

SURVEYING AND MAPPING DIVISION  
REPORT

The primary objectives of this Division were to survey and map the lands required for the development of Plan-  
cor 763, the Lone Star Steel Company's blast furnace  
project; however, shortly after work was under way, it  
was decided to survey and map all lands required in the  
mining operations, that is, all lands upon which mineral  
leases were to be acquired. This called for a large amount  
of work and a large organization. The program is roughly  
outlined as follows:

I. Control Surveys

- a. Control Traverses
- b. Elevations

II. Topographic Surveys

III. Ore Test Pits

- a. Staking locations
- b. Collar elevations

IV. Land Surveys

- a. Abstracting
- b. Surveys
  - 1. Computations
  - 2. Field Notes
  - 3. Conveyances
- c. Mapping

V. Miscellaneous

## I. Control Surveys

The control surveys were commenced in May, 1942. A series of traverses were run throughout the area with elevations established along the lines. Upon these lines the topographic surveys were based and they were also used for azimuth control to start the land surveys. Only two of the lines were used as land survey lines.

This work began at the Arkansas-Louisiana Gas Company Compressor Station adjacent to the old State Highway No. 26 in the Ensign B. Smith Survey.

The first line, Line "A", was run in a southeasterly direction following the Arkansas-Louisiana Gas Company pipe line, first, to a connection with H. M. Connor's first survey of the preliminary plant site, and, later, it was extended along the pipe line southeasterly throughout the area covered by our surveys.

The second line, Line "B", originated near the same point as "A" and was run southward along Highway No. 26 to connect with the preliminary location for the dam site, then run North to connect with U. S. G. S. B.M. #A-3 at the Courthouse in Daingerfield. This is the line upon which all our American Polyconic Grid Control is based as well as all elevations.

Subsequent control lines all originated on or closed on Line "A".

A total of 58.86 miles of control traverses, together with elevations, were run.

In addition to the elevations run along the control traverses, approximately 40 miles of elevations were established for topographic use, making a total of approximately 100 miles of control elevations.

## II - Topographic Surveys

At the beginning of survey work, arrangements were made with the General Land Office of Texas for the use of a topographic party under R. C. Wisdom as Chief of Party.

Upon arrival at the job in May, 1942, this party first brought in elevations from the U. S. G. S. bench-mark system along the L & A railroad and began topography on the original preliminary plant site location in June, 1942. After work was under way, it was decided to expand the area to be mapped and the second party was organized in July with C. W. Tidwell, also from the Land Office, as chief. Still later the third party, under Scott Carney, was placed in the field in August, 1942.

Planetable topography on one foot intervals and 1" equals 100' scale was first made on the plant sites followed by Ellison Creek Reservoir Area on the scale of 1" : 500' with 5' intervals. Later the reservoir sheets were filled in on one foot intervals to the elevation of 245 feet. This amounted to a total of approximately 1200 acres of topography on one foot contour intervals and 4600 acres (including the one foot area) on 5' intervals.

For a period of several weeks in July, August and September, the topographic parties were used in connection with the preliminary railroad location surveys and in running out drainage areas on the final railroad location.

In September, 1942, the topographic surveys were started on the ore lands. This topography was taken at 5' intervals on the scale of 1" equals 500' and the work was hung, first, on the control survey traverses, and, later, on the preliminary land survey traverses. It was completed for the greater part in February, 1943, and covered a total area of approximately 19,000 acres.

All topography was by plane table upon a standard mounted sheet. The sheets were coordinated and traced directly onto standard map sheets on the scale of 1" : 500'. These were later combined into a composite map by a photo-reduction process to the scale of 1" equals 1000'. In the interim, however, the original tracings were stored in the Administration Building vault and suffered so much from mildew that it was impossible for the blue printer to secure a first class matching job.

The topographic surveys summarize as follows:

1' intervals scale of 1" = 100' =	300 acres
1' " " " 1" = 500' =	<u>900</u> "
Total 1' intervals	1200 acres
5' intervals, 1" = 500' scale:	
Plant Sites and Reservoirs	4600 acres
Ore Lands	<u>19000</u> "
Total, 5 ft. intervals	23600 acres
GRAND TOTAL	24,800 acres

### III - ORE TEST PITS

Staking of ore test pits was all done by a survey party under H. M. Connor as Chief of Party.

The work began in June, 1942, and was held rather steady until September, 1942, when this party was placed on land surveys for several months. Later it returned to test pit staking.

Originally the pits were staked on a grid system at 500 foot intervals but later, after testing, some areas were restaked on 250 foot intervals.

Elevations were established on all the pit locations and also on the well collars.

This work required approximately 75 miles of transit and level lines in staking test pits on approximately 3400 acres of land.

#### IV - Land Surveys

Unlike the Federal land states, Texas, with its old system (or rather the lack of any system) of headright surveys, land grants and pre-emption lands, presents survey problems peculiar to Texas and much more complicated than a person unfamiliar with them would expect. Especially is this true in an area like this in which all the original headright grants were surveyed from 1838 to 1855 without permanent markers of even reasonably accurate surveys - a timbered area with very little farming, low valued lands, etc. The land owners down through the years paid very little attention to their land lines and the preservation of corner witness trees. This condition usually results in requiring an entire area to be resurveyed instead of permitting a survey of any individual tract. This was the case in this instance and it became necessary to resurvey not only our lands but those headright surveys adjacent thereto or which may in any way affect the proper location of the required lands.

As in the topographic surveys, the area to be resurveyed called for a large amount of work involving (a) abstracting, (b) surveying and (c) mapping.

##### a. Abstracting

Preliminary to and in preparation for the surveying field work, abstracting of the Surveyor's Deed and Patent Records of Morris County, was commenced early in July, 1942.

At the start of this work, we took off complete abstracts working with the understanding that these abstracts were to be used by the Real Estate Division of the D. P. C. for title purposes. Such abstracts were prepared on all lands required for the plant site and reservoir before we learned that the D. P. C. had contracted this work to Elliott and Waldron, Abstractors. Following this we reduced this work to securing only the record descriptions and field notes required for use in our surveying. From these instruments, working, or abstract, sketches were prepared on 80 headright surveys by the time the work was suspended in March, 1943. These field notes and descriptions were duplicated by Ditto process and multiple copies made.

### b. Surveying

As mentioned under "Control Surveys" all the land surveying is coordinated on the American Polyconic Grid System based on the U. S. G. S. B.M. #A-3 at the Courthouse in Daingerfield, Texas.

Horizontal chaining was done using hand levels and plumb bobs. The chainmen were trained (and checked periodically) in the proper pull on the tapes by use of tape scales.

All angles were read three times and their mean readings used for azimuth control. Frequent ties were made to the control traverses with occasional Polaris readings as a further check.

The required closures were: chaining 1 : 5000 and, azimuth 10" per transit point. The average ratios actually secured were much better than the requirements in both factors.

All headright surveys and property corners were monumented with 6" x 6" concrete markers with a copper disk set in top. Iron rods were set on each line leading away from the corner monuments as reference points and also used as angle points in meander lines.

