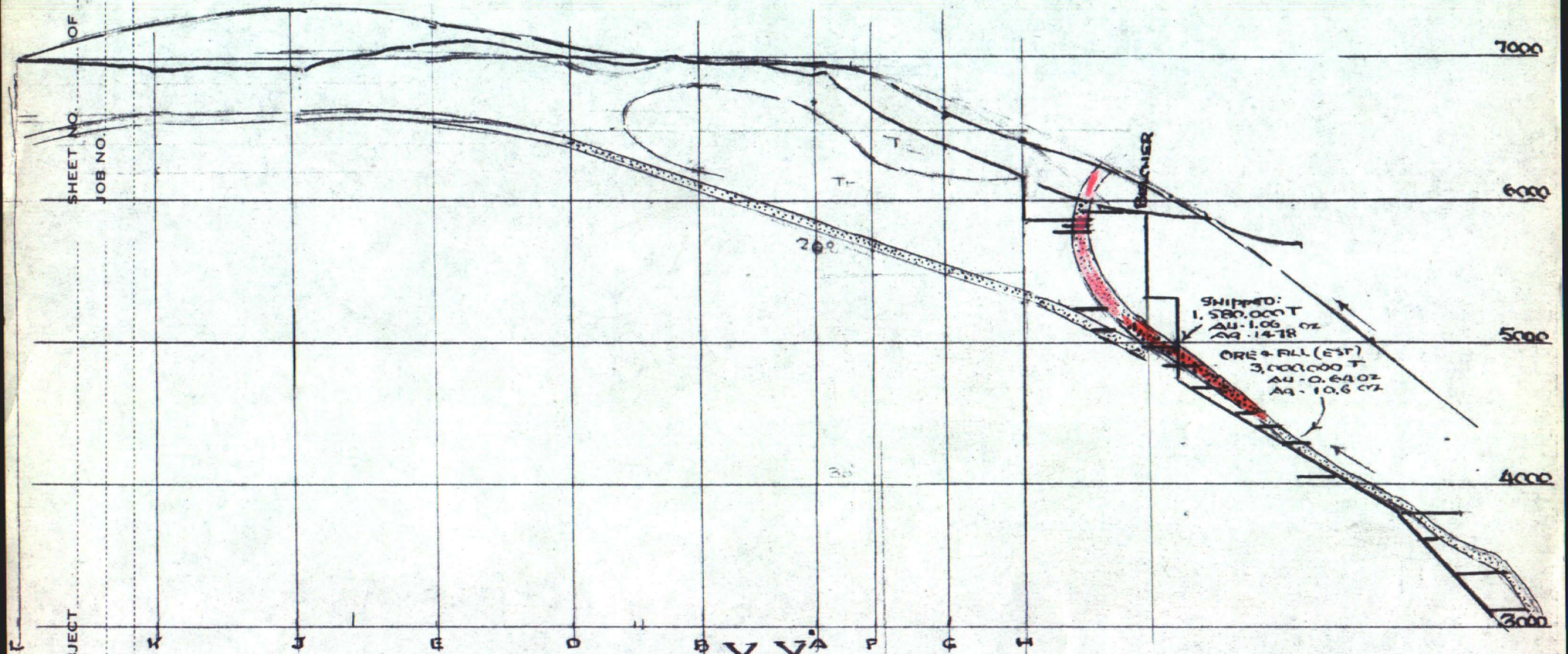
David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HI
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

IX-C



X-X

BELCHER

SHEET NO. OF

JOB NO.

SUBJECT

BY DATE

CHKD. BY DATE

David LeCount Evans
Consulting Geologist
January 1983
FEB. 21, 1983

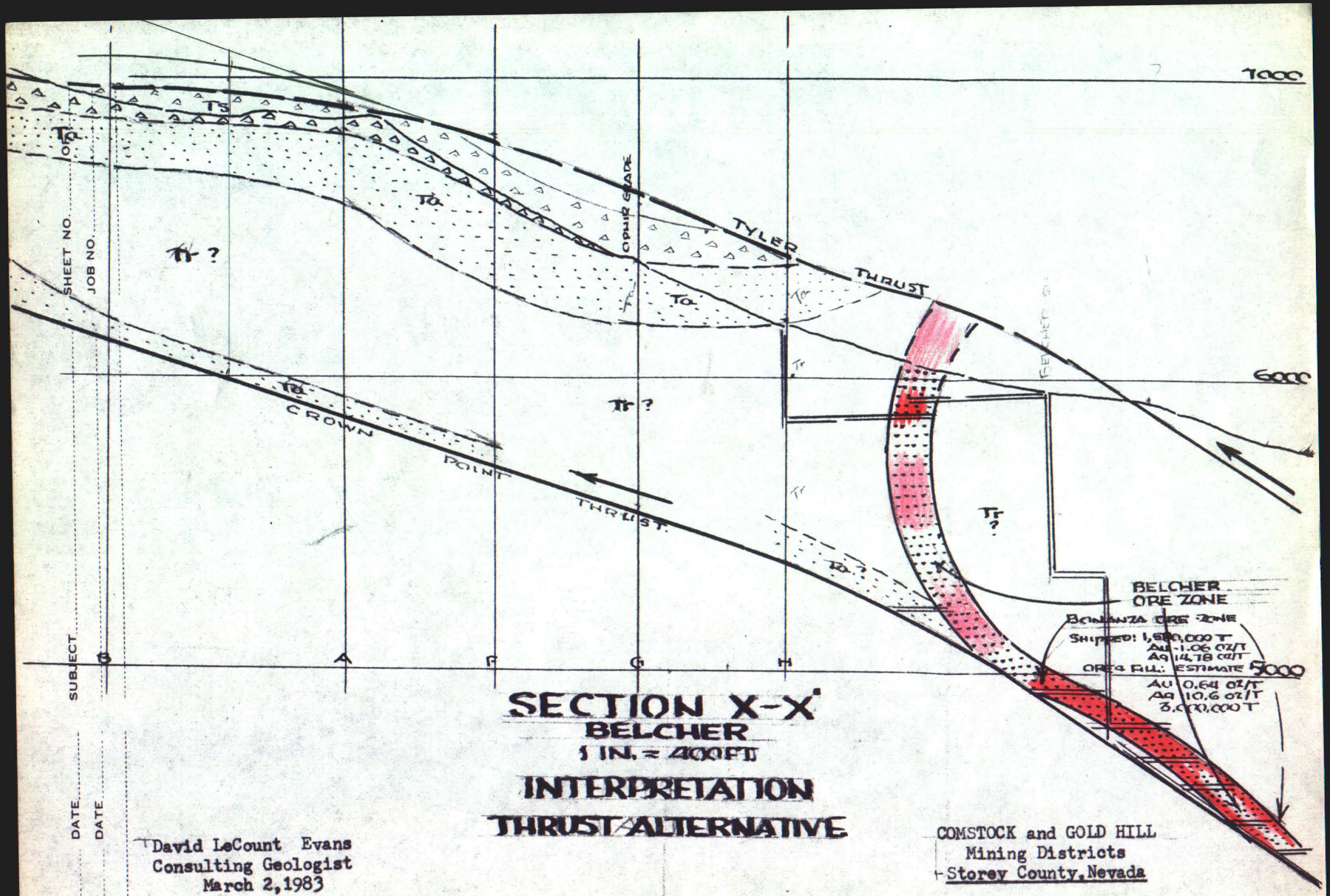
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

CROSS SECTIONS

1" = 1000'



SECTION X-X'

BELCHER

1 IN. = 400 FT

INTERPRETATION

THRUST ALTERNATIVE

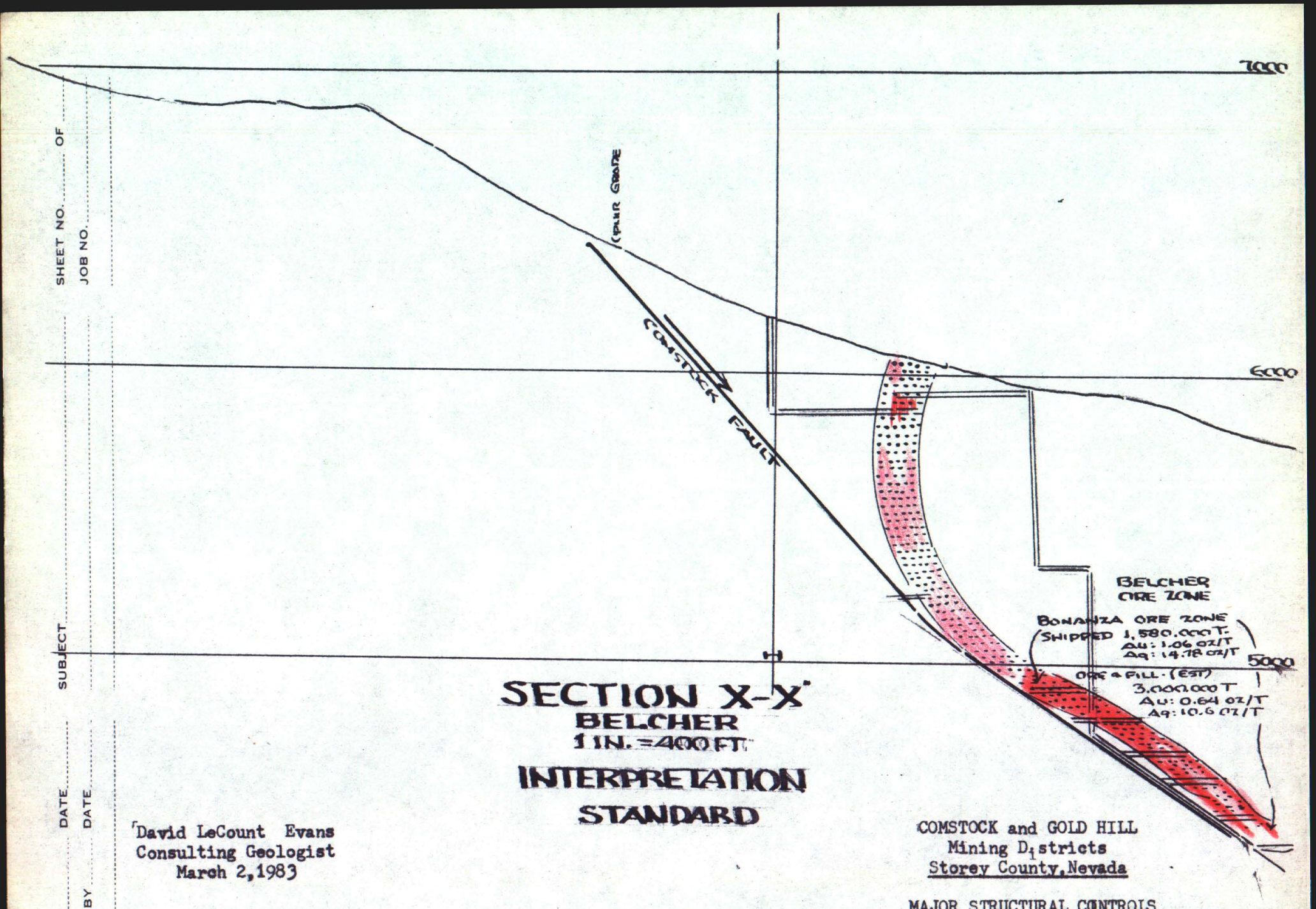
David LeCount Evans
Consulting Geologist
March 2,1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

X-9



SECTION X-X'

BELCHER

1 IN. = 400 FT.

INTERPRETATION

STANDARD

SHEET NO. ..... OF .....

JOB NO. .....

SUBJECT .....

DATE .....

BY .....

CHKD. BY ..... DATE .....

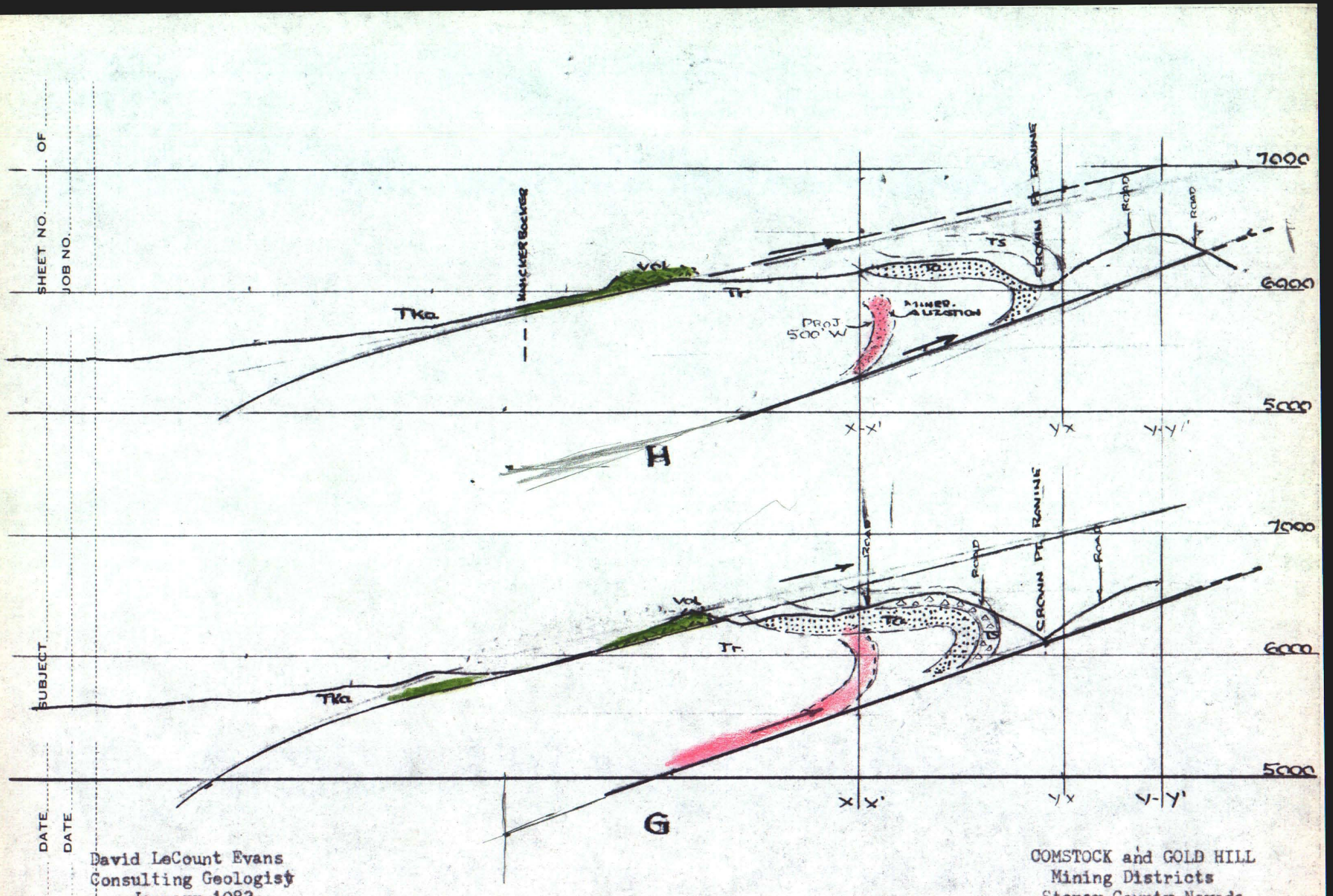
David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

4C



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SUBJECT .....
BY ..... DATE .....
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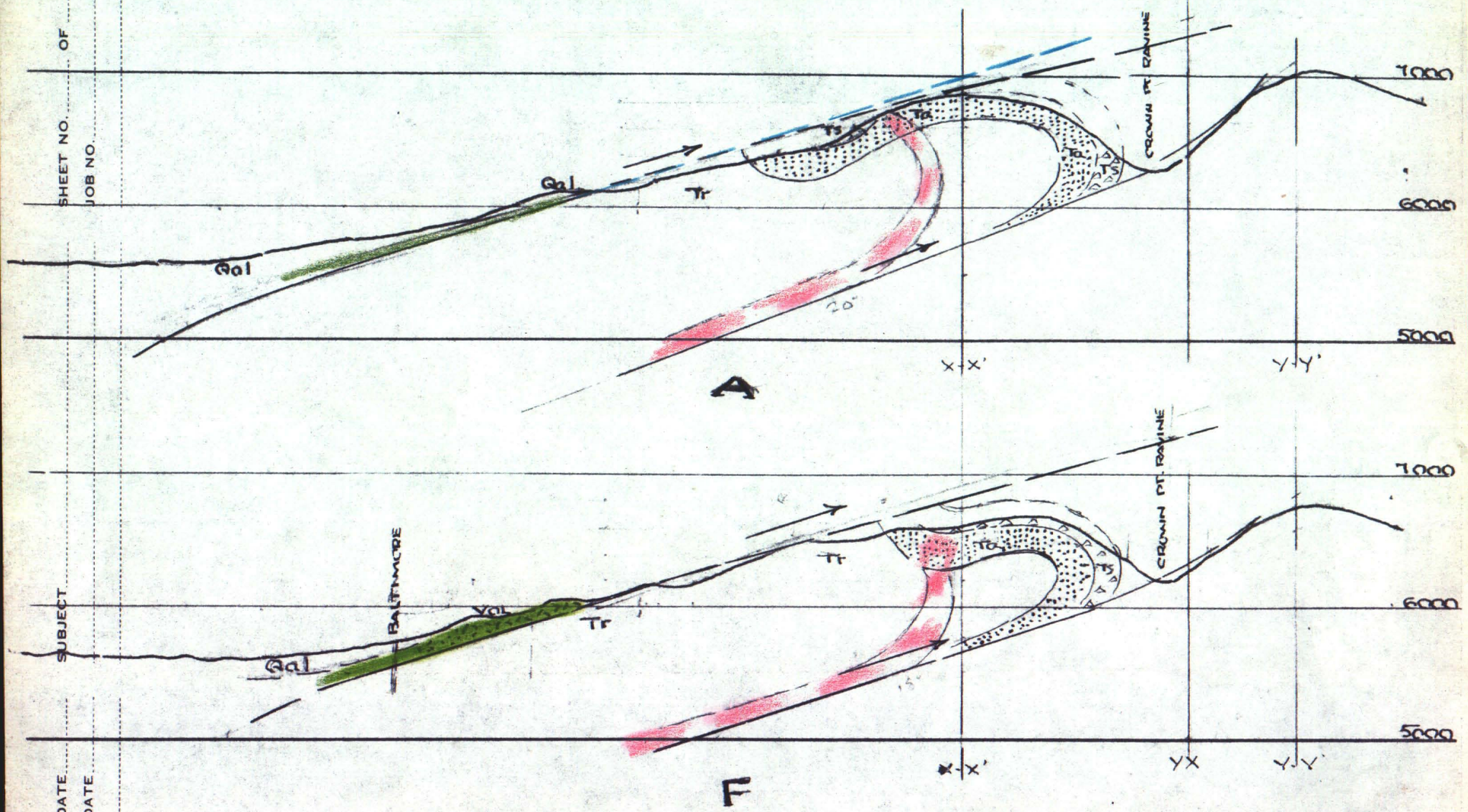
Consulting Geologist
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada
MAJOR STRUCTURAL CONTROLS
A Consideration
CROSS SECTIONS
1" = 1000'

