Log Housing In The Bush

Part II

Go Daddy limits the size of a File to 30 megabytes. Log Housing In The Bush promises to be a lengthy tome with its many illustrations, and wordy explanations; as well as its smatterings and splatterings of philosophy and disgruntlements; its attempt at story telling, and the writings of meaningful, sometimes meaningless, things.

Thus we begin a Part 2, whose intent is not to be much different in purpose and tone than the first Part (remembering the promises).

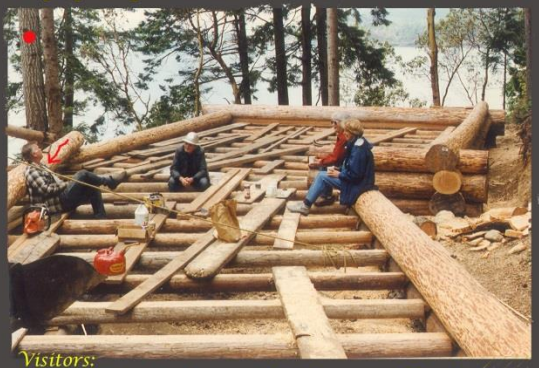
We ended Part 1 with illustrations that took the project to enclosing the front door, and the writing anticipating the start of the roof rafters; and even the mention of the roofing and flooring. (This horse wants to run free). Before the rafters, although cut and prepared much earlier in the project, can begin, we need to finish the log work through the front walls, and the addition of the ridge poles and purlins. An extant request seeks to reserve some distance from the author, or you will not get his story, and you will be stuck with your own story. Try living with that.

Log Housing In The Bush

Fiberglassed; Ready To Be Rolled Into Place
Note: The near end of the log does not have any material removed (rare) because the log beneath was not as long.

Hefty Log (with red arrow) In Place

Another 10 Foot Hefty Needing To Be Sawed Into A Fit



Visitors:
One Of Whom (red arrow) Had Suggested The Gin Pole

Americans For Prosperity.

Maneuvering First West Window Log

Window Log In Place (red arrow) With Next Log Ready For Borate and Fiberglass Insulation