Witness trees were marked in many instances as called for in our "corrected" field notes.

The "Surveyors Report" to the Commissioner of the Land Office of Texas is attached hereto to which reference is made for more specific details of certain surveys.

Prior to the start of work by the John V. W. Reynders organization, a partial survey of the preliminary plant site "A" was made by H. M. Connor, a local surveyor. This survey was tied to by the control surveys and used by the topographic surveys for their initial work. Later it was retraced and correlated with the land surveys.

In September, 1942, the land survey organization began to function.

Party S-1, under Vaughn H. Phillips with Ned Ford as Instrumentman, had been organized late in August and was working on the Ensign B. Smith.

Party S-2, under R. B. Steger with Albert Lee as Instrumentman, was also organized during August but for the first month their work was on location of the power line and on the railroad. It started on land surveys proper about September 15th on the O. C. Pouns and R. P. Holcomb Surveys.

A party under H. M. Connor, which had been working on staking ore test pits, was re-organized as Party S-3 with Connor remaining as Chief and A. E. Holcomb as Instrumentman. They began their land surveys on the Wm. C. Everett Survey.

This organization had just been made when instructions were received to do the impossible. We were ordered to resurvey and return corrected descriptions on all lands involved in the East Texas Brown Ore Company mineral deal by October 31, 1942, and also those in the Marion-Cass Development Company block by November 30th.

Two new land parties were assembled - Topog Party No. 3, under Carney, was re-organized into a land survey party and the control survey party, C-1, was placed on land surveys.

Some progress had been made by October 31, 1942, when it developed that the surveys were not required by the dates ordered so this arrangement was abandoned. The extra parties were laid off and Topog Party No. 3 and Party C-1 both returned to their former duties. The land parties resumed their work as per the original schedule.

Party S-1 surveyed nineteen (19) headrights together with their required subdivisions. This party was terminated in April, 1943. Phillips, however, was retained in the office until July 15th.

Party S-2 remained on the job longer than any of the others. It surveyed thirty-six (36) headrights and set all monuments (637) throughout the area. It also ran the power line location, tied-in Highway #26 to survey lines for right-of-way purposes and surveyed both the railroad and power line rights-of-way tracts. Steger remained with the party until September, 1943, when he



was made acting land agent for the Lone Star Steel Company. After Steger was transferred, A. E. Holcomb acted as Party Chief until the party was terminated in February, 1944.

Party S-3 alternated their work between land surveys and staking ore test pits. The last two weeks prior to termination in August, 1943, it re-marked certain test pit areas and meander points with iron pins. It surveyed eight (8) headright surveys, ran about 75 miles of lines, staking 711 ore test pits and set iron rods at approximately 500 shore line meander points.

Summary of Survey Field Work

63 Headright Surveys	26,847.89 Acres
3 Vacancies	108.72 "
"Original" Subdivisions	10,194.56 "
Lone Star Steel Company Subdivisions (In addition to the "original" subdivisions)	<u>2,748.06</u> "
Total Acres Surveyed	39,899.23 Acres

In making these surveys the approximate mileage of preliminary traverses is roughly as follows:

Headrights	125 Miles
Subdivisions	150 "
Shore Lines	<u>35</u> "
Total	310 Miles of line.

To mark the surveys we set:

Concrete monuments	637
Reference points (iron rods)	1600
Ore test pits (not drilled, re-marked with iron rods for future use), approximately	220
Meander points, approximately	<u>500</u>
Total	2957

## 1. Computations

The correlating of our surveys to the American Polyconic Grid Coordinate System entailed a huge amount of computation, requiring the services of two computers for nearly a year.

## 2. Field Notes

All field notes and "corrected" field notes were written by the Principal Surveyor. An original typed copy and three (3) carbons were prepared for record purposes and then 30 copies of each tract to be acquired were made by the Ditto process. On those headright surveys field noted, but in which we were not acquiring lands in fee, fifteen (15) copies of each was prepared.

"Corrected" field notes were returned on 63 headright surveys and approximately 140 original subdivision tracts. The tracts to be acquired originally totaled 163 tracts but subsequent changes on many of them increased this number to approximately 225 sets of field notes, thus making a total of field notes computed, typed and dittoed of about 430. Due to the changes mentioned, many of these notes lost their value and in the final assembly we bound for recording in Morris and/or Cass Counties a total of 337 field notes together with 112 plats covering a total of 36,677.53 acres of land. This acreage broken-down is as follows:

Headright Surveys	26,847.89	Acres
Vacant Public School Land	108.72	"
Subdivision Tracts	9,600.57	"
Pipe Line Easements	2.32	"
Railroad Rights-of-way	62.74	"
Power Line Rights-of-way	<u>57.61</u>	"
Total	36,677.53	Acres

In addition to the above as a result of changes instructed since binding, we have prepared for recording separately four additional notes:

J. C. Wilson Estate	85.84 Acres
Connor Brothers	12.51 "
Lone Star Steel Co.	18.36 "
" " " "	<u>45.05</u> "
TOTAL	161.76 "

This makes a grand total of 36,839.29 acres upon which field notes are being recorded.

### 3. Conveyances

From the initial negotiations for the required lands until some of the very recent changes, this Division prepared all conveyances such as deeds, waivers of water damages, easements, etc., as to their descriptions. We filled in the descriptions and transmitted the instrument to the D. P. C. Agents office in Dallas for the considerations to be supplied there. This involved originally 163 tracts but, like the field notes, a large number of changes were instructed and, therefore, approximately 225 to 240 separate instruments were prepared.

In addition to these upon those tracts upon which condemnation was required, we prepared individual sketches of each tract together with the field notes for same and a locative map. These were supplied as follows:

D. P. C. Local Agent	1 Copy
Washington Office	12 Copies
Lone Star Steel Co.	<u>2</u> Copies

A total of . . . 15 Copies of each set.

From first to last, we have supplied the following number of tracts:

1st - Proceedings	7 Tracts
2nd "	19 "
3rd "	43 "
4th Request	14 "
5th "	<u>3</u> "
TOTAL	86 "

### c. Mapping

Without base maps or control maps of any particular value to start this project, we were faced with having to prepare some map to serve a number of purposes until we could build specific ones.

The first was made as an Index and General Location Map by combining a U. S. G. S. map which accompanied their publication on the Queen City Sand Deposits with a U. S. C. & G. S. map showing the Daingerfield quadrangle. This latter map showed topography while the first mentioned showed the mineral deposits. Both were on the scale of 1 equals 62,500 or 1" equals 5208 feet. The southern limits of the U. S. C. & G. S. map was the 33° of latitude and we joined them along this line. Photolithoid reproductions were made upon which we superimposed various data. One was prepared as a General Index Map, one to show proposed railroad locations, another highway locations and a combination of those two. As more data was secured, new issues were forthcoming until we had this same small scale base map showing plant site, beneficiation site, railroad, highway and index to our topographic and land survey sheets with their coordinate boundaries. This was then used as a progress map to accompany our weekly reports until it could be replaced with another.