IX



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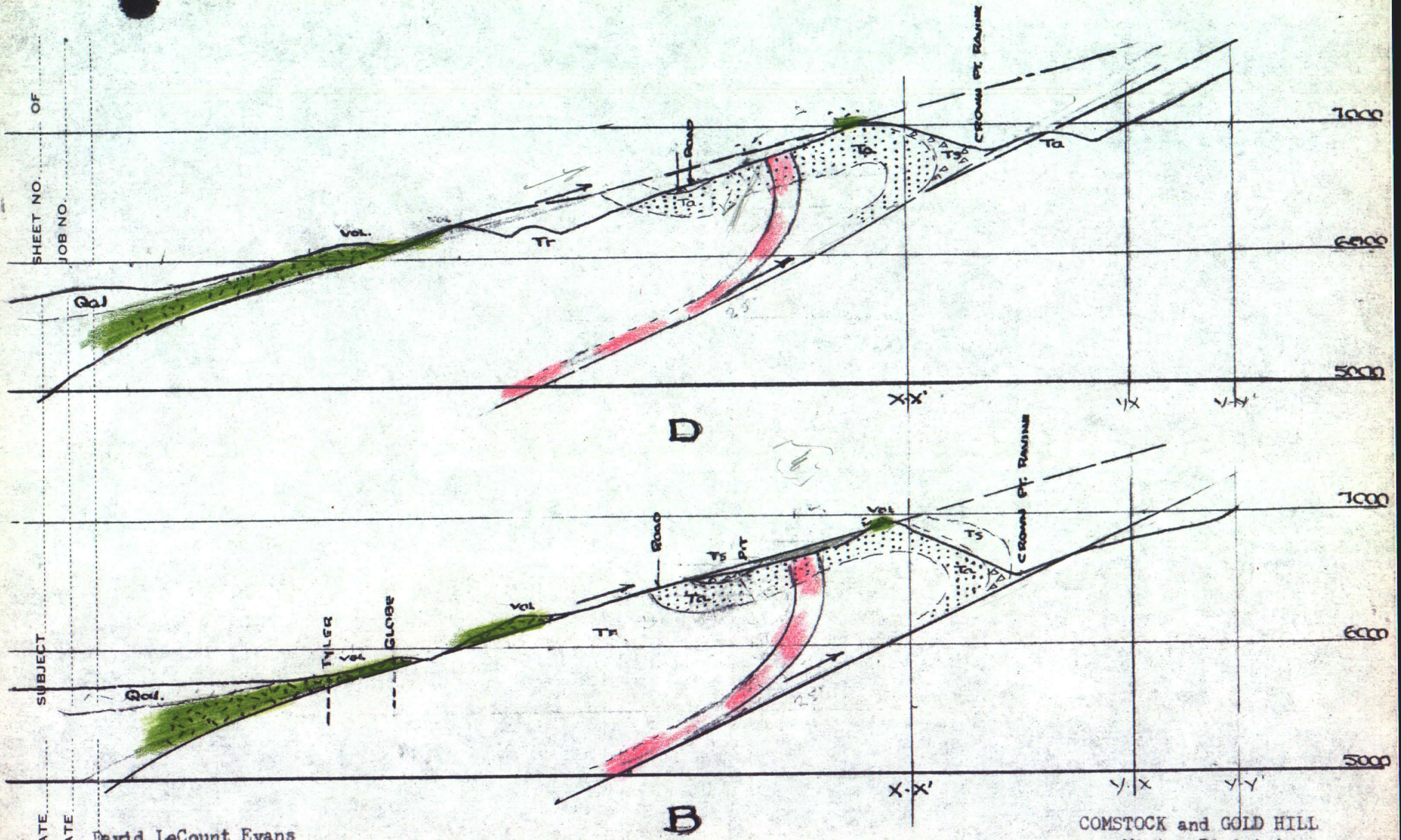
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada
MAJOR STRUCTURAL CONTROLS
A Consideration
CROSS SECTIONS
1" = 1000'

XII



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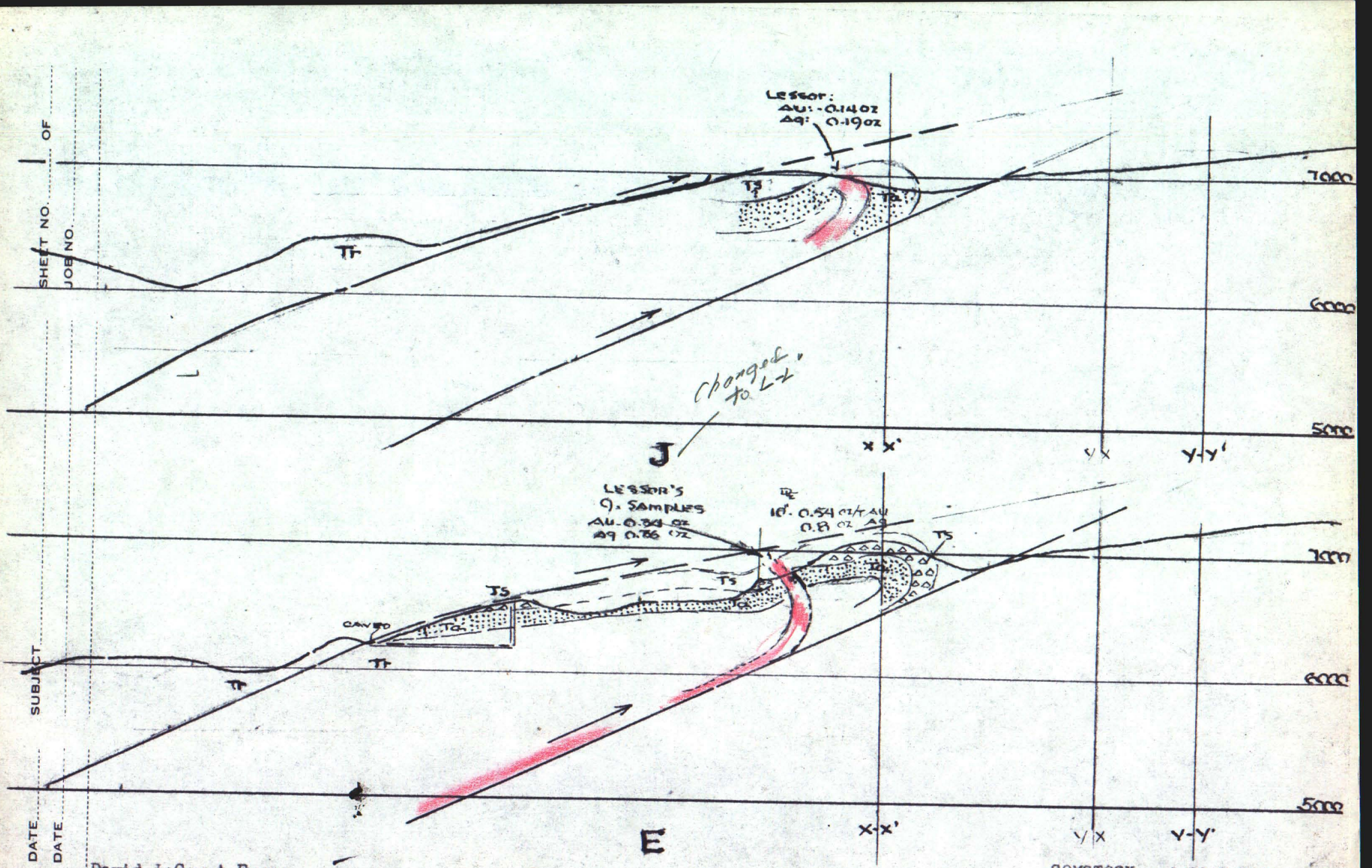
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration
CROSS SECTIONS
1" = 1000'

XIII



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JOB NO.
SUBJECT
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BY
CHKD. BY
DATE

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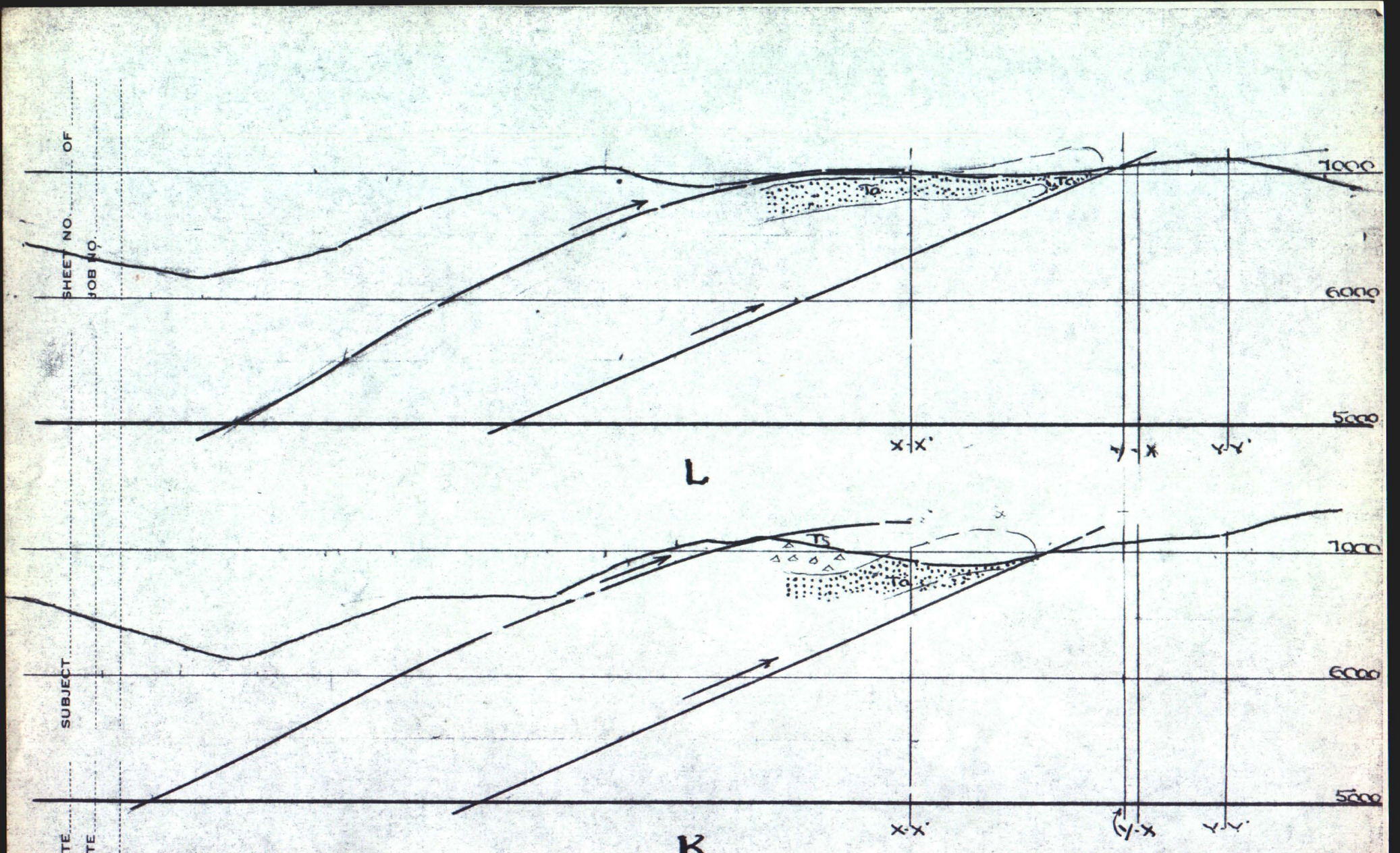
Consulting Geologist
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

CROSS SECTIONS
1" = 1000'



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SUBJECT

BY DATE

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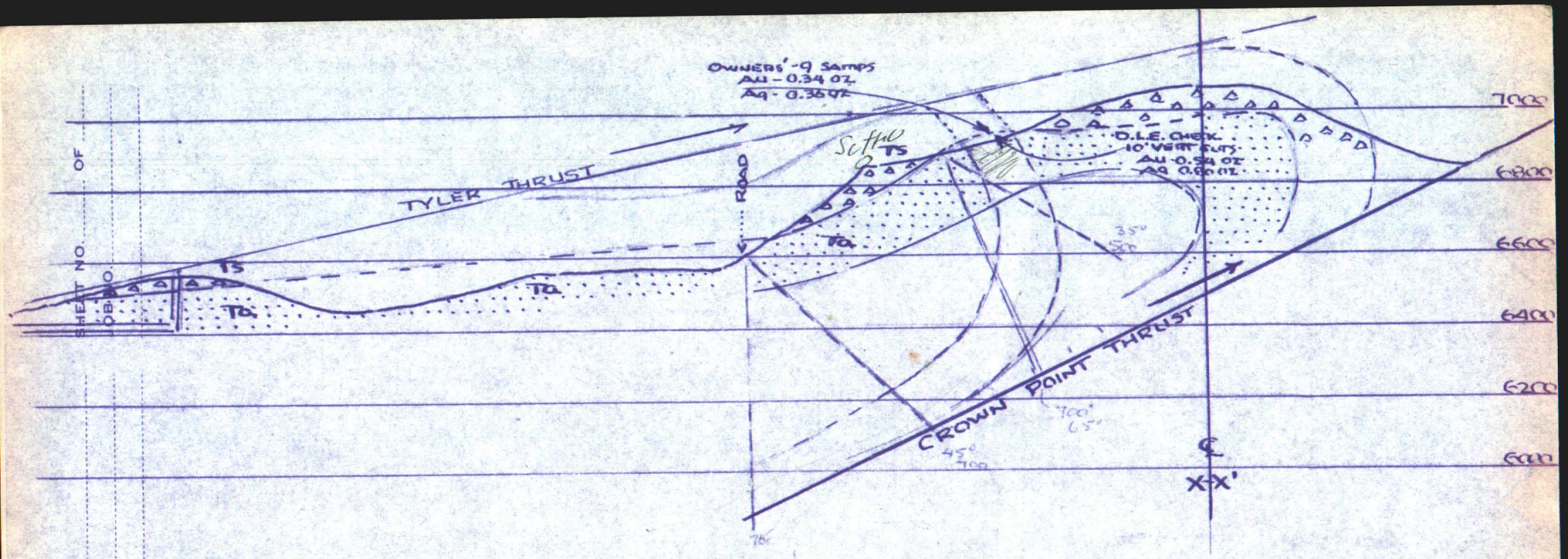
Consulting Geologist
January 1983
FEB. 23, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration
CROSS SECTIONS
1" = 1000'