First Window Log Ready For Borate And Insulation

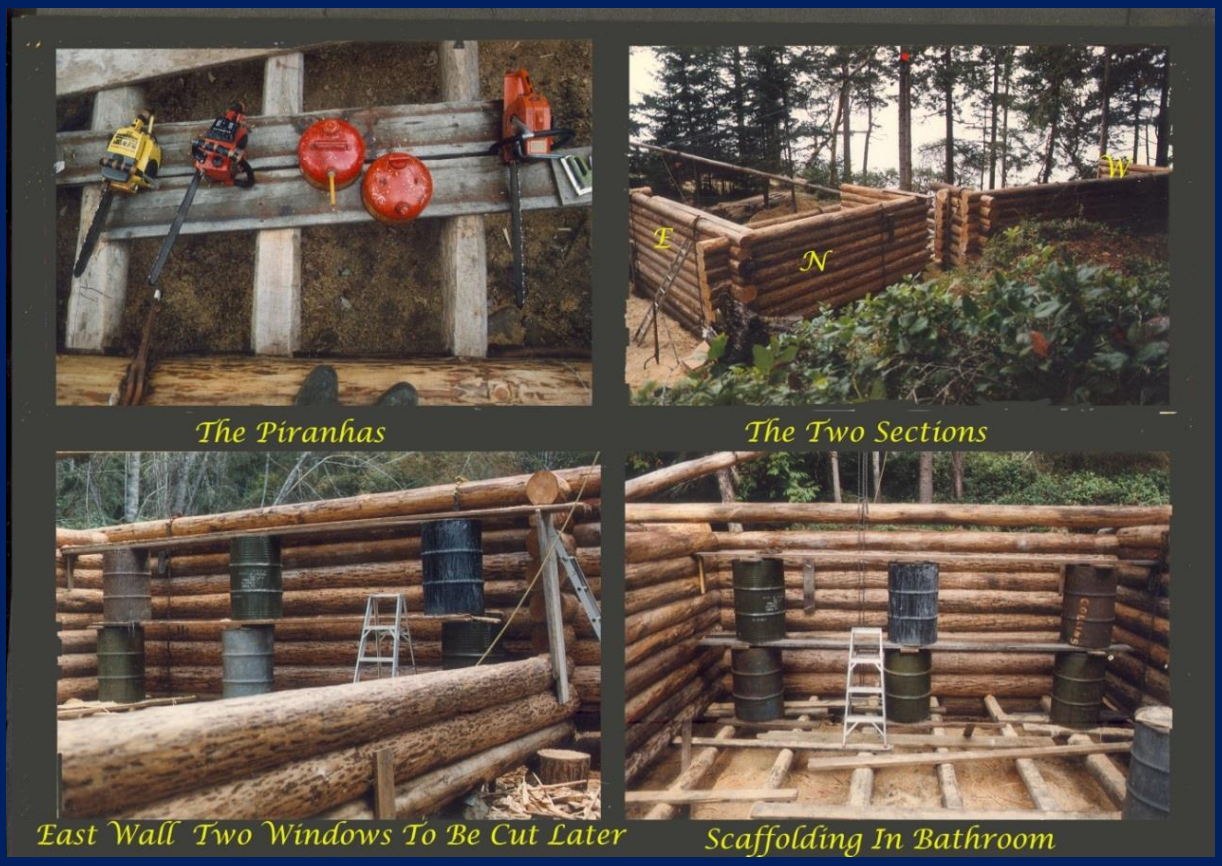
Note Bread Slices Cut From Round Notch

Are We Settling Into A Routine?

Log Housing In The Bush

Inglis of S. Carolina

Log Housing In The Bush



When things were running smoothly, the pace was a log a day. The smaller logs took as almost as much time as the larger ones, if one stuck to his standards.

One thing not to be overlooked. In fashioning a log notch, one needed to get it right the first time, or so very nearly right. In a sense, there was no second chance. A lot was involved with making each fit the best one could do. First, scribing it accurately. Then following faithfully the scribe marks and lines. It was a complete process; each part of the cutting had to be done as best as 'humanly' possible. If he did everything right but one of the notches; he couldn't just replace the notch, and keep the rest, He couldn't even save the largest part of the log, which had been cut accurately to match another log. Everything to do with the remainder would need to be rescribed and recut; a situation of rapidly diminishing returns. Even if one had an excess of logs, the amount of labor involved would become demoralizing. So there was only one way; do it right.

Yeah! Well. Things were going along swimmingly when it became apparent that the builder had overlooked something pretty basic. First he erected the northwest section; then he started the northeast section. The northeast section had a doorway in the corner. This doorway was constructed using very short logs cut to the angle of the shape of the two sections as they met. This took a lot of careful perseverant

concentration, and whatever else was required, besides conscientious labor, and attention to detail. In building this section, like the first section, one needed to include all the walls, the north, the east and the south, and the west walls, even the dovetailed bathroom wall, simultaneously, all erected, one tier at a time. So far so good!? Until the two sections were more or less tied together above the doorway hah!, when it became obvious to anyone that the two sections were not measuring to the same height. Well, maybe not obvious to anyone, because there was no one else around to see it, and deal with this thing to do with logs. What was needed was one very fat log, or one very skinny log, to make up the difference in height. There would be only two logs, one fat one, and one regular one; or one skinny one, plus two regular ones to get to the top. A fat log would not look right; and it might not even work. The builder did not have a fat log. The difference in the height of the two sections was about 8 inches. A fat log would have needed to be 20 to 21 inches in diameter. A skinny log would have needed to be 8 to 9 inches in diameter. Skinny got the job. In the boating world this might be known as a 'cheater' log. In building a wooden boat, ideally, one uses a single plank to cover the entire length of the hull from stem to stern. This plank, like any other used, is shaped to conform to the lines of the boat. Even with all the shaping, the turn of the hull as it grows into a stern, is sometimes so severe that bending and shaping a plank might cause it to break; or severely weaken it. Hence the 'cheater' plank, usually installed above the water line, to reduce the severity of the bend in subsequent planks. The cheater plank is one that does not go from stem to stern, but is a sort of fat thing in its middle (middle of the hull) and very narrow, in fact pointed on its ends.