The second, and most infamous, of our early maps was a land map on the scale of 1" equals 1000' prepared from the deed records for the lands in and around the plant site and reservoir area. This became known as the "John V. W. Reynders Abstract Map" and figures into the land transactions to a very great extent.

As work progressed we secured a reproduction of an oil company ownership map of this area and upon a negative of it we superimposed our data and used it for reporting progress and also as a general guide for the field parties in laying out their work. This map was on the scale of 1" equals 1.8 miles.

We are indebted to the Magnolia Petroleum Company for a series of negatives of their ownership maps throughout this area which have been used many times over to show the various mineral lands acquired. In fact, these are the only maps we have to show all the holdings of this project.

From time to time we have made special maps for various purposes from these Magnolia maps. For the sake of brevity, these special maps will not be enumerated herein.

As a general statement accounting for a very large number of man hours, the various special maps prepared, colored and mailed at all hours on special urgent orders were a source of trouble for a long period of time. It is estimated to have required the full services (which included overtime) of at least one man for a period of about six months.

The mapping of the land surveys consisted of:

1. Working Sketches	1" equals 500' Scale
2. Survey Sketches	1" " 500' "
3. Area Survey Maps	1" " 500' "
4. Survey Maps	1" " 1000' "
5. Topographic Maps	1" " 500' "
6. Special Maps	Variable Scales

A brief explanation of the various groups of maps is as follows:

1. Working Sketches were of two types. The first type (a) was prepared from abstract data for guidance in running the preliminary field surveys. The second (b) type was prepared from our field work as a guide in selecting evidence for the proper location of the survey lines. These were platted from the notes as turned in daily by the survey parties and usually covered several headrights. All marked trees, corners, witness trees, fences, lines of occupancy, etc. found in the field were shown on these plats to serve the computers and Principal Surveyor in setting up the final lines. For the greater part, these sketches were made on paper on the scale of 1" equals 500'. These sketches carry no identification numbers.

2. Survey Sketches are also of two types, both of which were prepared from our final survey data and reflect our field notes.

Type 1 are the maps of the individual headright surveys made for recording with our "Corrected Field Notes" in the General Land Office of Texas. This is a legal requirement. These survey sketches were on linen and made to the scale of 1" equals 500' unless otherwise noted. They carry the Surveyor's Certificate and are numbered "LS-1", "LS-1-A" or "LS-1-B", etc. to "LS-63". The Land Office requires all sketches to be submitted in the form of tracing, so for that reason we had the originals duplicated for recording. Prints from these are likewise being recorded in the County Surveyor's Office of Morris and/or Cass Counties.

Type 2 are survey sketches of various tracts of land; these were made for condemnation proceedings, as a rule, or for use of the Real Estate Division in acquiring certain lands. They too, as a general rule, were on the scale of 1" equals 500' since they were usually traced on paper from the "LS" maps. In each instance, they carry the land owners name for the purpose of identification. No numbers were assigned these maps. Approximately 110 of these maps were made. On the 86 tracts submitted for condemnation, we supplied 16 prints of each, most of which had the tract boundaries outlined in red.

3. Area Survey Map. - This map is on the scale of 1" equals 500' and is composed of eight (8) standard (24" x 36") sheets coordinated to match the 500' topographic maps covering the same area.

These sheets carry the identification serial numbers in the following order:

763-434	763-437
763-433	763-438
763-432	763-439
763-431	763-440

These numbers are 30 higher than the topographic map sheets covering the same areas, that is to say, 763-431 covers the same area as topographic map 763-401; 763-437 the same as 763-407.

They show headright surveys, subdivisions, railroad, power line, pipe lines, plant sites, housing projects, dams, reservoirs and highways. In addition to these items, they show each tract of land acquired in connection with the development of this project, giving their tract numbers, appraisal numbers, names of owners from whom the land was acquired and the acreage content of each tract.

4. Survey Map. - This map is on the scale of 1" equals 1000' and consists of five (5) standard (24" x 36") sheets numbered 763-441, -442, -443, -444 and -445. The map shows all headrights surveyed, all subdivisions and all items of the project such as dams, reservoirs, plant sites, railroad, power line, pipe lines, housing project, roads and highway. Van Dyke negatives were made of these sheets, matched together and two (2) composite duplicate tracings made. These are explained under "Special Maps".

5. Topographic Map. - This map is on the scale of 1" equals 500' with 5 foot contour intervals. It is composed of 16 standard (24" x 36") sheets carrying the identification serial numbers in the following order:

763-404	763-407	763-414
763-403	763-408	763-413
763-402	763-409	763-412
763-401	763-410	763-411
	763-417	763-418
	763-420	763-419

The skips in the numbering are due to abandoning certain areas originally planned to be surveyed.

These maps were made by tracing direct from the original coordinated plane table sheets. A composite photo reduction was made of these sheets in January, 1943, prior to completion of the work and another one in its completed form was made as of May 31, 1944. These maps carry the numbers 763-425 and 763-425 Revised. They are further explained under "Special Maps".

6. Special Maps are:

a. Topographic Map No. 763-425. This was a composite photo reduction made by matching Van Dyke negatives of our 1" equals 500' topographic map sheets and combining into one tracing on the scale of 1" equals 1000'. This was done before either the topographic or land surveys were complete. Approximately thirty-six (36) copies of this map were colored for distribution.

b. Topographic Map No. 763-425 Revised. This map was prepared in the same manner as the first 763-425 after all surveys were completed.

It shows all items of the Project such as railroad, power line, pipe lines, plant sites, dams, reservoirs, silt basin, housing project, roads, etc. as well as all topography taken and land surveys made. This revision date is as of May 31, 1944.

c. LS-446, Survey Sketch - 763-446. This map was prepared for filing with the General Land Office of Texas in connection with the "Corrected Field Notes". It is a composite duplicate tracing made by combining the five (5) standard sheets of the 1" equals 1000' Survey Map. The duplicate tracing was made on the original scale of 1" equals 1000' and shows all the headright surveys, re-traced by this organization and upon which "Corrected Field notes" were returned.

d. Area Map - 763-450. This map was made from the 1" equals 1000' Survey Map by combining the five (5) sheets into one duplicate tracing (the same as was done in LS-446, Survey Sketch) on the original scale of 1" equals 1000'. Upon it we show, in heavy lines, the outer perimeter of all lands acquired in fee for the development of this project as well as the location of all project items such as power lines, railroad, pipe lines, dams, reservoirs, silt basin and plant sites.

e. Progress Map - 763-451. This map was made by superimposing upon an ozalid positive of a section of the Magnolia Petroleum Company map (scale 2" equals one mile) the limits of the area surveyed, the perimeter of the lands to be acquired, the railroad, power line, dams, reservoirs, and plant sites. A legend accompanies the map to show the status of the land acquisitions.

f. Progress Map - 763-453. This was a map made by combining ozalid positives of part of the Survey Map on the scale of 1" equals 1000' and superimposing upon it the boundaries, tract numbers, appraisal numbers, names of owners and acreage of each tract of land being acquired for the plant site, Ellison Creek Reservoir and Ore Development areas. Made in October, 1943, it was designed primarily as a guide and progress map to be used in connection with the acquisition of the lands.

g. Location Map - 763-452. This was a map made to accompany the filing of condemnation proceedings upon the railroad and power line rights-of-way tracts and the lands required for the ore development facilities. It was prepared by combining ozalid positives of part of the Survey Map on the scale of 1" equals 1000' and superimposing thereon the required data. It shows the location and limits of each tract together with its number, name of owner, abstract reference and acreage required.

h. Weekly Progress Map - 763-454. This map is on the scale of 1" equals 2000' and was used to show weekly progress on control, land and topographic surveys and ore test pit staking. It is on tracing paper; the last date shown is January 15, 1943.