SECTION - E-E'
STAR GROUP
1 IN. = 400 FT.
EXPLORATION

SHEET NO. ____ OF ____
JOB NO. ____
SUBJECT ____
DATE ____
BY ____
CHKD. BY ____
DATE ____

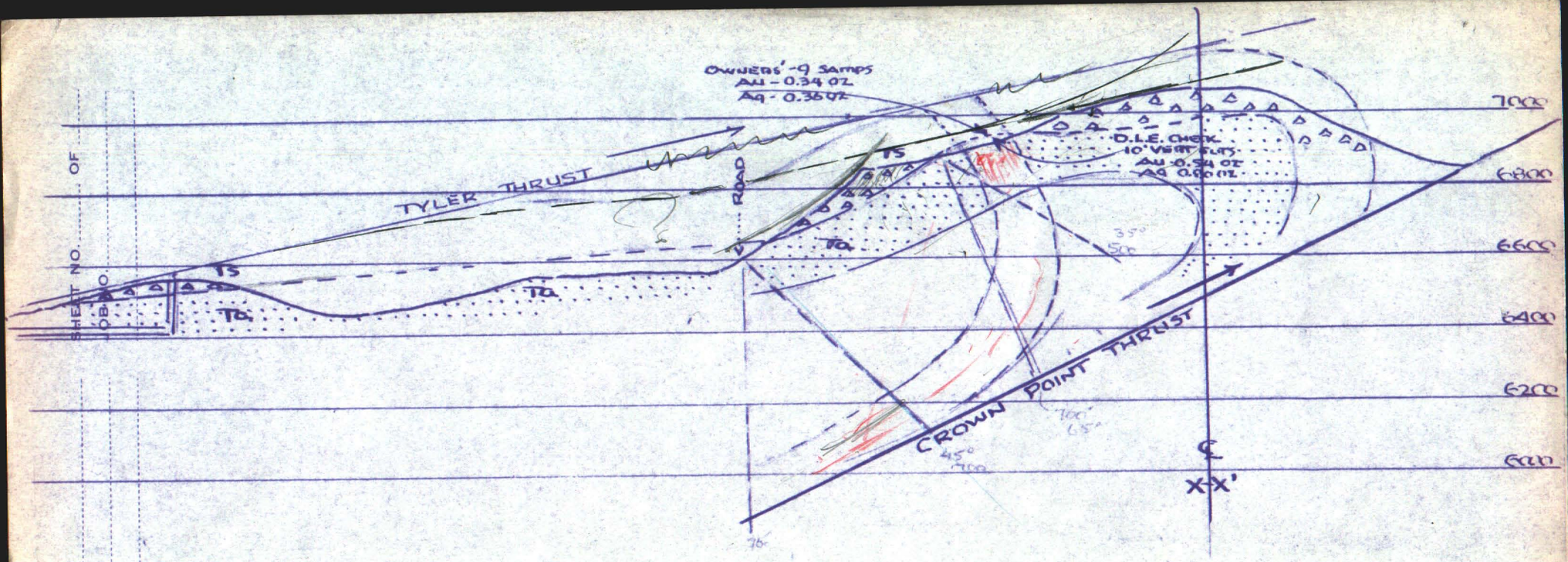
David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

XIV-b



SECTION - E-E'
STAR GROUP
1 IN. = 400 FT.
EXPLORATION

David LeCount Evans
Consulting Geologist
March 2, 1983

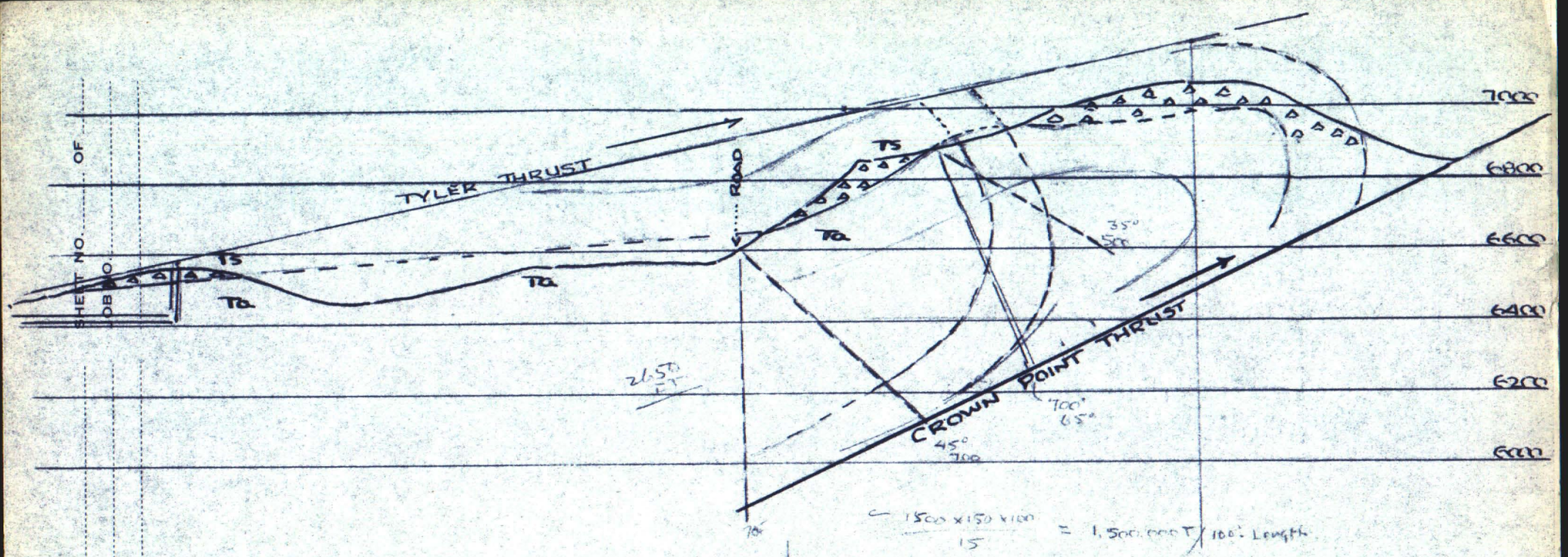
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

SUBJECT
DATE
BY
CHKD. BY
DATE
SHEET NO.
OF
JOB NO.

XIV-b



$= \frac{1500 \times 150 \times 100}{15} = 1,500,000\ T / 100'\ \text{Length}$

SECTION - E - E'
STAR GROUP
1 IN. = 400 FT.
EXPLORATION

David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

848

STAR GROUP
3

MARCH · 2 · 1983

848

STAR GROUP PROPERTY

Gold Hill District
Storey County, Nevada

Continuing Analysis
GEOLOGICAL

David LeCount Evans
March 2, 1983

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST

Foreword:

Submitted to owners on June 26, 1982 was our report covering the Star Group. The property was considered favorably and exploratory drilling, preceeded by some geophysical studies, was recommended.

Prepared for personal files was a February 1, 1983 memorandum, ("Further Analysis") with copies provided owners. The writer, continuing with his appraisal of this very interesting area, added to his conclusions with a series of notes, accompanied by improved maps and cross sections.

An opening statement merits repeating, to wit:

> " Probably the June study's most contentious proposals were (1) the introduction of two overthrust faults to the regional structural picture; the one following Crown Point ravine and the second, crossing the region of concern, proceeding from the Imperial pit area and past the footwall of the Belcher mine; and (2) the continuation to the west of the Comstock major-structure (long accepted as a normal fault) by the proposed Crown Point structure, a thrust fault."

Purposes were outlined as follows:

> " This up-dating memorandum is submitted not for purposes of reneging on the above, but to further explore earlier suggestions, using the same field observations, taking full advantage of P.C.Calkin's geological surface-map (1944), and backing the reasoning with additional Star Group sections, as well as, Comstock sections with which to compare the two areas.

A copy of the original June-1982 report accompanies this second "continuing analysis." No copy of the February 1 effort is included, since its content is fully repeated herein.

Urged is reference to the original report which, with its standard headings, provides Location, Conditions, Title, History of District, Geology of the Comstock and Star areas, Samples, Resume, et cetera.

Conclusions and Recommendations are reconsidered at the end of this up-dated analysis.

Supporting Illustrations:

Plates I

Plates I and I-b (Comstock area) provide the location of the location of the Star block, the distribution of major structures, and an index of all cross sections

Plate I-c (regional) shows the position of the Comstock area with respect to bordering regional geology, major petrologic units, and Tertiary volcanic members, bleached and otherwise affected by intense alteration. Formations are shown as follows:

Color	Member	Geol.Period	MYBP	Symbol
Blue	Meta-sediments	Triassic	207	St
Olive Green	Meta-volcanics	Triassic	207	VOL
Lavender	Granite intrusives	U.Cretaceous	110	Kgd
Uncolored	Hartford Hill flows	L.Miocene	22.7	Tr
Ochre	Alta & Kate Peak altered volcanics	M.Miocene & U.Miocene	16.5 12.49	Ta TKa
Pink	Kate Peak granodiorites	U.Miocene-L. Pliocene	12.49 12.2?	TKa TKi
Purple	Mt. Davidson granodiorite	Late Tertiary	?	Tgd
Uncolored	Mineralization	U.Miocene	12.2	Occidental & Comstock?

Plate I-d, the Star Group area enlarged to 400 scale, shows thrust fault interpretation, an indicated mineralized trend meriting exploration, and assay values provided by owners.

Plates II Through VI

Plates consist of projections of major structures and postulated mineralization to various data (levels). All projections are developed from cross sections.

Plates VII Through X

Provided are cross sections through Comstock loci of exceptional Bonanza-type production, namely: VII - - - the Con. Virginia-California, VIII - - - the Hale-Norcross, IX - - - the Yellow Jacket and X - - - the Belcher.

Plates XI Through XV

Also furnished are sections through the Star Group, starting with Section H (closest to the Belcher) and continuing west to Section L, at the western edge of the block.

Comments which follow are listed under standard headings, as additions to, like categories, listed in the June 1982 report.

Further Considerations by
Standard Headings:

Geology

One:

Note that in this analysis the Comstock-Crown Point curving trend remains, as shown, on Plate 7 of the June report, but that our second thrust has been moved slightly south, on the basis of Triassic distribution and structures shown on Calkins map.

Two:

In June 1982, under Mineralization on page 9, reference was made to the Sutro unit of the Alta, as follows:

> "Except for scattered clusters of bright red Jasper, accompanied by some white opaque chert, the unit is without mineralization or alteration."

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These clusters, some as large piles, occuring at the ridge crest on Volcano and Moonlight claims are also shown on Section B (Plate XIII). Anomalous gray opaque cherts occur, down slope, in talus to just above the "pit" on Section B, to within about 1500 feet of outcrops of Meta-volcanics, of Triassic age, moving up slope.

Red jasper and other cherts have been reported as characteristic of much of the Triassic-Lower Jurassic of North central Nevada (Carlin et cetera). Suggesting that these chert masses are Triassic would provide the basis for the flat 20° thrust interpretation, from the Tyler-Globe area, shown on submitted Plates XI through XV.

Three:

References to "footwall" and "hanging wall" are rather constant but not too specific in Comstock literature. However, the quotes, listed below, are rather definite and have been used in support of personal interpretations on Comstock sections and projections.

Mining and Scientific Press (San Francisco, Sept. 30, 1871), summarizing Mr. Clarence King's (USGS) "Geological Exploration of the 40th Parallel", reports:

> "The lode is bounded by two walls, running north and south, which, inclining together, the western at an angle of 45° to the east, the eastern being steeper, form a V-like section. This wedge is some 20,000 feet long, 200 to 800 feet wide at surface, and 800 to 1200 feet deep. Throughout the greater part of the lode, below the junction of the two walls, explorations show no vein. But at the Hale-Norcross the contact does notoccur, the east wall curving into parallelism with the west. The great ore-channel is along the eastern fissure.

The description fits the V between Comstock structure and dip of the Bonanza, itself. It does not ~~infer~~ suggest our parallel 45° to less Comstock-type structure, of Sections VII through X.

On the other hand, according to Carl Stoddard, describing the Con. Virginia (Univ. of Nevada, G amd M Series No. 40, 1950), the upper

limits were defined by what the miners described as "cap rock", as follows:

> " The base of the ore body rested in the vein matter of the Comstock lode, approximately 250 feet at right angles to the footwall and 500 feet below the cap rock."
>
> " The position of the so-called 'cap-rock', conforms to a plane, having a strike parallel to the lode, and inclined to the east at an angle of 32°. It probably marks the position of a fault."

Four:

Regarding the normal versus thrusting interpretations, Vincent Gianella (1936) suggested two periods of faulting, ie: a pre-mineral Comstock fault closely followed by the Lode, and then a much-later post mineral "Comstock-Davidson fault." Considering the Silver City branch south from the Belcher area, such he correlated with the Pre-Mineral fault. The main Comstock fault and a branch to the southwest, past American Flat, he believed, experienced both periods of movement.

With reference to attached I-b, Stoddard's map (1950) shows a solid line for the Comstock-Davidson fault to the Baltimore mine, from whence it is faintly "dashed" as a weak projection another three miles to the south before disappearing. It is from ~~this same~~ the Baltimore that this analysis proposes a continuation to the west, using other structure shown by Calkins, as well as, the distribution of Triassic meta-volcanics.

Samples

Samples, listed on pages 9 through 12 of the June 1982 report, lack specific locations in the case of the Star Group series. Owners' efforts have now provided sample locations. For those samples pertinent to actual mineralization values are shown on Map I-d.

With reference to Midnight Star, an average of 0.34 oz/T Au and 0.36 Oz/T Ag (from 9 samples) is significant, in view of the writer's

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST

0.54 oz/T Au and 0.80 Oz/T analysis for a series of evenly spaced, vertical cuts.

Concerning the Bright Star area (2800 feet southeast of the Midnight Star) values are low (0.1 ounces gold)) but equally significant, since the tunnel, serviced by the air-shaft, had reported, scattered $60 per ton values ($20 gold and $1 silver).

The 2800 feet of interval between "shows", theoretically, just at or slightly beneath the overiding thrust plate, is considered an exploration "must"; as is the indicated westerly continuation through the Silver Star and its lone surface value of 0.14 Oz/T Au and 0.19 Oz/T silver.

Resume'

Purposes are not to upset basic Comstock geology, the product of many serious efforts since the 1860's.

Gianella's petrology (1936) is basic, the work of an expert and invites no changes. Differences, however, in structural interpretation have always existed and this analysis proposes yet another alternative.

Gianella's classic approach is considered, in many ways, the "Bible" and is shown below as the"Gianella Time Table", as summarized by Stoddard (1950).

Comparison is provided in a parallel column by this writer's "Alternative Time Table."

Fig. 1

Alternative Time Table	Gianella Time Table
Hartford Hill Rhyolite; 23 MYBP	
(1) Middle Miocene volcanism; Alta formation; 18 to 15 MYBP.	(1)Middle Miocene volcanism before faulting; Alta formation.
(2) Davidson Diorite intrusion	(2)Davidson Diorite intrusion.
(3) Early Comstock to Silver City fault.	(3)The Comstock fault.
(4) Barren to low grade(?) quartz	(4)Barren vein quartz
(5) - - - - - - - - - - - - - - - - - -	(5)More faulting in hanging wall section (largely) veins and ore-deposits.
(6) Probable heavy erosional period	(6) Long period of erosion; bevelling with Comstock fault as escarpment.
(7) Initial Kate Peak volcanic flows 12.9 MYBP	(7) Early Pliocene, Kate Peak flows, followed by Late Pliocene Knickerbocker flows.
(8) More faulting, mainly thrusts of regional extent; possibly overlapping with Kate Peak.(see Gianella (5)).	
(9) Major mineralization, possibly associated with Kate Peak intrusives and following thrusts into inclined strain openings between thrusts, ie: East wall--a thrust. 12.2 MYBP.	
(10)Little Bonanzas may be roots of eroded Big Bonanzas.	

- - - - - - - - - - -

With reference to the above table, differences are as follows:

(1) Although agreeing that there were two periods of faulting the Gianella second period, at between Alta and Kate Peak or about 14 MYBP is as contrasted to Kate Peak time of the Alternative or 12.9 MYBP.

(2) Gianella places the major period of mineralization as between Alta and Kate Peak or about 14 MYBP, which is in contrast with the 12.2 MYBP, a product of K-AR dating. It must be remembered that absolute dating of igneous rocks and mineralization was not accepted practice in the 30's.

(3) The simple normal faulting, long accepted as standard Comstock structure, is replaced, at least, for indicated east-hanging wall structure.

(4) The alternative suggests a relationship between major mineralization and the Kate Peak intrusives.

(5) The alternative at (3) refers to the "Early Comstock Fault", leaving the door open for normal or thrust interpretation. Reference is made to ~~Figure 2, at the back of text.~~ Figures 1X-B - 1X-C and X-B - X-C

Recapitulation:

From 1859 through 1924, Comstock production amounted to 13,526,700 tons, averaging 0.568 Oz/T gold and 13.9 Oz/T silver. 58% of the total represented high-grade (0.76 ounces gold and 18.47 ounces silver) from the Bonanza-type ore bodies. The remainder was from lower grade ores, stope fills and dumps. The period of decline (1924-1950) representing 5,055,200 tons at 0.095 Oz/T gold and 1.57 Oz/T silver represented open-pit, block caving and top-slice lower grade production.

The S15°W production trend from the Ophir to Belcher, with scattered mineralization, amounted to 10,000 feet. From the beginning the Lode presented continuous complexities which, with mining geology and mining methods, both in an early, formative period, remained only partially resolved.

The entire 10,000 feet, in plan, was explored by expensive horizontal workings and some 4000 feet of depth by three lines of shafts for the Comstock proper with some success, to the turn of the century, and dwindling to no success, thereafter. Extending the trend, southeast to Silver City, produced only small occurrences and no additonal Big-Bonanza-type ore bodies. The same can be said for exploration along the southwest continuation along the west flank of American Flat, to the Globe-Tyler area, a trend suggested by Gianella and others.

In short, exploration since 1881, based on the premise that the normal Comstock fault, continuous from the Ophir, south to Silver City and the major ore control, would provide more Big-Bonanzas, has been without success. Now, some 100 years later, another attempt, following the

same "fairway" has been abandoned, while others move in to continue with the same type of exploration.

The above suggests a change in interpretation based on more interpretive field mapping and the recognition of structural growth, other than the long over-used normal faulting and other Basin and Range 'crutches'; and proposes interest and exploration for an area, in line with Comstock structure, providing interesting alteration and scattered surface values, which have never been tested at depth.

Much has been learned regarding the importance of thrust faults in Nevada, over the last 20 years, and a study of that wedge between the Furnace Creek-Las Vegas fault system and the Sierra Nevada front suggests an abundance of such thrusting.