When the author informed the other log house builder of his faux pas, he very graciously intoned, "that's where you hang the moose head".

Log Housing In The Bush

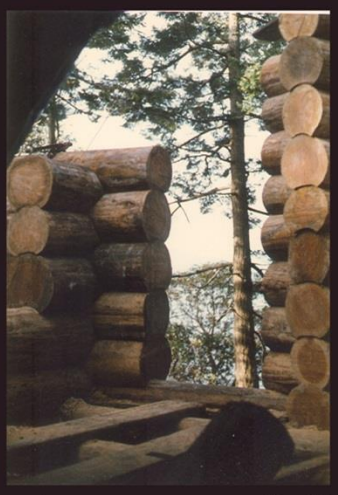
Covering Logs For Winter 10 mil Polyethylene

Not Much Accomplished In '92 With Heart Surgery and Back Surgery

What Little Got Done Was Done Without Removing The Tarps

Log Housing In The Bush

Working On The Front Door

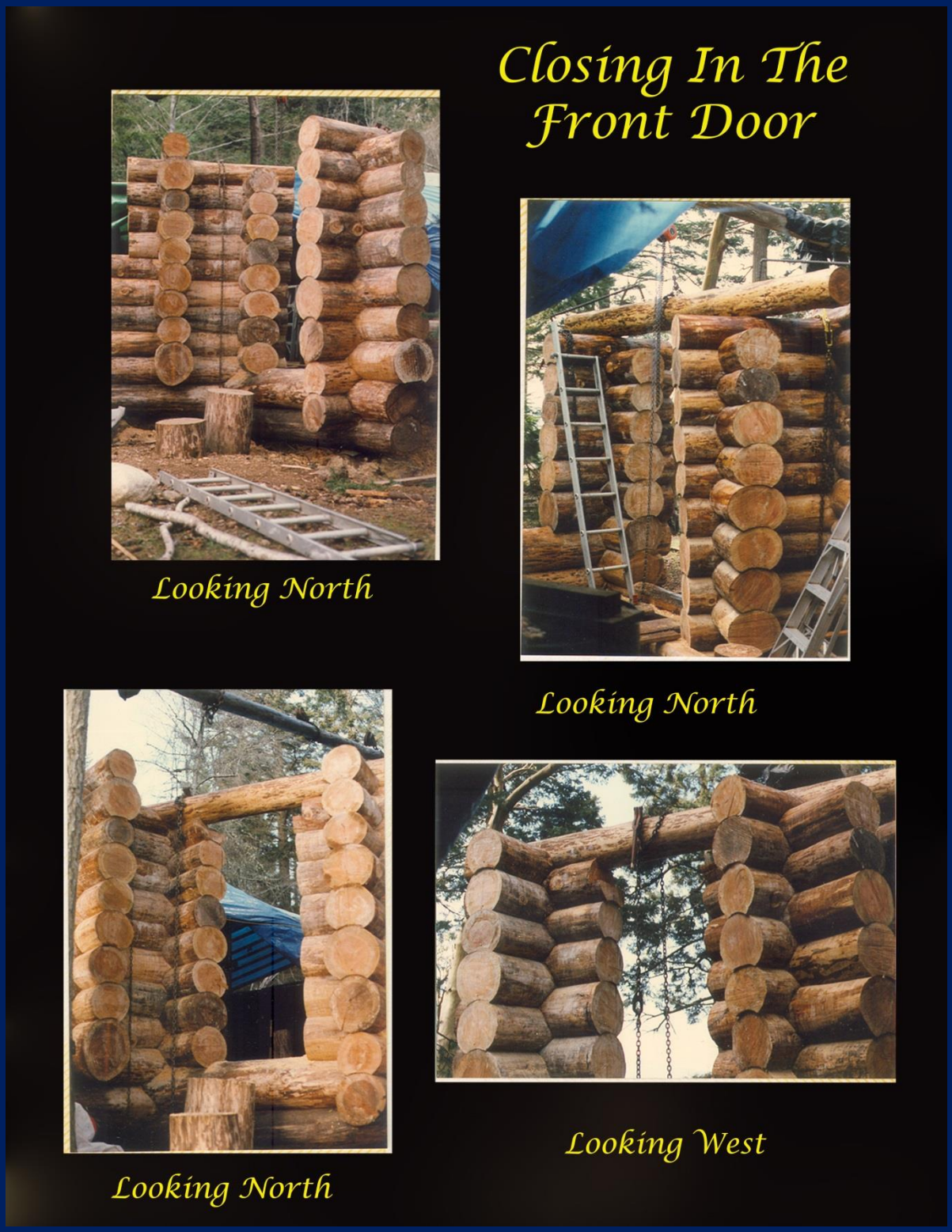


Inside Looking West

Outside Looking Northwest

Growing: Outside, Lookimg Northwest

Outside Looking East



Inside, the flooring was, like the roofing, at 32” centers mounted on the previously described adzed floor joists. The flooring would be SPF 2 x 6 t&g, using mostly culled Douglas fir for the floor.

The SPF (Spruce Pine Fir) was a 'decking outs' grade, which meant the wood had been selected for perfection by the Japanese, and what remained was a mixture of pieces of wood with a chipped surface, broken knots (or too many knots), occasional wains (on one side), some twisting, some softness (in the pine). It was considered a commercially marketable grade of interior "decking"? The wood was chamfered on one side. The chamfered side would be the side to be used by the author. If