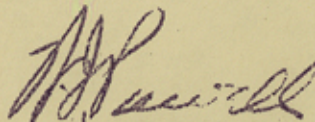


i. Topographic Mapping. Index and Progress Sheet 763-455. This map was made by combining U.S.G.S. map showing mineral deposits with the Daingerfield quadrangle of the U.S.C. & G.S. map. Shows limits and sheet numbers of the Topographic Survey Maps, Plant Site, Reservoir, Railroad, Power Line, Telephone Line and proposed road routes. It also shows the coordinate grid system as used on the surveys. The scale is 1 : 62,500 or 1" equals 5208'.

j. Index Map - 763-499. This map is on the scale of 1" : 2000' and is platted by coordinates from our final surveys. It shows the location of all plant site items, the limits of the topographic surveys, an index to the topographic map sheets, the headright surveys with our "LS" index numbers together with acreage of each, and other pertinent data. A duplicate tracing of this map was made for filing in the Land Office along with the "Corrected Field Notes".

#### V. MISCELLANEOUS

In addition to the work as outlined above this Division did a considerable amount of miscellaneous work such as (1) acting as a go-between for the land owners and project management, and (2) the coding and filing of requisitions and purchase orders for materials for approximately one year.



W. J. Powell  
Resident Engineer

WJP/VC/KW

SURVEYORS REPORT ON  
RETRACEMENTS OF CERTAIN SURVEYS  
IN MORRIS COUNTY, TEXAS

Preparatory to the resurveying of the Plant Site, reservoir and ore lands for the Lone Star Steel Company, we started a survey along the old Texas State Highway No. 26 near the Arkansas-Louisiana Gas Company Compressor Station in Block 12 of the Ensign B. Smith Survey, Morris County, Texas. Observation of Polaris was made near this point June 1, 1942 for azimuth control and a traverse run to a connection with U.S.G.S. B.M. No. A-3 at the Courthouse in Daingerfield, Texas. The geodetic position of this B.M. is:

Latitude  $33^{\circ} 01' 53'' .3$   
Longitude  $94^{\circ} 43' 19'' .4$ , and; the American Polyconic  
Grid coordinates are:

N: 1,096,148.07 yds. equals 3,288,444.21 feet  
E: 1,232,713.58 yds. equals 3,698,140.74 feet

Grid Azimuth is  $1^{\circ} 14' 05''$  less than Geodetic (True) Azimuth.

A series of Control Traverses were next run throughout the area to be surveyed. Each loop was run to a closure meeting a requirement of 1:10,000 and all positions were adjusted to their proper plane coordinate values based on U.S.G.S. B.M. No. A-3.

Later, on August 20, 1942, another observation was made on Polaris from a point near the southeast corner of the D. B. Sorrells Survey and confirmed the observation first made in the Ensign B. Smith Survey as previously mentioned.

The magnetic declination was determined as being  $8^{\circ} 38'$  East.

During the running of the Control Traverses, a force of abstractors searched the Surveyors, Patent and Deed Records of Morris and Cass Counties and furnished us with all record instruments on each headright survey together with all subdivisions of same and from this information working sketches were prepared for use in the field.

Three land survey parties were organized under experienced party chiefs. The men trained in precision chaining and with each party we placed local men familiar with the various property lines and also experienced in identifying surveyors markings on trees. Each party was assigned an area to work in and, basing their work on the Control Traverses, each began his work at some definite known survey corner.

Party No. 1 under Vaughn H. Phillips began at the original northwest corner of the O. C. Pouns Survey, Abst. 399, on the south line of the Ensign B. Smith Survey and first retraced the Ensign B. Smith Survey, Abst. 253, together with all the sub-divisions of same.

Party No. 2 under R. B. Steger began at the original most westerly southwest corner of O. C. Pouns Survey, Abst. 389 and first retraced that survey.

Party No. 3 under H. M. Connor began at the recognized northwest corner of the Wm. King Survey, Abst. 412, retraced the west and south lines of same and then those surveys to the south of the Wm. King.

Preliminary traverses were run with all evidence of surveys such as line, center line and witness trees tied into these traverses as well as all evidence of occupancy such as old hedge rows, fences, blazed timber lines, cultivated areas, etc. Each headright was first traversed and then all record sub-divisions of same. Horizontal chaining was done throughout using hand levels and plumb bobs and a balanced pull on the tape as developed by practice, and checked from time to time, with tape scales. All angles were read three times to determine their mean and an azimuth closure of 10" per transit point was required and met.

Upon completion of each preliminary traverse, or line, the notes were platted and computed. In the event of excessive error in closure the lines involved were retraced, usually by a different party, and the errors corrected.

Following the platting and preliminary computations the controlling evidence was selected and co-ordinated and trial lines established for comparison with the original field notes of each affected survey and, if the comparison was favorable the trial line was adopted and, working from the preliminary traverse points, it was monumented upon the ground with 6" x 6" concrete monuments with a copper disk marking nail set in the top and stamped as called for in the field notes. For the corners of the headright surveys the usual method of marking was to use the initials of each survey affected. In most instances witness trees were marked and all original witness trees tied in and recited in the field notes. Iron rods as reference points were set on each line leading away from the monument at the usual distance of 100 feet from the corner except in some instances where the topography made it best to vary the distance.

Generally speaking the history of the surveys retraced for this project is the usual one for East Texas headright surveys of which most of the senior surveys were made around 1838 to 1855 with a series of S. F. (scrap) surveys placed in around the years 1901 to 1910. This area for the most part was, and is, a timber area with very little farming. This fact caused the early destruction of many original witness trees and line trees and since the majority of the lands are not under line fences it was hard to identify even specific lines of occupancy. For these reasons it was nearly always necessary to consider several surveys at once rather than treat them individually. Finding good evidence on the E. B. Smith, the O. C. Pouns, Abst. 389, the James Winton and the Thomas Lee Surveys together with recognized and agreed corners on several others, we used these surveys more or less as a basis for our constructions. The result seemed to fit the occupied and recognized corners as found to have been established throughout the area by various surveyors during the past thirty to forty years.