The area of interest, starting 2000 feet southwest of the Belcher Mine (Belcher-Crown Point area production = $63,600,000) and continuing 7000 feet to the northwest, flanked by flat thrust faults, offers probable Comstock extension and is recommended.

Proposal:

Proposed is a program, consisting of the steps, listed below.

(1) Detailed geological mapping should be considered, and systematic soil sampling employed, where needed.

(2) Considering the 2800 feet, indicated as a possible continuous trend, strip at regular intervals dozer, removing talus and other cover, to further expose mineralization, and sample.

(3) Test the 2800 foot unit at depth by drilling angled holes from Ohir-grade road, or closer, using Down-Hole HAMMER equipment:

a- start opposite best values, working both ways (west and east) at 100' or 200' intervals; SEE PLATE XIV-b.

b- indicated is about 2000 feet of hole per section; estimated is about $10 per foot for drilling costs, alone.

c- considering the possibility of 150 feet of mineralization per hole or 300' per section, and sample every five feet, assay cost per section would be $900.

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(4) Upon completion of four sections, a review of results and consideration of next steps would become a 'must'. However, the above are only suggestions, and changes in proceedure, at any time, remains an expectancy.

(5)assaying for gold and silver should be by fire-assay, performed, preferably, by Metallurgival Laboratories of San Francisco, chemists of excellent repute.

March 2, 1983

DLE

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST

I

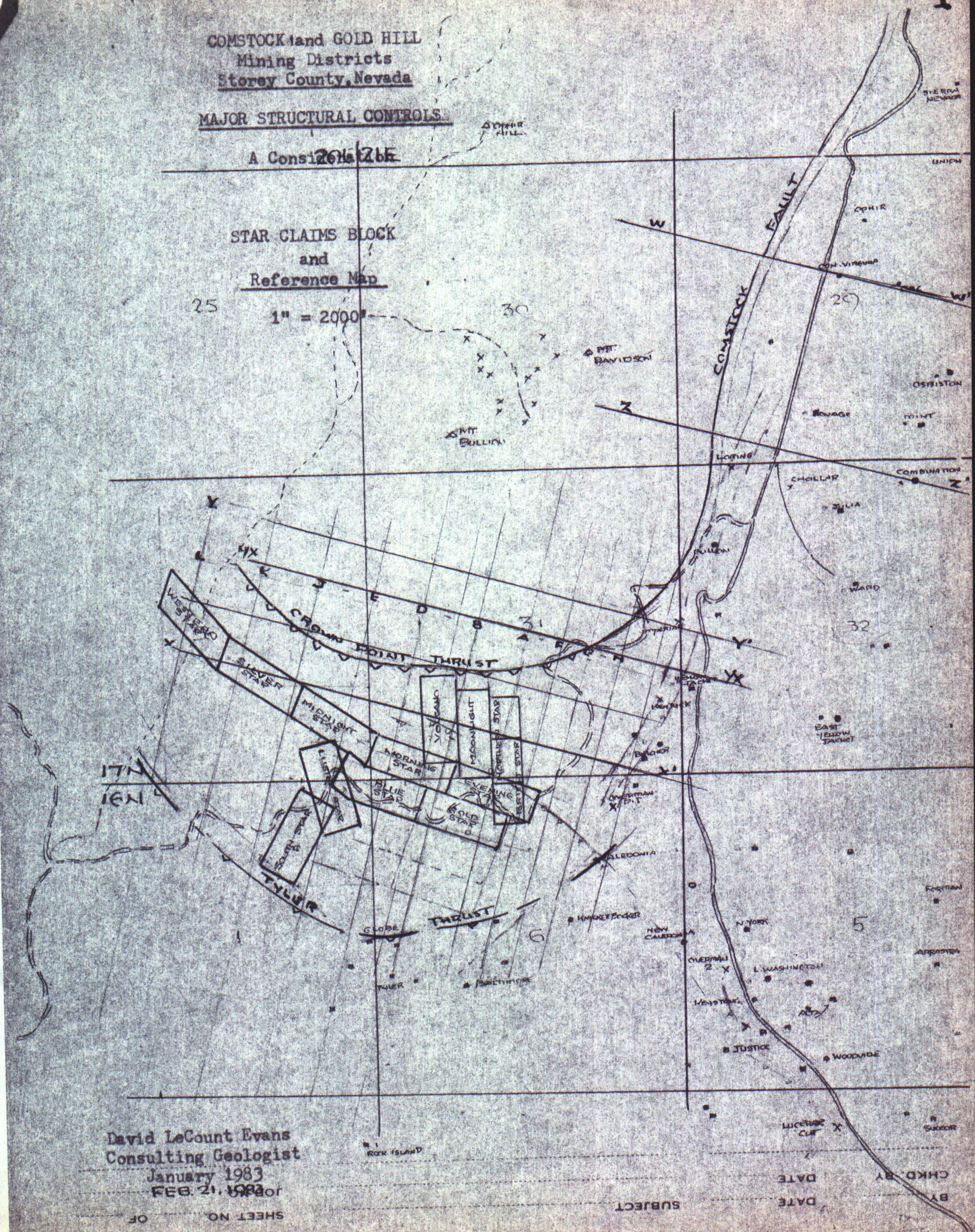
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

STAR CLAIMS BLOCK
and
Reference Map

1" = 2000'



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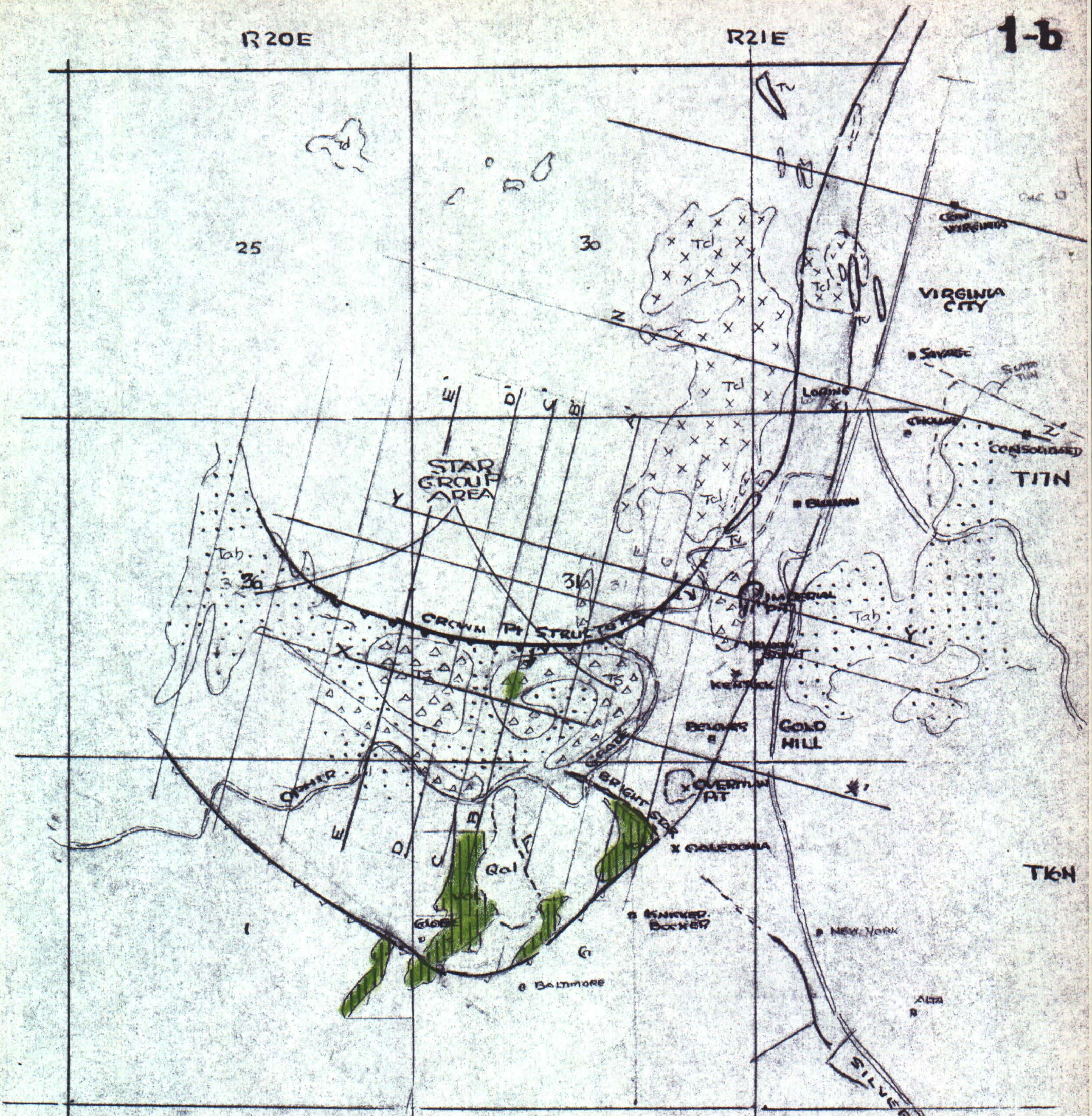
January 1983
FEB 21 1983



STAR GROUP

GOLD HILL MINING DIST.
STOREY CO., NEVADA

COMSTOCK AREA INDEX MAP

1 INCH = 2000 FT.

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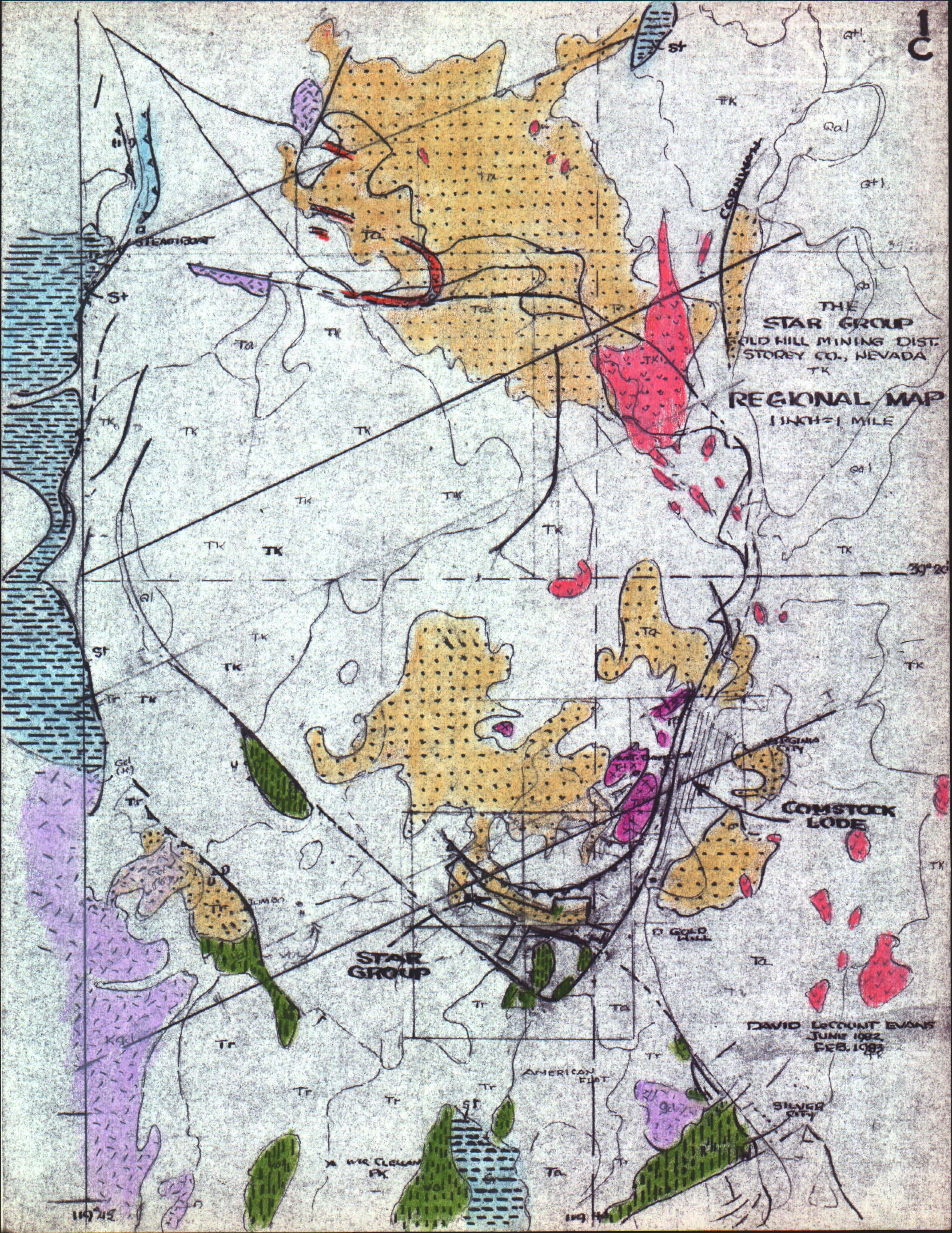
CONS. GEOL.
JUNE 1982
FEB. 1983



1C
THE STAR GROUP
GOLD HILL MINING DIST.
STOREY CO., NEVADA
REGIONAL MAP
1 INCH=1 MILE
STEAMBOAT
CORNWALL
COMSTOCK LODE
VIRGINIA CITY
GOLD HILL
STAR GROUP
AMERICAN FLAT
SILVER CITY
DAVID LeCOUNT EVANS
JUNE 1982,
FEB. 1983
39°20'
119°45'

CROWN POINT THRUST

SILVER STAR

MIDNIGHT STAR

E-CURRAN-(9 samps)
Avg: Au: 0.34 oz
Ag: 0.36 oz

D.L.E. (1 samp)
Au 0.52 oz
Ag 0.80 oz

Au .14
Ag .19

Au .22 Ag 1.56 Au .05
Au .07 Au 1.15 Au .04 Au .32 Au .01
Au .37

VOLCANO

MOONLIGHT

NORTHERN STAR

Au .01
Au - .40
Ag - .41

Au .02
Ag 1.18

Ag .49

AT OR JUST BENEATH TYLER THRUST

MORNING STAR

Au .10
Au .05
Au .21 Ag 1.89
Au .09 Ag
Au .08 Ag .58
Au .05 Ag .09

Avg. Au 0.11 oz

GRADE

OPHIR

LUSTER STAR

Au .34 Ag .29
Au .12 Ag .60
Au .02 Ag .30
Au .04 Au .03 Ag .14

TYLER THRUST

BLUE STAR

Au .01 Ag .10
OPEN TRENCH

EVENING STAR

Au .01 Ag .49

BRIGHT STAR

GOLD STAR

SOUTH STAR

Au .01 Ag .51

* AT 6850 FEET AVERAGE DATUM

COMSTOCK & GOLD HILL
MINING DISTRICTS
STOREY COUNTY, NEVADA

STAR GROUP
BLOCK

*TRENDS
AND
SAMPLE VALUES
BY OWNERS
1" = 400'

DAVID LeCOUNT EVANS
CONSULTING GEOLOGIST
MAR. 2, 1983

II

COMSTOCK and GOLD HILL
-Mining Districts
Storey County, Nevada

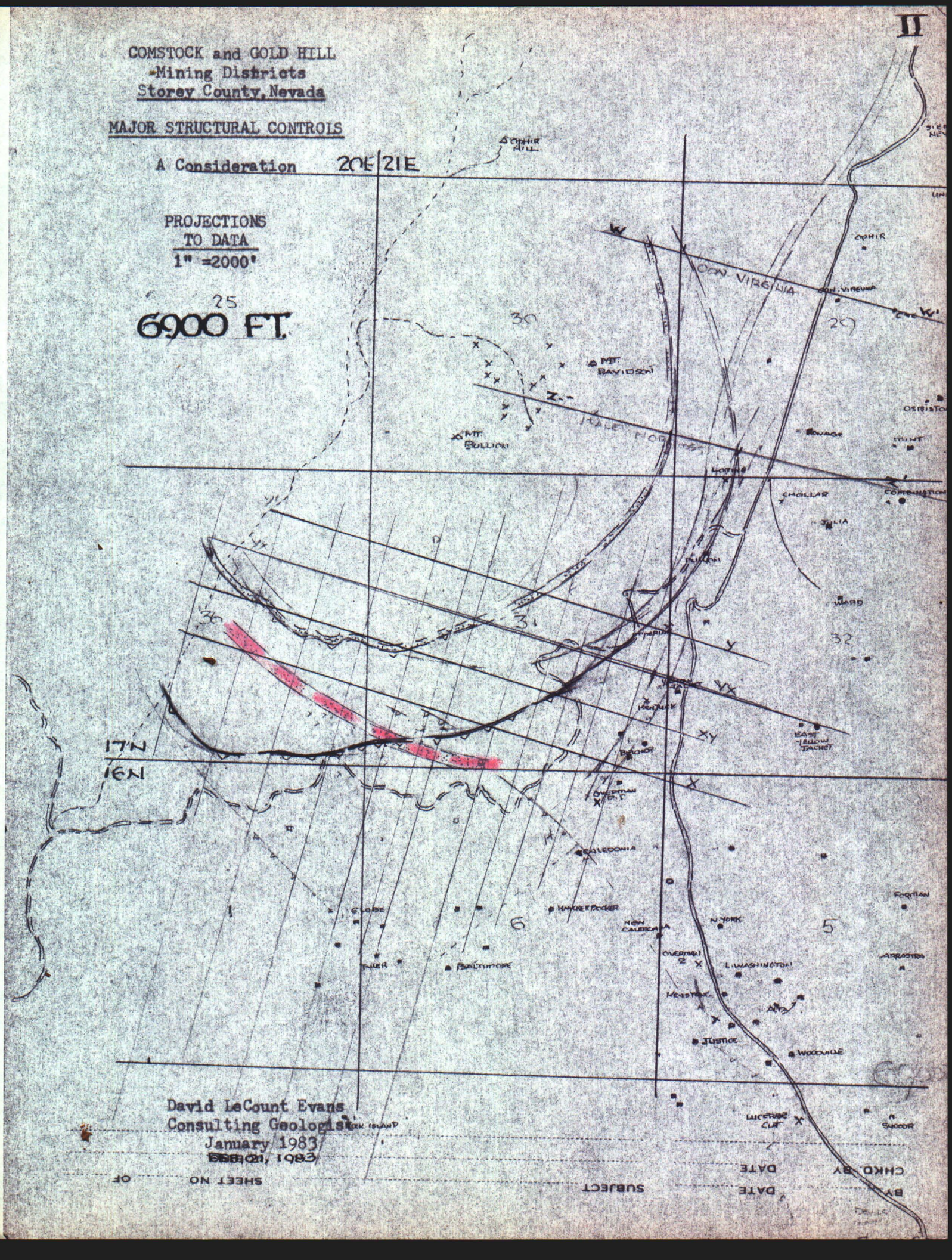
MAJOR STRUCTURAL CONTROLS

A Consideration 20E/21E

PROJECTIONS
TO DATA
1" =2000'