the opposite side had a better appearance, the author would turn over the piece to mill a chamfer, that side to be used. A lot of this was done, as well as additional planning which required sizing the thickness to assure a level floor surface.

The author let himself be talked into these 'decking outs' by a Canadian lumber broker who lived on the Island. The original plan had been to transport Hemlock, 2 x 6 t&g from the 'States'. The intent was to buy some 8000 board feet of material to cover both the roof and the floor. The transportation would be arranged by finding a carrier who was returning to Canada empty. The cost of the hemlock would have been $425.00 per thousand board feet. The lumber broker offered $250.00/1000 for the SPF 'decking outs' with shipping included to a designated place in Qualicum BC for storage, until arrangements could be made for getting it to the Island.

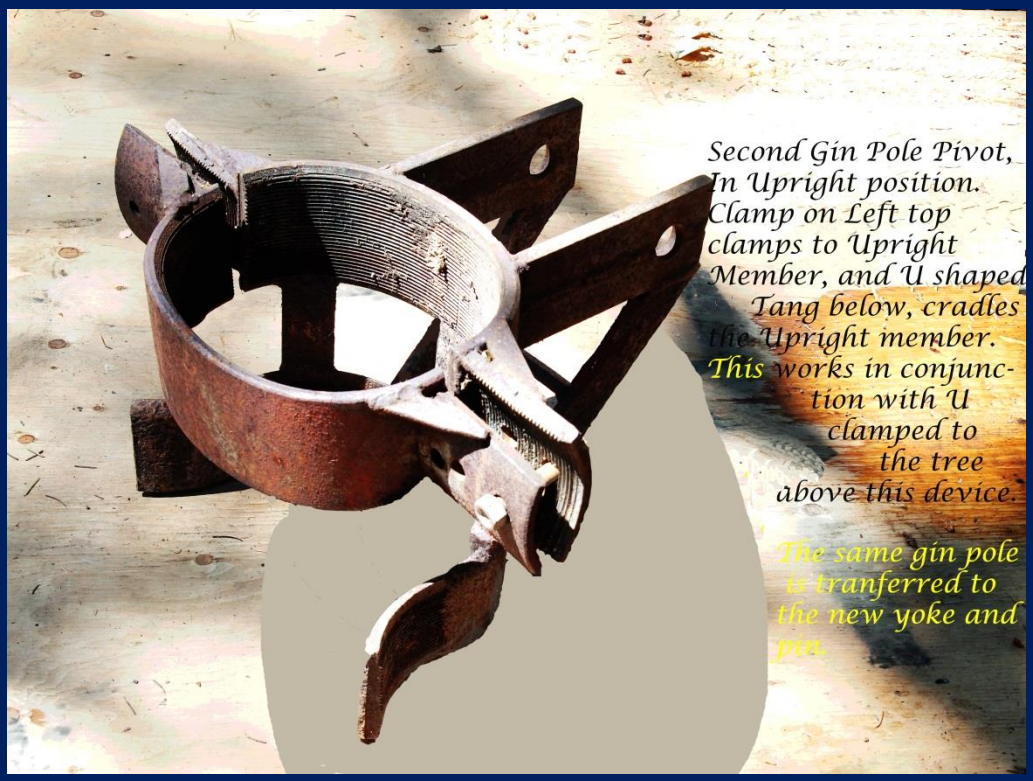
The steel roofing, Styrofaom insulation, tri-ply, fiberglass insulation, 30 lb. asphalt felt was all be purchased in the 'States'. Also a used 1976 Dodge 5 Ton Van (14 foot box), a former military vehicle, was purchased for $1750.00 to transport the materials, as well as other goods not associated with log house building.