The area covered by these retracement surveys approximates 26,961 acres contained in 63 headright surveys upon which field notes and plats are being recorded. In addition to these surveys we found 3 apparent "vacancies" totaling approximately 108 acres, (1) the so-called "W.C. Bridges Pre-emption Survey" of 43.97 acres shown on Index Map as "IS-43"; (2) another tract of 18.36 acres lying south of and adjacent to the "Bridges" (shown as "IS-42A") and, (3) a tract of 46.39 acres between the A. L. Dalby and A. Montgomery Surveys on the west and the Joel Cherry on the east (shown as "IS-16B").

"W.C. Bridges 'Pre-emption'"  
"IS-43" - 43.97 Acres

The so-called W. C. Bridges Pre-emption Survey seems to be a case of where a man by the name of W. C. Bridges failed to carry out his intention of applying for the land in question. A thorough search of both county and General Land Office records failed to reveal any application to acquire the land or any other evidence pertaining to it in itself. However it is recognized by adjoinder calls in each of the adjacent surveys thereby placing it upon the ground in the position we find it to be.

In the original field notes for the Samuel Story Survey as filed by Elam Riddle, January 9, 1858, we find the first call to read "Beginning at the southwest corner of a survey of 40 acres made for Williamson Bridges on the H.R. of G. W. Dunlap"

"Thence east 100 vrs. a stake in the south line of sd. 40 acre Survey ----."

(These same calls enter into the 18.36 Acres Vacancy to to be referred to later.)

In the field notes for the Stephen Stone Survey as recorded in Vol. 1, Page 101 of the Surveyors Records dated January 2, 1854, in the 6th call we find "Thence north 2160 vrs. to a stake in the S B line of a 40 acre survey made for Williamson Bridges -----".

"Thence east 231 vrs. a stake the S E corner Bridges Survey---".

In a description of the J. W. Rogers Survey as recorded in Vol. U, Page 378 of the Deed Records of Morris County we find a reference to another survey of 280 acres "made for Williamson Bridges on the Head Right Certificate of G. W. Dunlap". (This is now the Wiley George Survey) and again in the 5th call "Thence west with Harris (Now Stephen Stone) N.B. line 780 varas to a stake, another corner of the Harris Survey in the E. Bdry line of 40 acres survey made for Williamson Bridges -----". And, 6th, "Thence North with Bridges line 156 varas to his N. E. corner-----". And 7th, "Thence West with Bridges North B. line -----".

In the Surveyors Notes Vol. 2, Page 12, the field notes describing the O. C. Founs Survey, Abst. 389 as surveyed June 4, 1907, we find the call for the J. W. Rogers southwest corner as well as the call "West 150 varas to S. Stone's N. SE corner". Both fail to mention the "W. C. Bridges". Parole evidence for this omission from an assistant of the Surveyor, J. W. Founs, is to the effect that J. W. Founs stated he had been unable to find anything of record other than the calls above listed for the "W. C. Bridges 40 acre Survey", and that he, J. W. Founs, considered it to be vacant unsurveyed land at that time (1907). Our record searching bears out this theory.

The land in question is claimed by the A. L. Dalby Estate without any record title nor do they own any land immediately adjacent to the land in question.

18.36 Acres Vacancy  
"13 - 42 - A"

This apparent vacancy is closely affiliated with the "W. C. Bridges" inasmuch as it is created by the same adjoinder notes as place the Bridges upon the ground, particularly those of the Stephen Stone and Samuel Story Surveys together with those for the James Winton lying to the south.

In Elam Riddle's original notes for the Samuel Story Survey of January 9, 1858, we find the beginning to be "at the SW corner of a Survey of 40 acres made for Williamson Bridges on the HR of G. W. Dunlap", and "Thence east 100 varas a stake in the SB line of sd. 40 acre Survey from which a Red Oak bears S.60°W.8vrs.

a White Oak S. 89° W. 11½ vrs. both mk EB". No mention is made of the Stephen Stone Survey in either this call or the following one "Thence south 585 varas a stake in the N.B. line of a survey of 320 acres for J. T. Harris, Assignee of James Winton, ----". Then too the call from this southeast corner of the Story reads: "Thence west 668 vrs. with said line (north line of Winton) to a corner of sd. Harris Survey ---", whereas the call for the north line of the James Winton (J. T. Harris) dated June 3, 1854, as recorded in Vol. 1, Page 94, of the Surveyor's Records of Morris County, reads: "Thence west at 173 varas the S. E. C. of E. Bridges Pre-emption Survey (S. Story). Thence along the S. B. L. of Bridges at 830 varas (in all) Bridges S. W. C. in the E. B.L. of Hugh B. Lilley's". Reference is also made to the notes of the Stephen Stone dated January 2, 1854 in which no mention is made of the S. Story Survey.

In retracing these three surveys, viz; Samuel Story, Stephen Stone and James Winton, the 18.36 acre vacancy is created upon the ground - especially by the fact that we find the original White Oak witness tree standing as called for together with the Red Oak stump for the Samuel Story Survey northeast corner on the south line of the "W. C. Bridges". These trees are also called for in a deed from W. T. Connor, Sr. to L. C. Luckell conveying 10 acres of land about 1908, the description of which begins at the southwest corner of "W. C. Bridges" and runs "east 100 vrs.", the same as in the original notes. This tract was actually surveyed and marked on the ground as we found the old marked west line of same with the southwest and northwest corners of same as called.

In 1921 in the suit of W. T. Connor, Jr., et al to divide the Estate of W. T. Connor, Sr., a commission was appointed by the Court to resurvey all lands affected. This survey was never recorded in the Surveyor's Records but is reflected in the judgement deeds and the Samuel Story Survey is therein shown as including the 18.36 acres in question. This was allocated to Lutie Turner, an heir of W. T. Connor, and is now claimed by her son, Seymour Turner, her successor in title. This gives Mr. Turner a clear prior right claim to this land but, although he has been informed of the facts he is not disposed to take any steps to perfect his title.

46.39 Acre Vacancy  
"LS - 16 - B"

This apparent vacancy is bounded on the east by the west line of the Joel Cherry Survey and on the west by the east lines of the south portion of the A. L. Dalby Survey, Abst. 390 and of the A. Montgomery Survey.

The Dalby Survey was a Scrap File Survey made by J. W.

Pouns, County Surveyor, first in 1907. These notes were found to conflict with the W. C. Lilly Survey and apparently were returned for correction as later the area was covered by two tracts in place of the one with the W. C. Lilly Survey dividing them into a north part and a south part. These two A. L. Dalby Surveys were patented January 8, 1909 as 2 tracts, the first tract being the one in this connection. It calls to begin at "The southwest corner of a 37 acre survey made for W. C. Lilly in J. M. Watson's E. B. line a stake".

"Thence east 170 vrs. to Joel Cherry's northwest corner a stake ----"

"Thence south with Cherry's W.B. line 1158 vrs. A. Montgomery N.E. corner a F. O. bears N. 41° W. 9 vrs.."