25

6900 FT.



David LeCount Evans
Consulting Geologist
January 1983
~~March~~, 1983

SHEET NO OF
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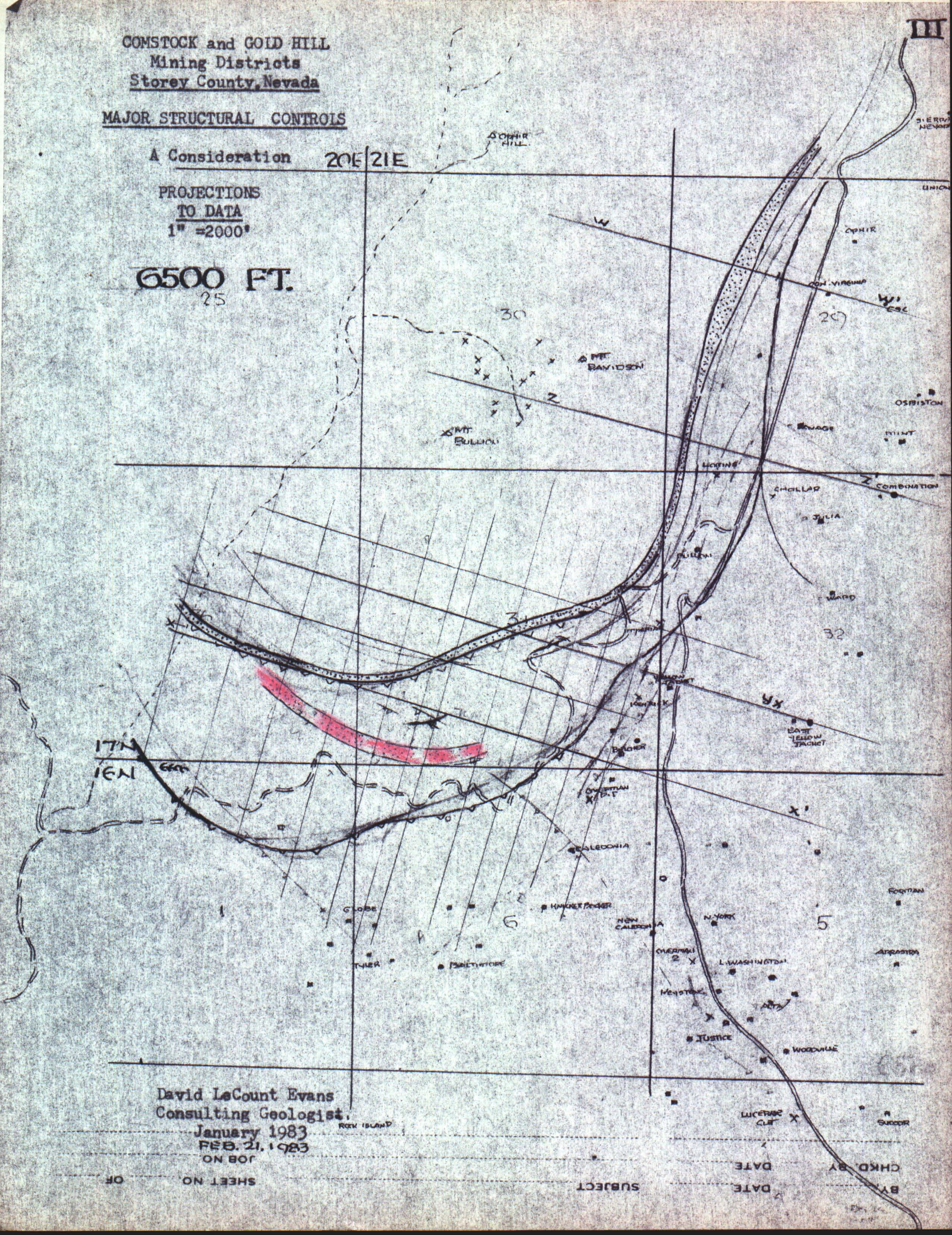
CHKD BY DATE


III
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada
MAJOR STRUCTURAL CONTROLS
A Consideration
PROJECTIONS
TO DATA
1" =2000'
6500 FT.
25
20E 21E
OPHIR HILL
W
W'
OPHIR
CON. VIRGINIA
UNION
30
29
MT. DAVIDSON
MT. BULLION
Z
SAVAGE
CHOLLAR
COMBINATION
JULIA
WARD
31
32
X
X'
EAST YELLOW JACKET
17N
16N
CALEDONIA
GLOBE
TYLER
6
5
NEW CALIFORNIA
N. YORK
L. WASHINGTON
JUSTICE
WOODVILLE
LUCERNE CUT
SUCCOR
ROCK ISLAND
David LeCount Evans
Consulting Geologist.
January 1983
FEB. 21. 1983

COMSTOCK and GOLD HILL Mining Districts Storey County, Nevada

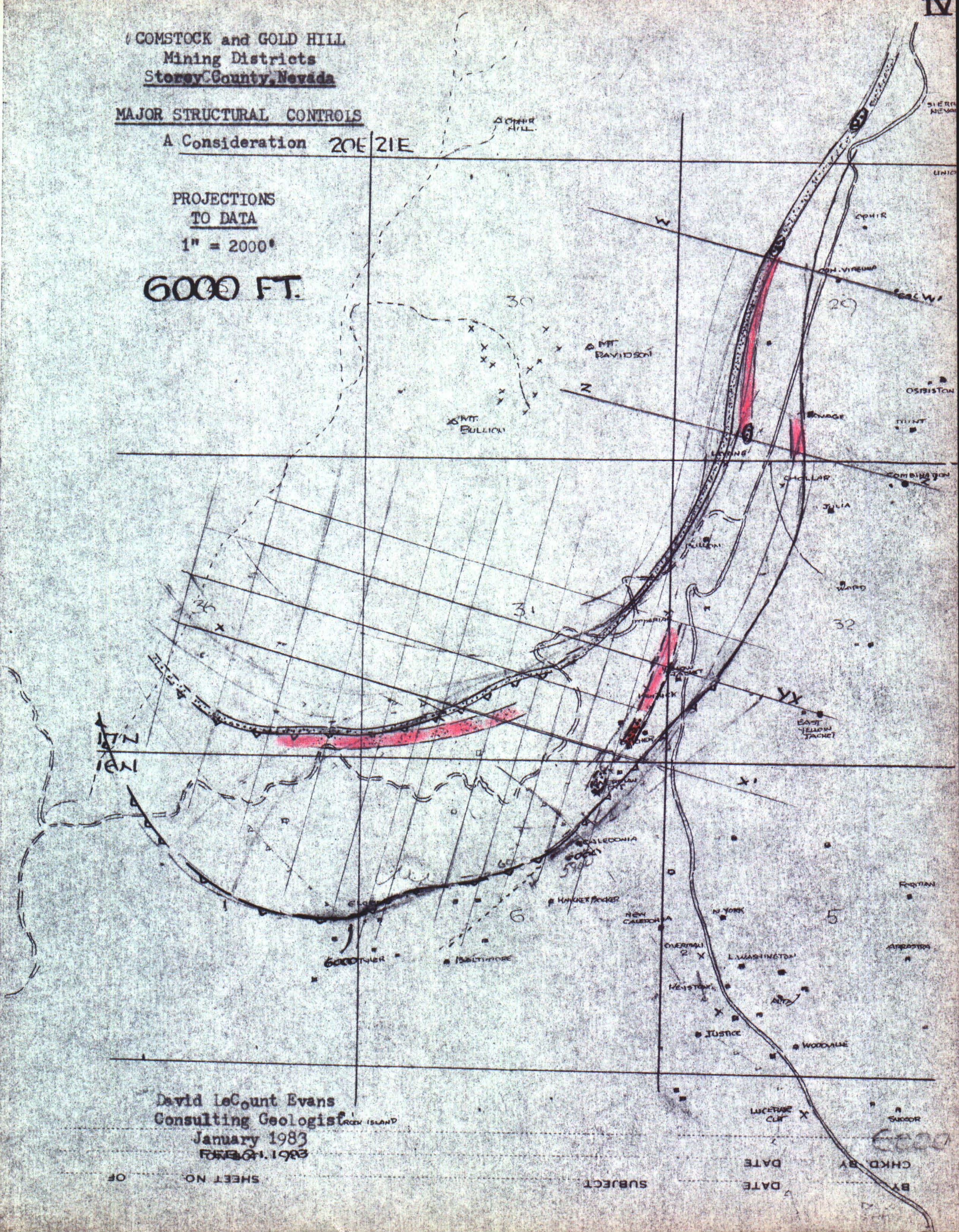
MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS TO DATA

1" = 2000'

6000 FT.



David LeCount Evans
Consulting Geologist

January 1983
FEBRUARY 1983

V

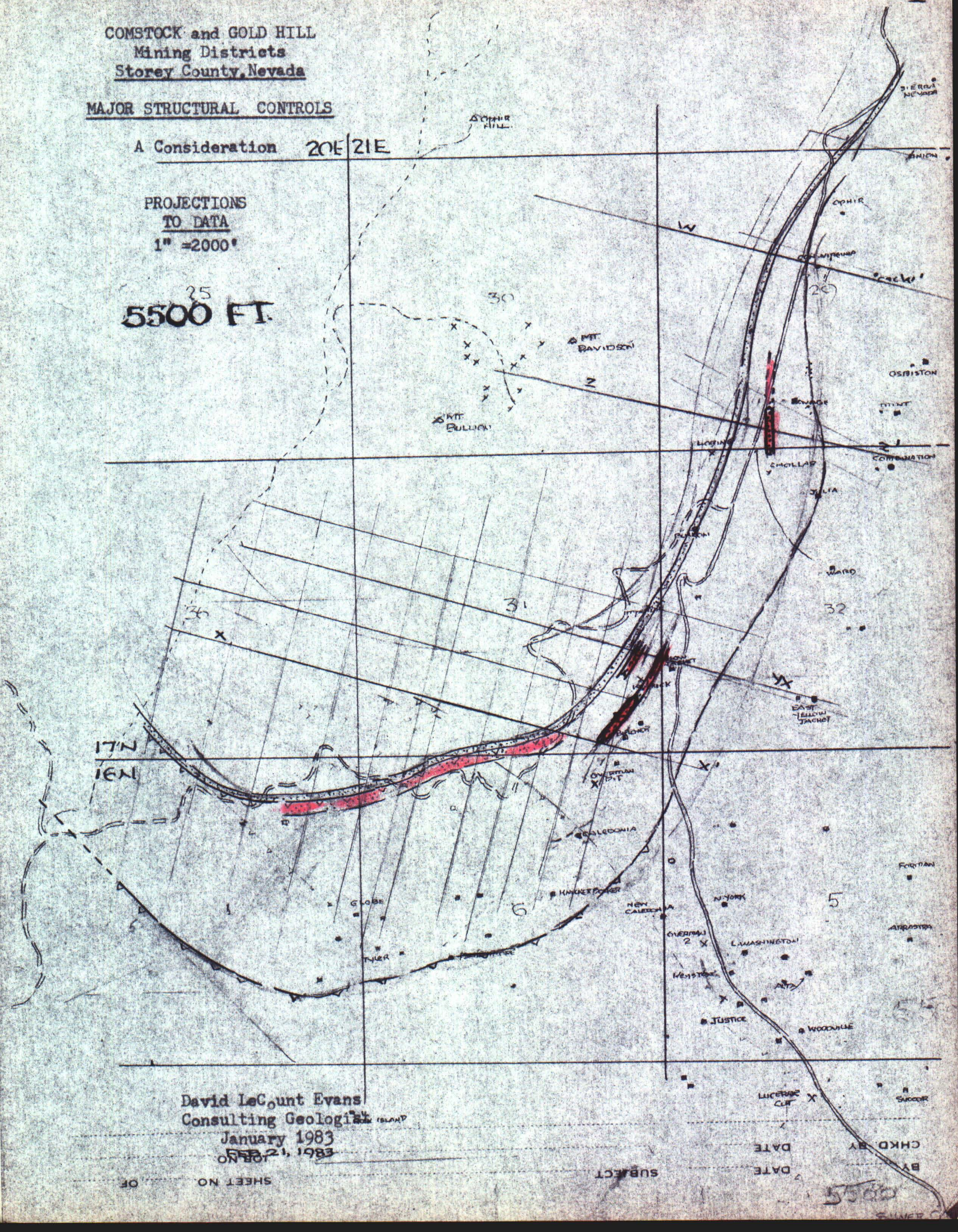
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS
TO DATA
1" =2000'

5500 FT.



David LeCount Evans
Consulting Geologist
January 1983
FEB 21, 1983

VI

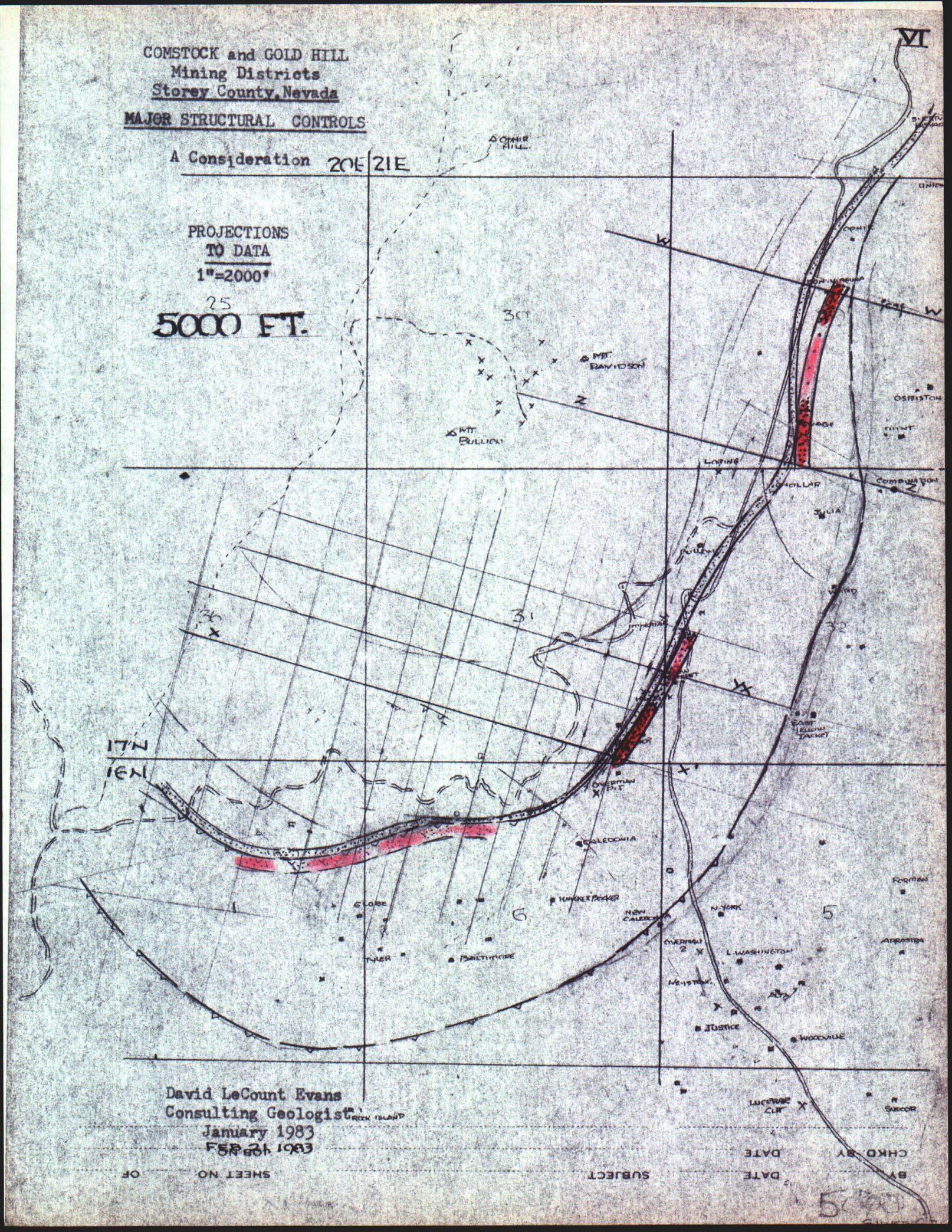
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