Since the author is claustrophobic, and since the author wanted to avoid, at all costs, placing fiberglass insulation from below the flooring, using fencing staples, he fastened a wire mesh at the edges to the log base, and to the joists using nailed wood strips at seams, securing the ¼ inch mesh from beneath. The ¼ galvanized inch mesh (purchased in rolls 100 feet x 4 feet) was chosen to prohibit mice from getting into the subfloor. The fiberglass insulation used under the floor was lain upon the ¼ galvanized mesh, in between the floor joists. Any penetration of the floor for plumbing, for chimney construction, and for a floor hatch was girded with ¼ galvanized mesh. On top of the insulation a polyethylene vapor barrier was installed.

Plans, Plans, Plans. 1992 was bust (medically). 1993 was better. 1994 The Roof. 1996 The Floor. In between the major

accomplishments, we did our boating, we built a shop, a wood shed, a watershed, also interior kitchen cabinets, and a hutch. Charline dug a trench from the watershed almost to the house for a buried water line. She helped dig the water hole; she dug the trench for the waterline under the road to the trailer. 1996, we moved into the house, chased from the trailer by an invasion of mice.

As mentioned earlier, the gin pole apparatus needed to be raised on the upright member; it also needed to have its boom replaced.



In the model, is shown, with color dots, the placement of the supports for the ridge poles and purlins. An attempt will be made to use the color dots to identify which support is under which ridge

pole, and which purlin, is being shown in the jumbled illustrations.