"Thence west 450 vrs. Montgomery's N.W. corner in Cyrus Dobbs E. B. line a stake ----"

We found Pouns lines for the Watson, the north part of the A. L. Dalby, the J. D. Lilly and the Dobbs without any question as to identity. We find a marked line, without corner witnesses standing, agreeing with his original 1907 field notes as to the offset distance of 180 vrs. between the southwest corner of the J. D. Lilly and the Northwest corner of the Joel Cherry, which we believe to be the line he established as the west line of the Joel Cherry and the East line of the A. L. Dalby. This is corroborated by the testimony of Abe Montgomery, an old negro and the son of the patentee of the A. Montgomery Survey. Just prior to our survey the recognized northeast corner of the A. Montgomery and the southeast corner of the A. L. Dalby Surveys was known to exist upon the ground but unfortunately it was destroyed by the construction of the "Rock Quarry Road". However, the negro Montgomery advised us of its approximate location on the ground and we found his location as pointed out to be in the marked line which we consider as being Pouns work. Although this line does not fit the occupied west line of the Joel Cherry we find it to agree fairly well with the calls for the A. L. Dalby, so we believe it to be Pouns interpretation of the west line of the Cherry for which he called in the Dalby notes. For these reasons we returned notes and plats (LS - 16 - B) showing this doubtful area as an alleged vacancy of 46.39 acres.

J. R. Dalby Survey, Abst. 89  
"LS - 22" 333.53 Acres

The J. R. Dalby Survey is one with a long history of doubtful location and content. It is now owned and occupied by the A. L. Dalby Estate, direct heirs of the original J. B. Dalby who first applied for this land in 1851.

Under date of February 6, 1851 A. F. Holcomb, Deputy Surveyor, Bowie District, returned a set of field notes for 320 acres of land calling to begin at the northeast corner of the Leander Kidd and the southeast corner of the J. Kolb Surveys, thence east 1210 vrs., south 1493 vrs., west 1210 vrs. to a point in the east line of the Kidd Survey and thence north with the east line of the Kidd 1493 vrs. to beginning.

The location of Leander Kidd Survey is known and apparently is the same as then called for. The J. Kolb does not exist as shown by Holcomb's notes and plat but was apparently in the area now occupied by the J. M. Bohannon Survey. Locating the J. B. Dalby by the beginning call for the L. Kidd Survey would place the Dalby in conflict with the D. B. Sorrells Survey and approximately 1791 vrs. north of where it is now occupied and claimed by the Dalby Estate.

On the Land Office copy of the Holcomb notes appear the notation "Patented December 31, 1855, Martin". Also a certificate reading: "This 16th March, 1855 this day at 10 o'clock A.M. J. B. Dalby has called on me to name his refile which I have accordingly done.

M. I. Knight, D.S.B.D."

Also in the Land Office file appears a set of "corrected field notes of a survey of 320 acres of land made for James B. Dalby", February 18, 1870 by F. Wilhite, Surveyor in and for Titus County. These notes place the Dalby Survey where it is now occupied and claimed to be by the Dalby heirs, that is, beginning at the southeast corner of the L. Kidd Survey and lying to the east of the L. Skinner Survey. His plat on the notes shows it to be bounded by the McCain, the Story and the Winton Surveys.

Also appearing in the Land Office files is an affidavit dated May 8, 1871, by Sarah Dalby, widow of said J. B. Dalby in which she states that her husband had secured a patent to 320 acres of land but it was not the same land they had settled upon and upon which she still lived; that the land so settled upon was that as described in the Wilhite survey of February 18, 1870 as above referred to; that she did not have the patent as mentioned in her possession and she prayed for a new patent to be issued on the Wilhite notes. This affidavit was made before one J. F. Hinnant, Justice of the Peace for Titus County, Precint No. 5.

On the back of the Wilhite field notes appear several notes, one of which reads "The same quantity land under settlers claim March 4, 1854 (and not as stated herein January 22, 1845) is located and ptd. to the same name James B. Dalby about 1400 varas north of this survey. No evidence in office to show cause why said ptd. should

counter 41690



be lifted. Explanation wanted before platted on map.  
April 18 / '70.

Thillepage"

Another note reads: "This survey will conflict with  
Jas. Winton's ptd. B-49 Survey. This is to be corrected  
if the original field notes which are ptd. should get  
rejected. March 4 / '71.

Thillepage"

Although no correspondence appears in the file evidently  
instructions to correct the conflict above noted were  
issued as another set of "Corrected Field Notes of a Sur-  
vey of 260 $\frac{1}{2}$  acres of land made for James B. Dalby ---"  
appear in the file under date of October 12, 1871. These  
notes are by "E. Riddle, Deputy Surveyor in and for Titus  
County". This set of notes, as do the ones by Whilhite,  
begin at the northeast corner of the L. Skinner and south-  
east of the L. Kidd and run east 1200 vrs. using same calls  
for witness trees at the corners as do the Wilhite notes.  
However, in the next call "Thence south with Story's W.B.  
line 930 vrs. pass his southwest corner and the northwest  
corner of a Survey for James Winton with Winton's W.B.  
line in all 1225 vrs. Winton's L corner ----". We find  
the Wilhite notes to call for a distance of 1505 vrs. --  
a difference of 280 vrs. Both notes call to go to Winton's  
"L" corner but in running west from same the Wilhite notes  
fail to call to run with either the Winton or J. H. Skinner  
north lines as do the later "corrected" notes by E. Riddle.

On the Land Office copy of these E. Riddle notes appeared  
the notation "Patented to James A. Dalby, January 13 / '73,  
A. Geluhour (?)".

A warranty deed from an R. E. Dalby to A. L. Dalby recorded  
in Vol. G., Page 339, Morris County Deed Records purports  
to convey 320 acres but recites the field notes by E. Riddle  
(containing 260 $\frac{1}{2}$  acres) in its description. The patent to  
James A. Dalby does likewise, calls for 320 acres but uses  
Riddles notes for 260 $\frac{1}{2}$  acres in its description.

The field notes of the J. H. Skinner Survey, Abst. 283, lying  
to the south of the Dalby Survey calls to adjoin the "Jas. A.  
Dalby 260 $\frac{1}{2}$  acre survey".

The original notes for both the Samuel Story and James Winton  
Surveys refer to the area now claimed by the Dalby Survey as  
the Hugh B. Lilly Survey. The Dalby heirs tell of an argu-  
ment between their grandfather, J. B. Dalby and H. B. Lilly  
over the ownership of this land. This argument reputedly  
reached the point of gun play at which time Lilly dropped  
his claim.

It seems that the patent mentioned in the affidavit by  
Sarah Dalby returned to light in 1919 at which time J.T.  
Robison, Land Commissioner, sent it to A. L. Dalby who

recorded it in Vol. 1, Page 457 of the Deed Records of Morris County, Texas. (This patent recites Holcomb's 1851 notes as its description.)