PROJECTIONS
TO DATA
1"=2000'

5000 FT.



David LeCount Evans
Consulting Geologist
January 1983

FEB 21 1983

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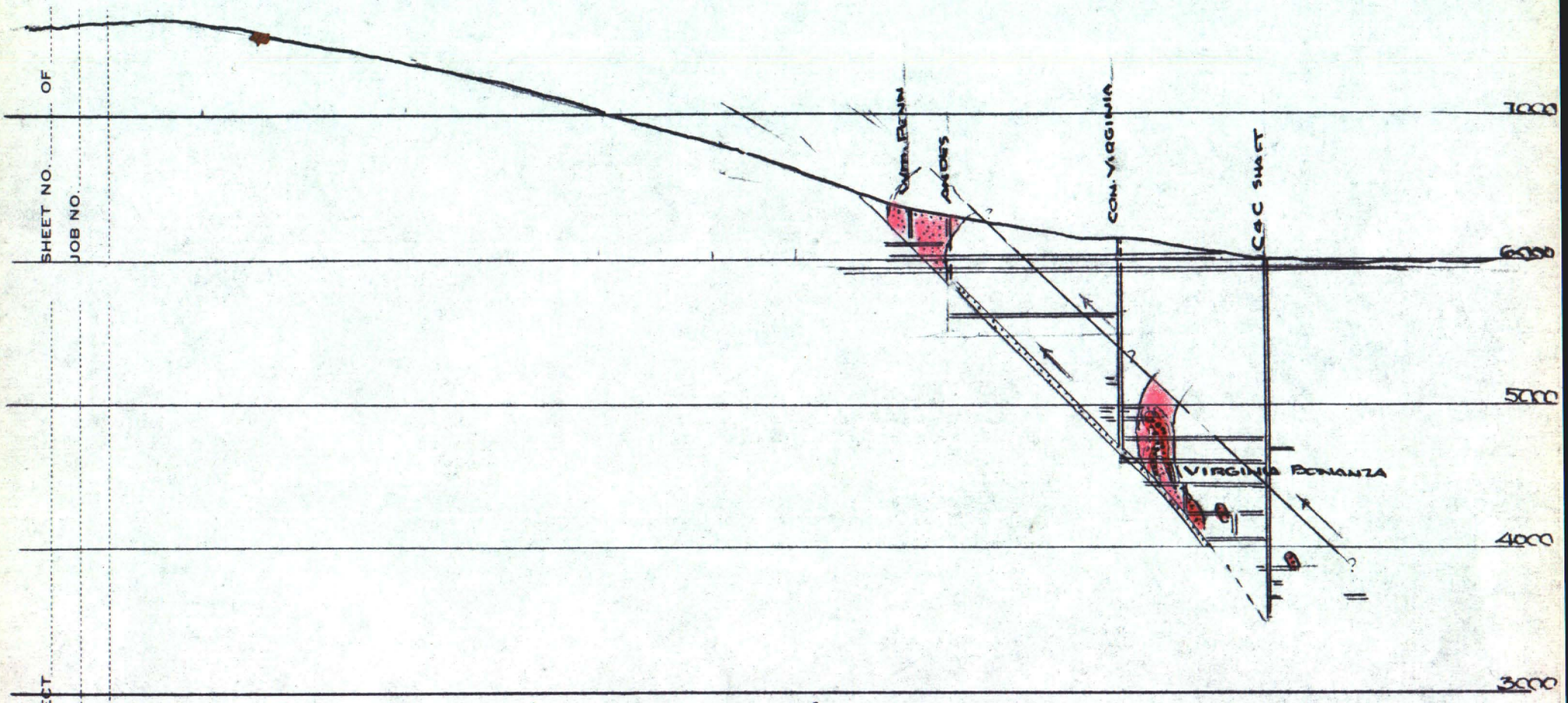
CHKD BY DATE



W-W'

CON-VIRGINIA

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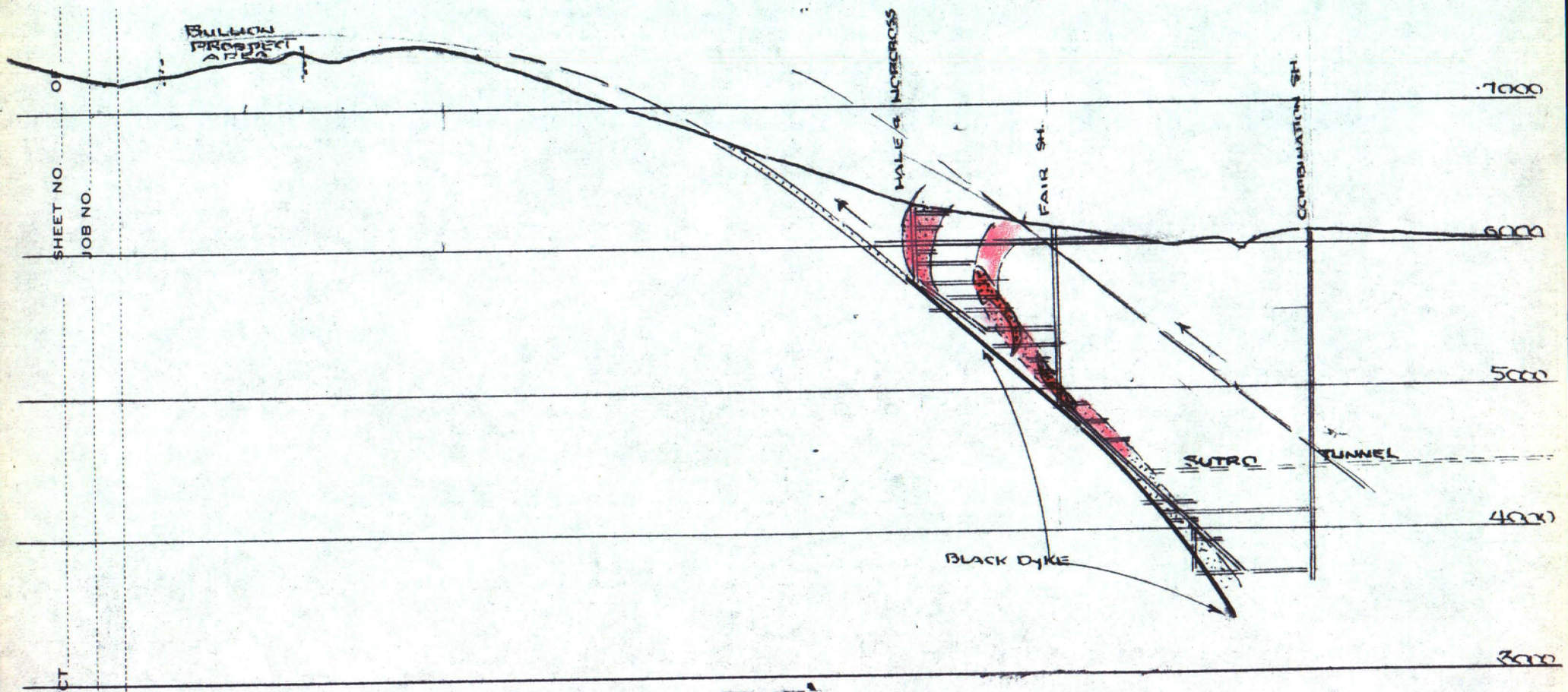
David LeCount Evans
Consulting Geologist
January 1983
FEB 21 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration
CROSS SECTIONS
1" = 1000'

VII



Z-Z'

HALE-NORCROSS

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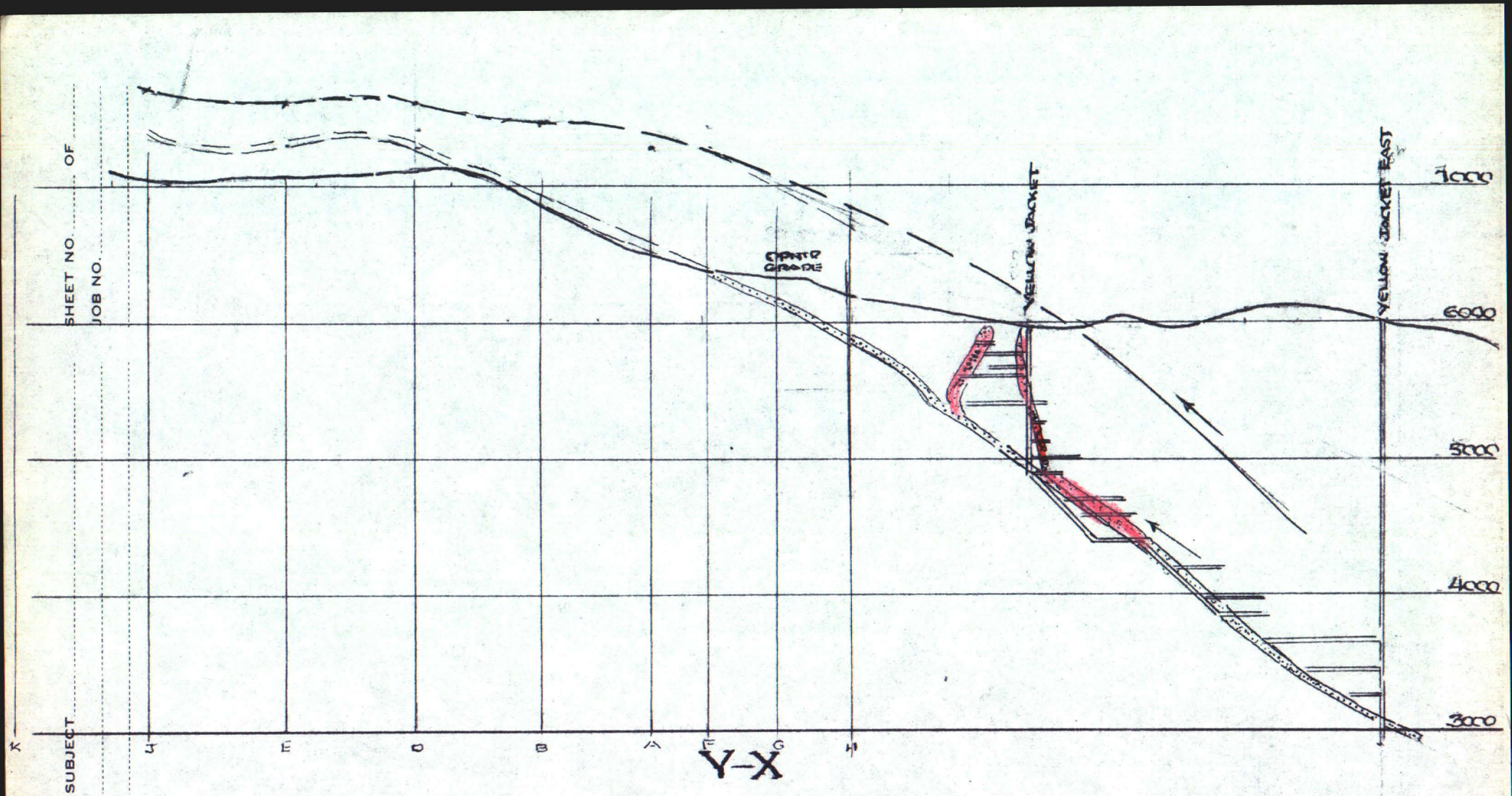
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS
A Consideration
CROSS SECTIONS
1" = 1000'

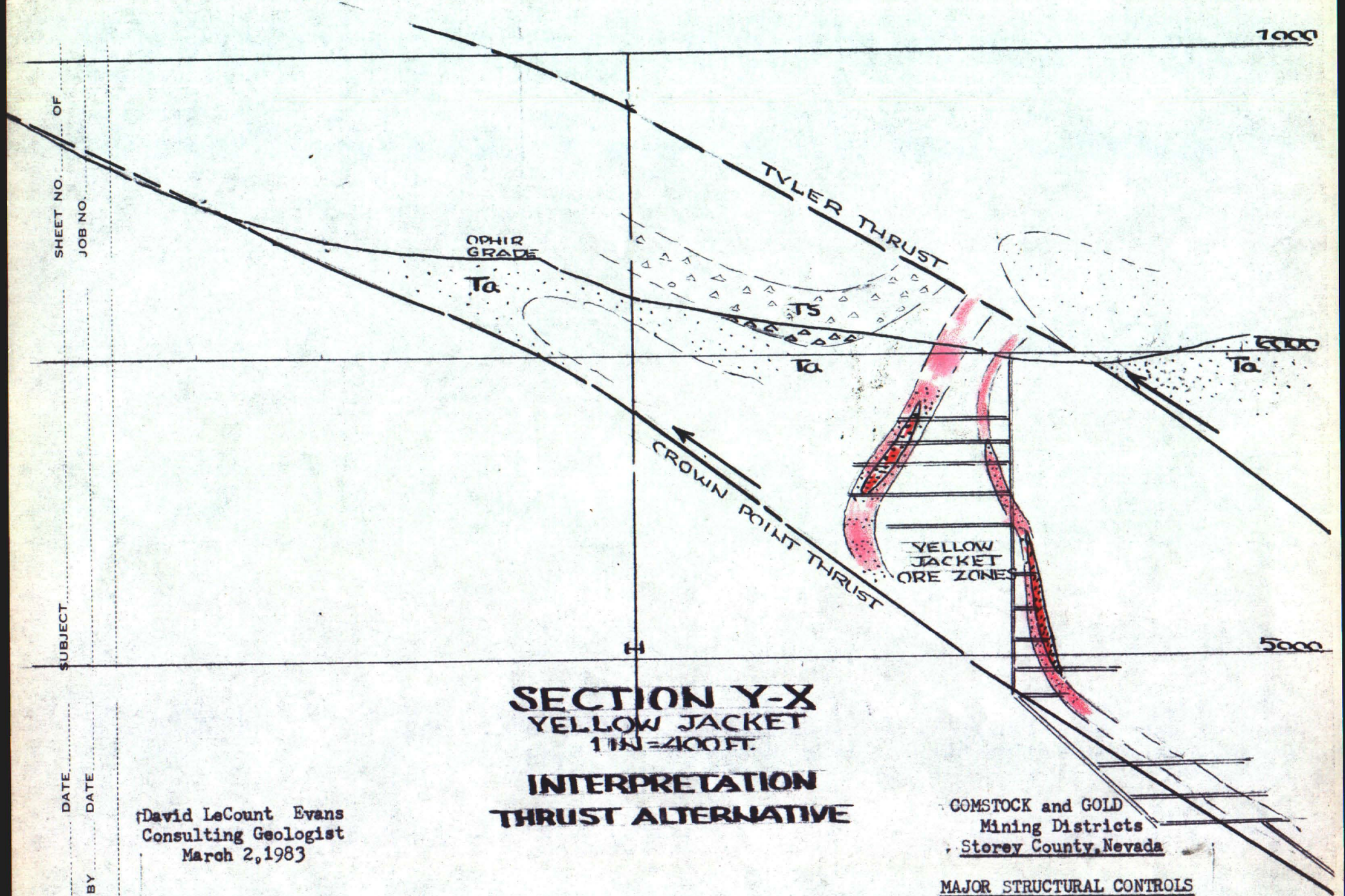
VIII



David LeCount Evans
Consulting Geologist
January 1983
FEB.21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada
MAJOR STRUCTURAL CONTROLS
A Consideration
CROSS SECTIONS
1" = 1000'

XI



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JOB NO. .....
SUBJECT .....
BY ..... DATE .....
CHKD. BY ..... DATE .....

SECTION Y-X
YELLOW JACKET
1 IN = 400 FT.