Apparently upon receipt of this old patent A. L. Dalby had someone survey the land as claimed by him using the distance calls contained within the patent but beginning at the southeast corner of the L. Kidd and not at the northeast corner as called. We find an established southeast corner with witness trees apparently marked about 25 years ago. No record notes of such resurvey can be found. In a resurvey of the James Winton Survey made for a division of the estate of W. T. Connor in 1921 for the guidance of the commission appointed by the Court we find that the surveyor, a Mr. Black (deceased) from Camp County recognized the Dalby southeast corner and changed the Winton calls accordingly. This resurvey does not appear in the Surveyors Records but is only reflected in the "Decree of Partition" in the suit "W. T. Connor et al vs. O. S. Connor et al", filed November 21, 1921, Vol. 5, Pages 261 to 281 inclusive, Deed Records of Morris County. By this decree the present owner, Ettie Latimer, was awarded 322 4/5 acres of land purporting to be all of the James Winton Survey. Since that transfer there seems to have been no questions as to the conflict between the Dalby claims and the original Winton Survey-- a conflict of 275 varas as shown by the difference between 295 vrs. as called with the east line of the "Lilly" in the original Winton notes and the 570 vrs. as called with the "Dalby" in the Decree of Partition notes. For many years the Dalby Estate has owned the J. H. Skinner Survey with which their claimed position for the J. R. Dalby also conflicts so for that reason no adverse claim entered from the Skinner Survey.

In view of the facts as above recited we decided it best to "let sleeping dogs lie" and likewise recognize the Dalby claim and return herewith the "Corrected Field Notes" as shown. We therefore recommend their adoption.

G. H. Allen Survey, Abst. 396  
"LS - 59" 413.99 Acres

The G. H. Allen Survey is another survey of doubtful location and content. It first appears in Vol. 2, Page 6 of the Surveyor's Records of Morris County in field notes by J. W. Pouns, County Surveyor under date of July 7 - 10, 1907. The caption of these notes reads: "Field notes of a survey \_\_\_\_\_ acres of land for G. H. Allen by virtue of his affidavit and application ----- providing for the sale of unsurveyed land".

On Page 22, Vol. 2 of the Surveyors Records of Morris County under date of August 25, 1909, appears another set of field notes over the signature of W. S. Connor, then County Surveyor of Morris County. The caption for these notes is similar to that of the Pouns notes and also leaves the acreage blank.

The Pouns notes of 1907 begin at Stephen Stones southwest corner in the east line of the Bostick Survey, Thence east, south, etc. ----. They are considerably altered with calls struck out and others inserted and interlined thereby making them hard to interpret but apparently they conflict with several surveys such as the J. H. Johnson, T. J. Johnson, Peter Miller and, especially the Skyles (or Napier as Pouns refers to it). They will not close as we interpret the notes.

The Connor notes of 1909 begin at Thos. Lee's northwest corner, thence south, east, etc. A comparison of the calls in these notes with those of Pouns reveal such a striking sameness except in the mixed-up portion where Pouns' notes are lined out and interlined that the writer is led to believe that Connor's work consisted of only an office attempt to "straighten-out" Pouns work. The same conflicts with the other surveys appear in the Connor notes as they do in those of Pouns.

Both surveyors were clearly attempting to cover all vacant unsurveyed lands as bounded by the senior surveys in this area.

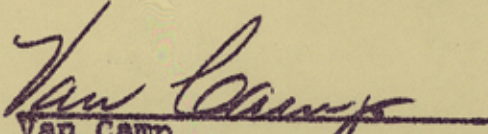
The patent issued May 2, 1916 and filed October 8, 1919 in Vol. 2, Page 245 of the Deed Records of Morris County calls for 553 acres of land and recites for description the field notes by W. S. Connor of 1909.

In attempting to establish this survey by its patent calls we ran into conflicts upon the ground and since the Allen primarily was a Scrap File Survey we resorted to the method of first establishing those senior surveys bounding it and let it take the residue. This was done and as a result our survey of the Allen is very different from those of both Pouns and Connor. We remove all conflicts and find only 413.99 acres of land whereas the patent calls 553, a difference of approximately 139 acres less land than called. Although the difference in the surveys is considerable as to location, configuration and acreage, it is our opinion that our findings are a true representation of the G. H. Allen Survey and that said survey should be corrected in accordance with the "Corrected Field Notes" as returned herewith.

In addition to the surveys herein discussed, attached hereto is a detailed report covering the resurvey of the Ensign B. Smith Survey, Abstract 253, which is to be considered as an additional part of this report. The Smith Survey appears in Vol. L. S. No. 1, whereas the "46.39 Acres Vacancy", and the "JR" Dalby Survey appear in Vol. L. S. 3, the "W. C. Bridges", the 18.36 Acres Vacancy" and the G. H. Allen Survey appear in Vol. L. S. 4.

We have attempted to retrace all of the Surveys upon which we are returning "Corrected Field Notes" in an impartial and equitable manner, with full consideration being given to all evidence of the original surveyors foot-steps and to each individual land owner's interest with prejudice toward none.

We therefore request your full consideration and adoption of these resurveys.

  
Van Camp  
Licensed State Land Surveyor

ENSIGN B. SMITH SURVEY  
ABSTRACT 253  
LS - 1

4110.70 Acres, Morris County  
Texas

The Ensign B. Smith Survey was patented July 1, 1851, to one John Spearman, Assignee of Ensign B. Smith, on a "corrected" survey made by Allen Urquhart, District Surveyor of Bowie Land District dated June 12, 1839 and recorded in Vol. 1, Page 20 of the Surveyors Records of Morris County. These are transcribed records and this may account for the odd fractional figures used in the area recited as being "Twenty-two  $710,800/9,000,000$  Labors of land". Reducing this fraction to decimals would equal 0.789777 of a labor which is 139.90 acres plus 3897.08 acres (22 labors) thus making the original total acreage to have been 4036.98 acres. This figure is corroborated by the deed from Ensign B. Smith to John Spearman August 21, 1850, reciting "4000 acres more or less" as recorded in Vol. "B", Page 183 of the "Transcribed" Deed Records of Morris County. Our retracement, or "Corrected" survey develops a total acreage of 4110.70 acres for the Ensign B. Smith Survey. This agrees fairly well with the area of "4082" acres as recited in a deed from one R. W. Dalby to W. B. Womack mentioned in the abstract but without reference as to date or recording of same.

With the exception of a certain 102 acre tract out of the Northeast part of the Survey deeded to Livingston Skinner in 1858, the Smith Survey remained more or less intact as one tract of land until 1895 when W. B. Womack with J. B. Henderson acting as agent, had J. W. Founs, County Surveyor, sub-divide the major portion of the survey into a system of blocks, most of which were intended to contain 100 acres each. This sub-division plat and field notes were not filed for record as such, but fortunately we found most of Founs original notes. The work however, was reflected in the deeds recorded by Henderson as he sold the tracts. After finding the original notes, it developed that in some several instances the bearings to witness trees were erroneously recited in the deeds, but the occupied corners usually bore out the original notes, and therefore we were able to identify and properly locate the majority of them from original witness trees standing. Inasmuch as practically all of the original 1839 survey witnesses had been destroyed, we used the 1895 sub-divisions as the best evidence of the correct location of the Survey boundaries, and since this was also definitely substantiated

by occupancy of many years standing, I feel that the location as marked by us is a fair and equitable one.