INTERPRETATION
THRUST ALTERNATIVE

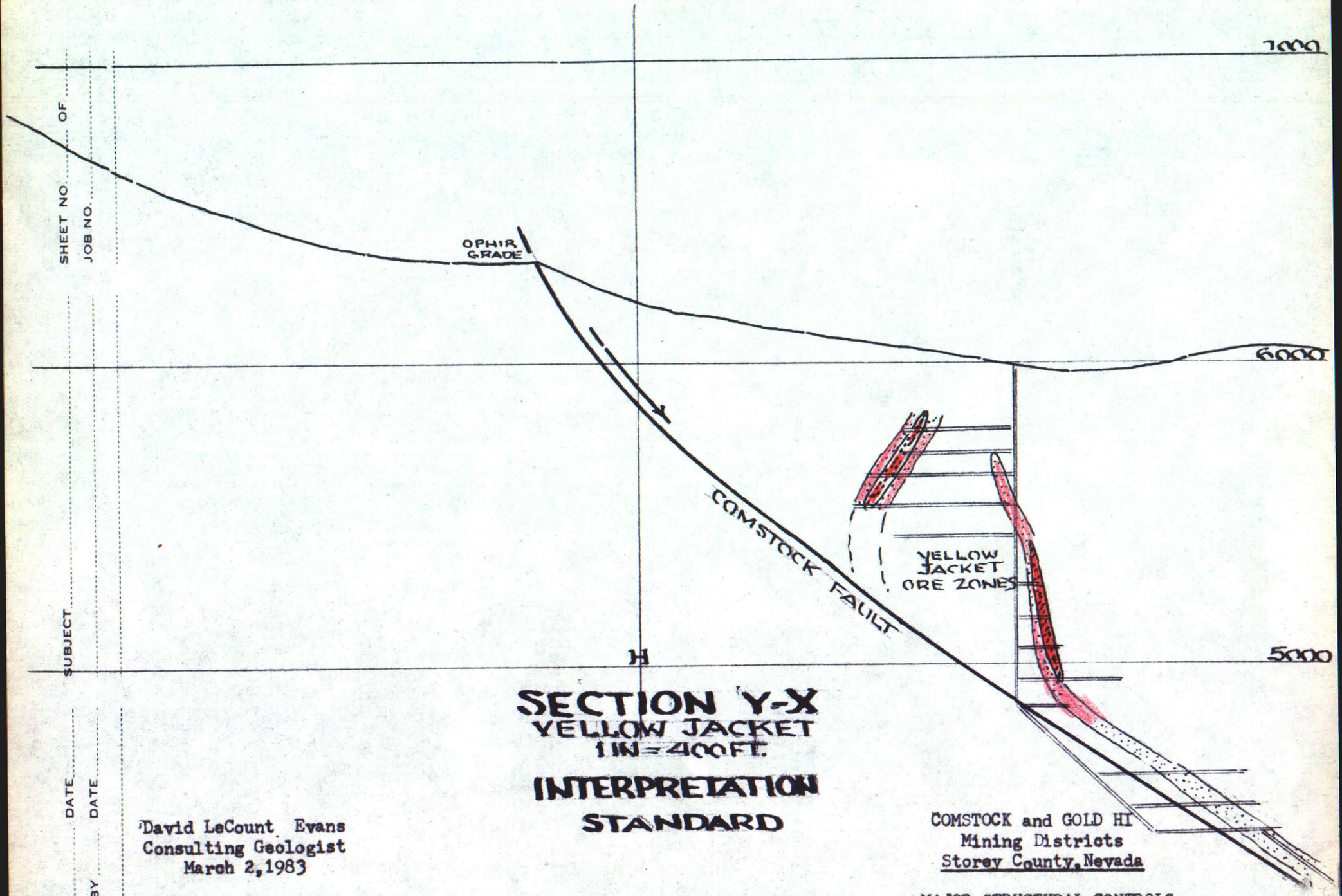
†David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

IX-b



SHEET NO. ..... OF .....
JOB NO. .....
SUBJECT .....
DATE .....
BY ..... DATE .....
CHKD. BY .....

SECTION Y-X
YELLOW JACKET
1 IN = 400 FT.

INTERPRETATION STANDARD

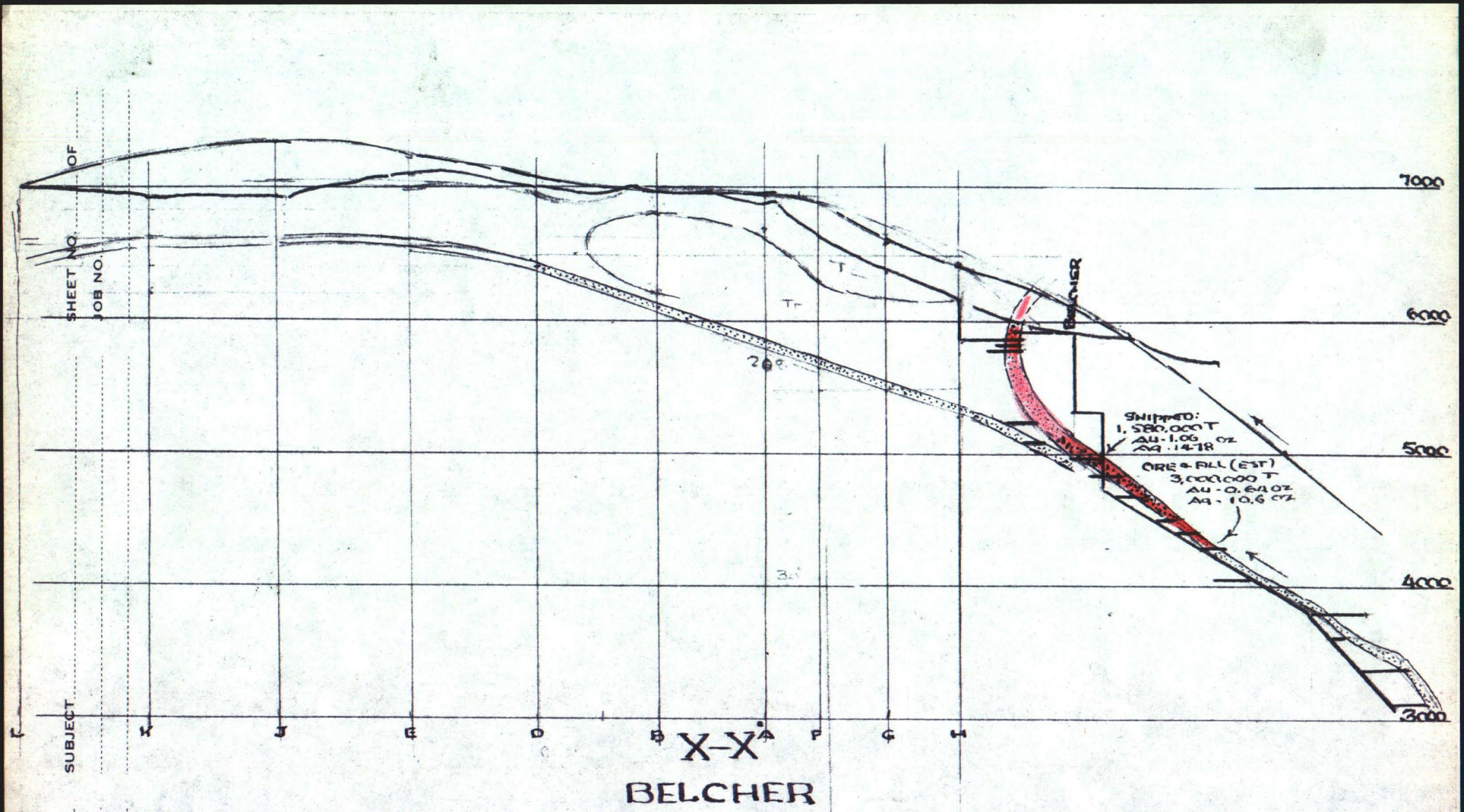
David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HI
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

IX-c



X-X'

BELCHER

SHEET NO. OF

JOB NO.

SUBJECT

BY DATE

CHKD. BY DATE

David LeCount Evans
Consulting Geologist
January 1983
FEB. 21, 1983

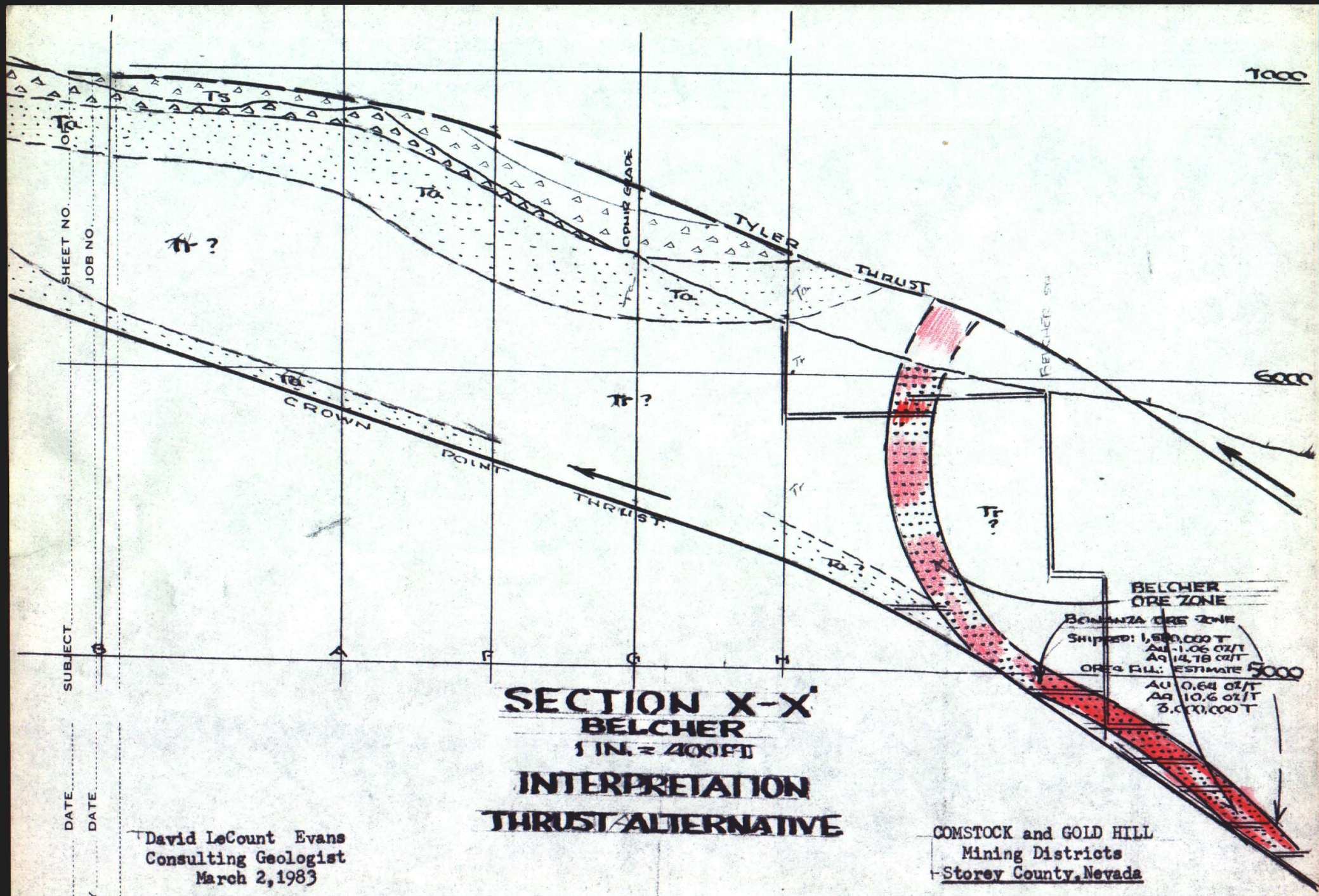
COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

CROSS SECTIONS

1" = 1000'



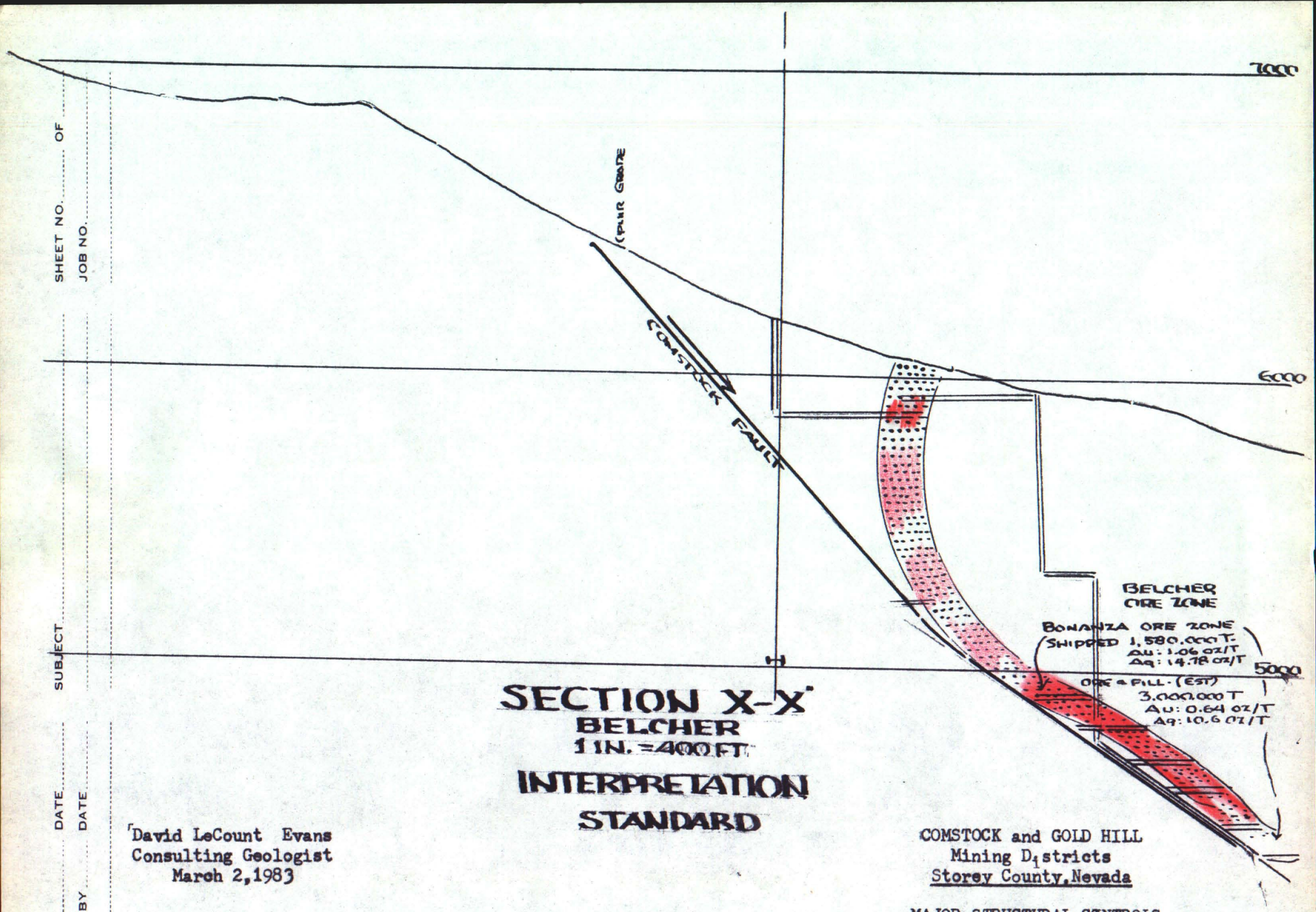
SECTION X-X'
BELCHER
1 IN. = 400 FT
INTERPRETATION
THRUST ALTERNATIVE

David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration



SECTION X-X'

BELCHER

1 IN. = 400 FT.

INTERPRETATION

STANDARD

SHEET NO. ..... OF .....

JOB NO. .....

SUBJECT .....

DATE .....

BY .....

CHKD. BY ..... DATE .....

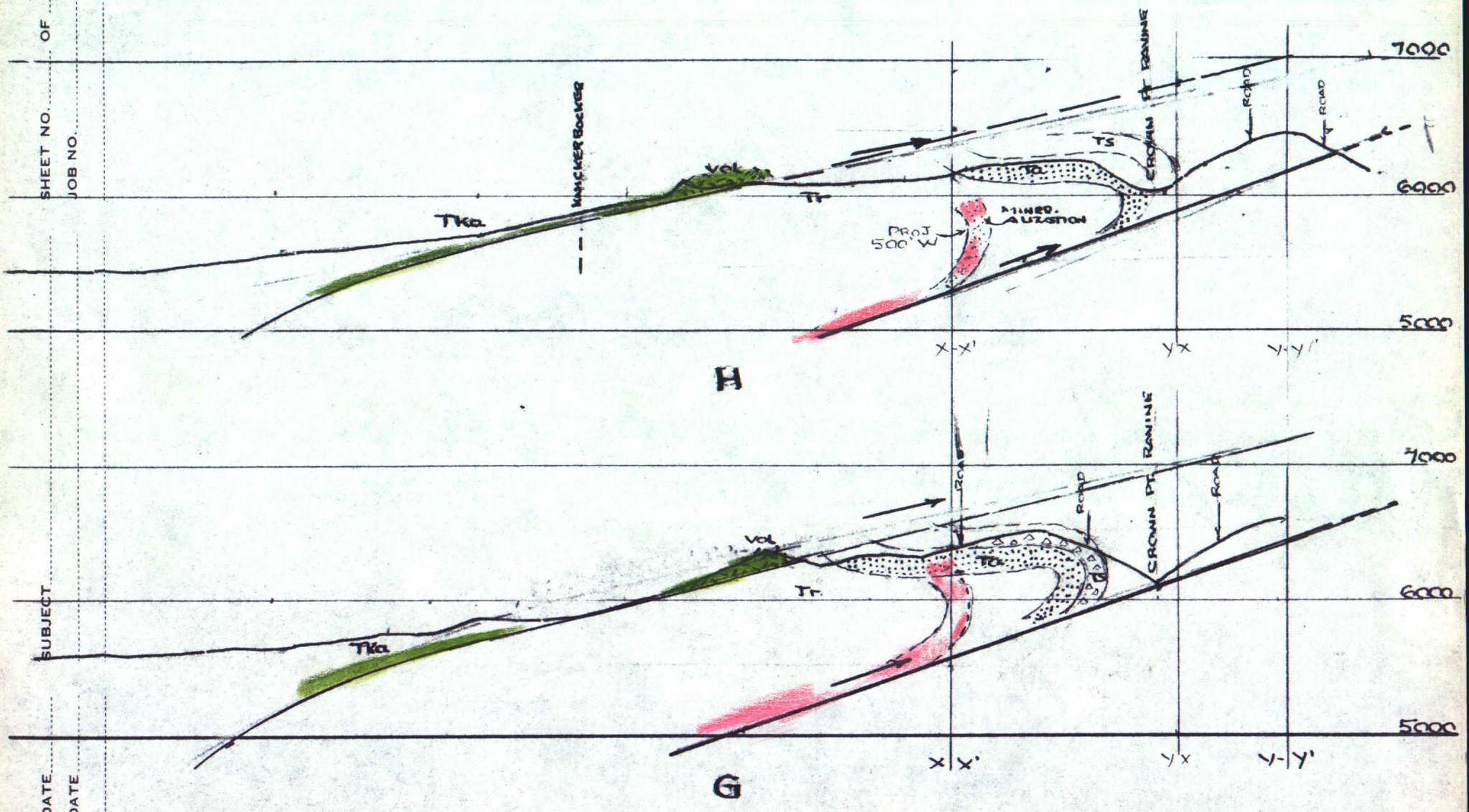
David LeCount Evans
Consulting Geologist
March 2, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

A-c



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JOB NO. .....
SUBJECT .....
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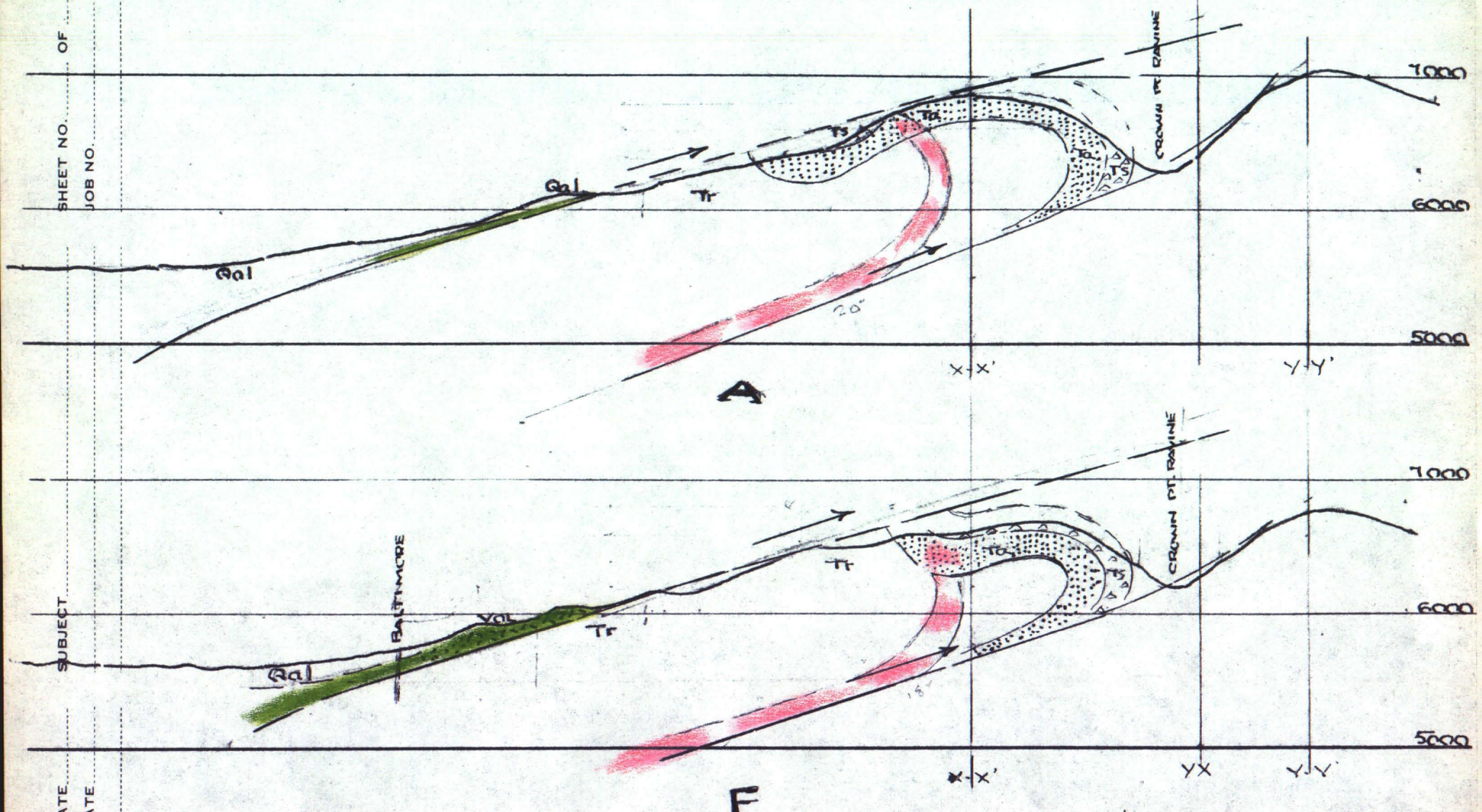
David LeCount Evans
Consulting Geologist
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada
MAJOR STRUCTURAL CONTROLS
A Consideration
CROSS SECTIONS
1" = 1000'

XI

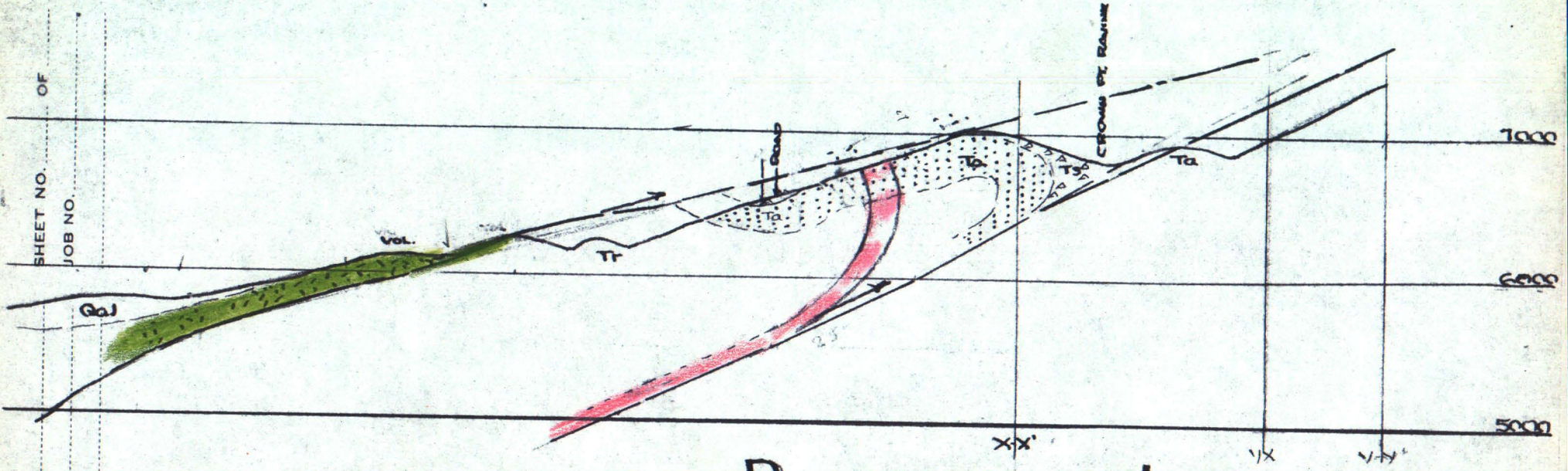


SHEET NO. ____ OF ____
JOB NO. ____
SUBJECT ____
BY ____ DATE ____
CHKD. BY ____ DATE ____

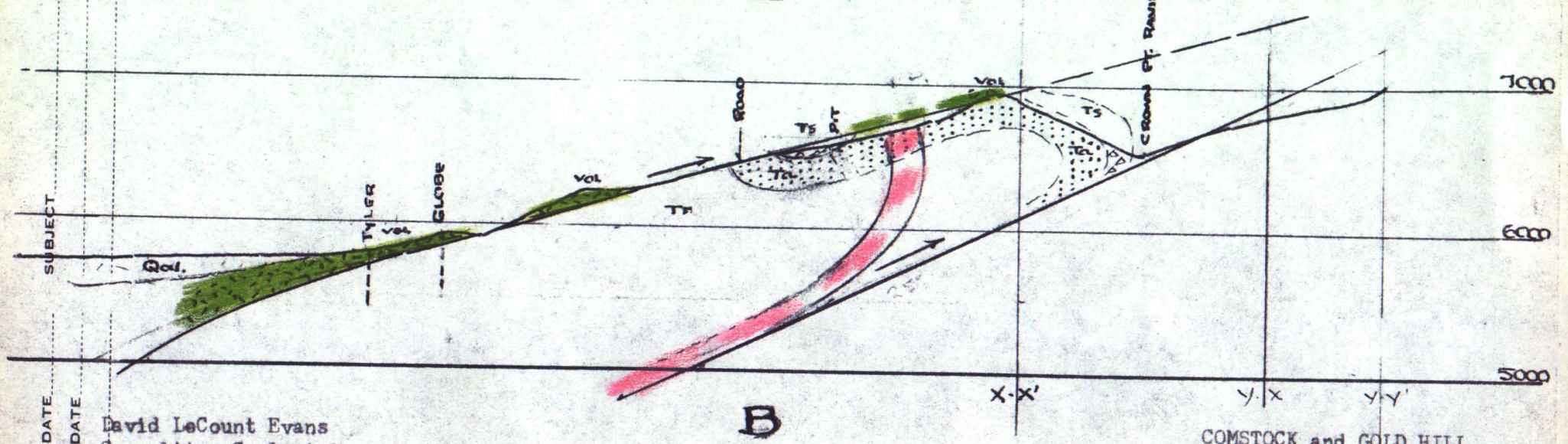
David LeCount Evans
Consulting Geologist
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada
MAJOR STRUCTURAL CONTROLS
A Consideration
CROSS SECTIONS
1" = 1000'

XII



D



B

DATE
BY
CHKD. BY
DATE

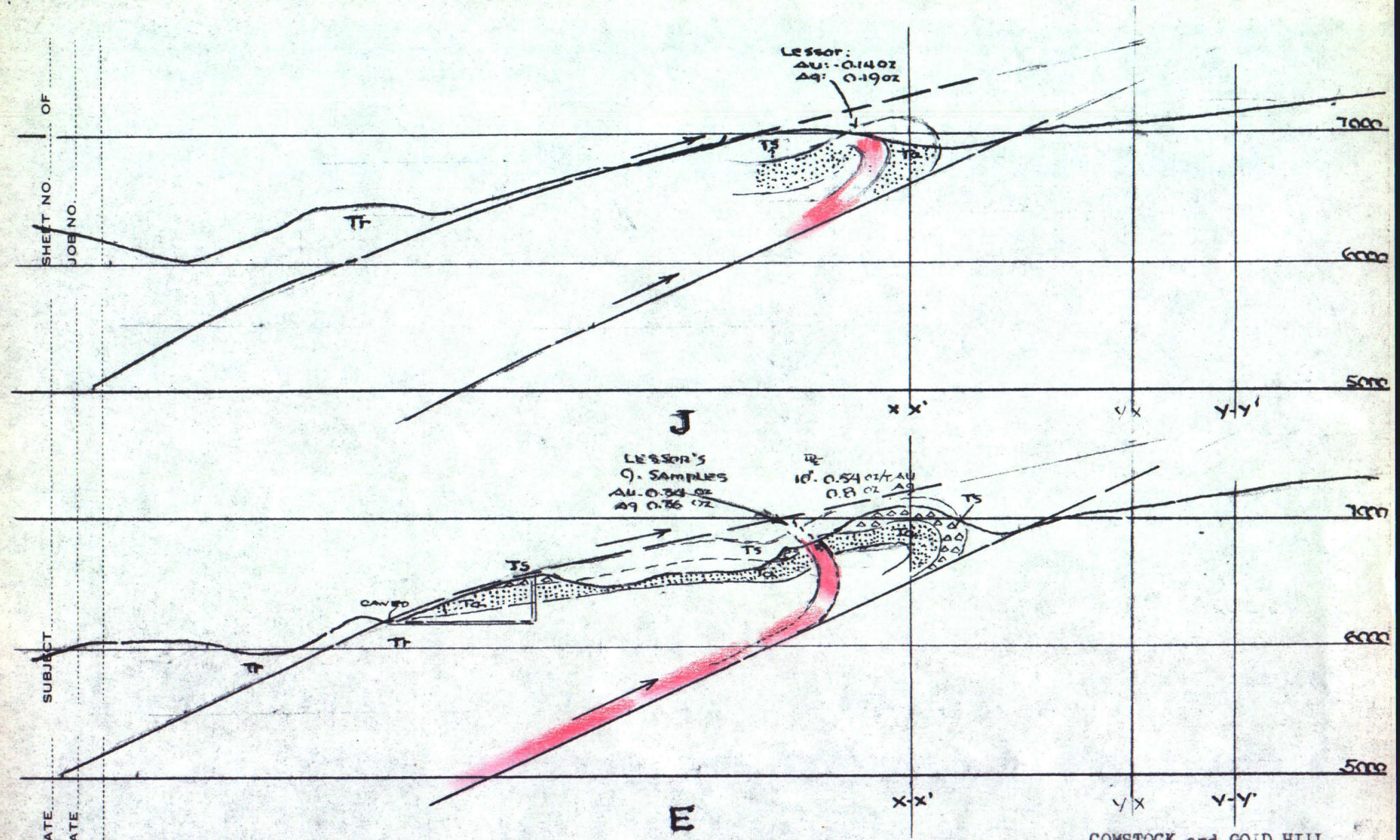
David LeCount Evans
Consulting Geologist
January 1983
FEB. 21. 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration
CROSS SECTIONS
1" = 1000'

XIII



SHEET NO. ____ OF ____
JOB NO.
SUBJECT
BY ____ DATE ____
CHKD. BY ____ DATE ____

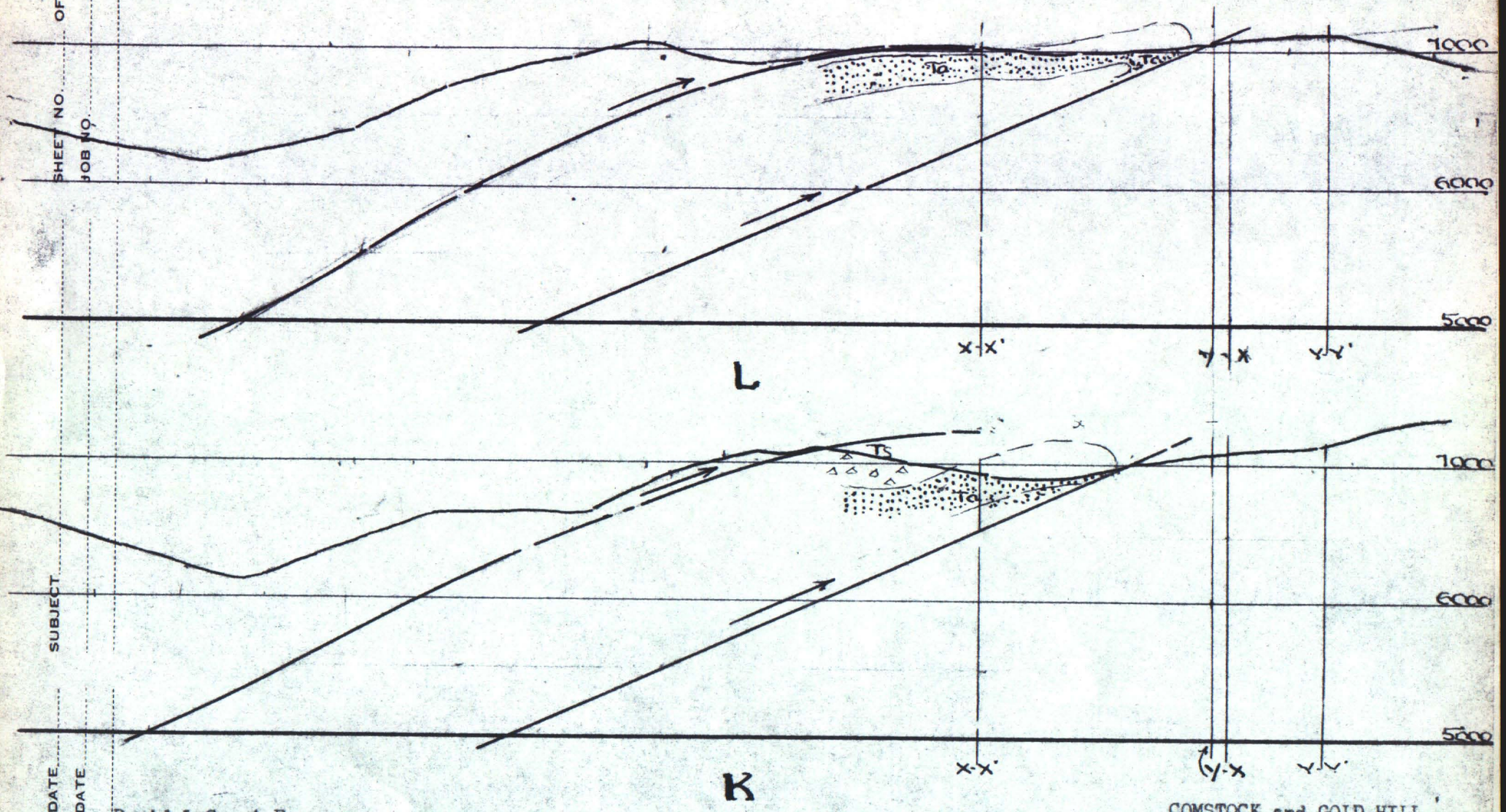
David LeCount Evans
Consulting Geologist
January 1983
FEB. 21, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration

CROSS SECTIONS
1" = 1000'



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David LeCount Evans
Consulting Geologist
January 1983
FEB. 23, 1983

COMSTOCK and GOLD HILL
Mining Districts
Storey County, Nevada

MAJOR STRUCTURAL CONTROLS

A Consideration
CROSS SECTIONS
1" = 1000'