Surveying of the headright started in August, 1942, by a party under Vaughn H. Phillips as Chief of Party, with Ned A. Ford as instrumentman. They began at the original southeast corner of Block 4 on the East line of the Survey. This corner was marked by an old pine knot stake and the original marked sweet gum witness tree standing. A preliminary line was run South to the occupied Southeast corner of the Smith; thence West along an old marked and occupied line to the original Northwest corner of the O. C. Pouns Survey, an old pine knot stake with original marked witness tree standing on the East (or Northeast) bank of Cypress Creek. Returning to the Southeast corner of Block 4 (the beginning point) a line was run North to a connection with the original sub-division Northeast corner of Block 2, also marked by an old stake and original marked witness tree standing. On this line a connection was made to our Control Traverse "A" Line for azimuth and grid control purposes.

Abandoning the east line of the Smith Survey for the time being, Phillips returned again to the Southeast corner of Block 4, (the initial starting point) and began the retracement of the 1895 Sub-division block by block with a series of closed traverses. In this manner the remainder of the East line and the greater part of the North line was developed by Phillips as far West as the West line of Blocks 20, 21 and 22. During this time, M. H. Connor, with A. F. Holcomb as Instrumentman, started running the West line of the Smith Survey beginning at the original Northwest corner of Block 26 as marked by an old stake with original marked 18" Red Oak witness tree standing. He first ran South following a well and old marked line, finding the original Southwest corner of Block 25 at Cypress Creek, crossing Cypress the old marked line swung to the East approximately 26 minutes passing an old sub-division corner. This line was carried to a point near the occupied Southwest corner of the survey and abandoned temporarily. Connor returned to his starting point, the Northwest corner of Block 26, and ran North to intersect with the North line as projected West by Phillips. Having made this connection, Connor then began another preliminary line at the original Northeast corner of the W. T. Payne Survey, same being an angle corner in the south line of the Smith Survey and being identified from an old pine knot stake with original marked Pin Oak witness tree standing. From this point a line was run West through the original Northwest corner of the same W. T. Payne Survey to an intersection with his preliminary West line of the Smith. Returning to the

Northeast corner of the W. T. Payne Survey Connor then ran N.  $60^{\circ} 45'$  E. along the Northwest line of the Ahira Butler Survey and formed the original marked Pin Oak witness tree standing on the Southwest bank of Cypress Creek for the North corner of said Butler Survey and an inner patent corner of the Smith Survey. At this point Connor connected with a meander line of Cypress Creek ran by Phillips from the O. C. Pouns Northwest corner to the South Southwest corner of Block 15 of the Smith sub-division. Again returning to the Northeast corner of the W. T. Payne Survey, Connor ran a line East across the Butler Survey, crossed Cypress Creek, made a passing connection to the Northwest corner of the O. C. Pouns Survey, and continued on across the Pouns and the Claiborne Ferguson Survey to intersection with a South projection of the East line of the Smith. This line was run for the purpose of trying to locate evidence of the South line of the Smith as first run prior to Urquhart's "corrected" survey of 1839. No evidence was found.

Upon the evidence found by these preliminary lines the boundaries of the Smith Survey were developed and monumented as reflected by the field notes and plats sub-mitted herewith and of which a few features are directed to your attention for comparison with the patent notes.

Our calls run clockwise whereas the original run counterclockwise around the survey, thus necessitating more explanation.

The patent begins at the Southeast corner of the survey called to be "at a stake 1220 varas East from the Northeast bank of Cypress Creek". We make our Southeast corner at a point N.  $89^{\circ} 24'$  E. 1241.8 vrs., as compared to the call of 1220 vrs., an excess of 21.8 vrs.

The patent calls the East line to run North 4700 vrs whereas we find it to be N.  $0^{\circ} 47' 28''$  W. 4798.57 vrs., an excess of 98.57 vrs. On this line the patent calls to cross "Holly" Creek (now known as Barnes Creek) at 3000 vrs. whereas we cross it at 3110 vrs., a difference of 110 vrs. excessive distance from the Southeast corner, but only 11 vrs. less than call from the Northeast corner of the Smith.

The call for the North line is West 4700 vrs. whereas we make it S.  $89^{\circ} 53' 52''$  W. 4784.16 vrs., an excess of 84.16 vrs. On this line the patent calls to cross "Bruton's" (now known as Ellison) Creek at 900 vrs. from the Northeast corner of the survey, and we crossed the old channel at 905 vrs., a difference of only 5 vrs. The old channel had to be dammed and a levee built with the new cut channel being at 966 vrs.

The Urquhart notes (patent) call to cross Cypress Creek on the West line at 3090 varas from the Northwest corner of the Survey whereas we cross it at 3206 vrs. and we make the total West line to be 4894.78 vrs., whereas the call is for 4700 vrs., thus we have an excess of 194.78 vrs. This is reflected in the development of the South line as to be noted later.

From the Southwest corner of the Smith Survey to the corner on the "West line of A. Butler Survey" the original call is "East 1900 vrs." whereas we find it to be "N. 89° 49' 20" E. 2480.86 vrs.", an excess of 580.86 vrs., which is by far the greatest discrepancy developed. However this is as marked by adjacent surveys and also as fenced and occupied for many years with no known disputes arising from such location.

Urquhart (1839) calls "North 60 degrees East with said Butler's line 960 vrs." whereas we find this to be N. 60° 45' 58" E. 956.99 vrs., a very close comparative figure.

Another point of considerable difference is the line along the creek. Urquhart calls: "and down said Cypress with its meanders S. 57 1/3° E. 890 vrs. to a stake whence the original S. B. line of said Smith Survey crosses said Cypress" --. Our airline connection from the A. Butler original corner to the O. C. Founs original Northwest corner is S. 37° 19' 34" E. 481.72 vrs. while the meander courses total only 713.19 vrs. thus developing another difference to be noted. My theory of this difference is based on Urquhart's statement referring to the "original S. B. line of said Smith". His survey was a retracement survey for the purpose of eliminating a conflict between the Smith Survey and the A. Butler Survey and, since his other three sides agree with the original field notes, it is probable he ran only that part along the Butler line and erroneously calculated both the "East 1900 vrs. to A. Butler West line" and the creek call of "S. 57 1/3° E. 890 vrs." However the West portion of the South line of the Smith as we found it will fall approximately 103.8 vrs. South of the Northwest corner of the Founs Survey, thus coming nearer to his creek call. Both the O. C. Founs and the C. Ferguson Surveys are many years junior to the Smith, and it is probable that they may have been placed on the ground in conflict with the Smith, thus explaining the offset in the south line. However this would add to the discrepancy in the call to cross "Holly Creek" on the East line.

After taking all evidence into full consideration and recognizing occupancy throughout, it is my belief that the