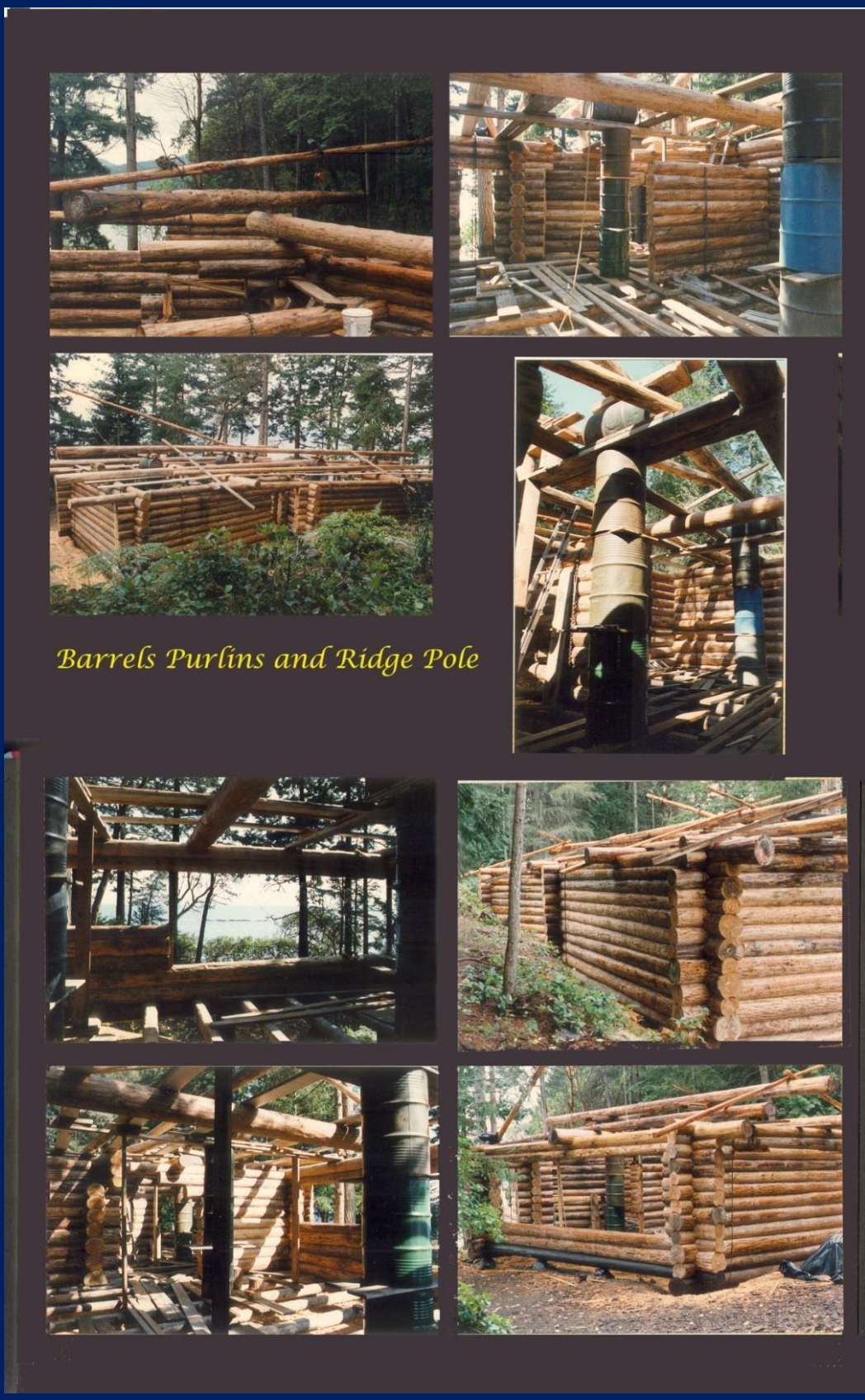
The author needs to mention that attempting to place all these illustrations into Microsoft Word becomes a trying process. Although many provisions are made for inserting jpg files into the text, it is not a straightforward endeavor. It is provided that one may pace a jpg file into any environment, that is, in line with the text, square within the text, tight within the text (the method the author uses), through the text, top and bottom, behind the text, in front of the text, or 'wrapping' (which the author uses for 'transparent' illustrations). However, what one needs is a 'lock' for locking an illustration into its selected place. Often when there is more than one jpg file on a given page, it becomes a juggling act to get them to 'settle down'. For the most part 'tight' within the text works, until it doesn't. This function is intended to make it possible to insert a jpg file of any size, with the text all around it, and allow positioning of the file, with according 'wrap around', in the text. This has worked often enough with more than one illustration per page; once again, until it doesn't. When it doesn't, one might as well run around the block or do pushups, hoping when he returns things will be better. Wishful thinking, and cause enough to wonder at the promotionals appearing on the computer screen suggesting upgrading to something even better (?).

Imagine going back to setting type, and using woodblocks, lithographs, and silver point. One thing, in those older remote days, the illustrations would stay where you put them.

Like all things modern, one grows accustomed to the state of the art, which is a different state than that experienced during one's youth. During one's youth, there were no computers. There was the typewriter. There was whiteout; there was retyping, and retyping, a laborious task even for a skilled typist. Making it right the first time became the objective. As Anias Nin said of her own self-publishing with her used printing press, where she had to set her own type, one had better be sure the word that had been used was the truly intended word.

Today, with the advent of computers, word processing, spelling checkers, everyone can publish, ad nauseum.

To wit: and To continue: (Hopefully)



To the Ridge Poles and Purlins.

These were supported by upright columns that had been scribed and excavated (shaped) to conform to the supporting timber at its base and the supported timber (a purlin, or ridge pole) on top).

Added to the top of the ridge pole was a vertical spine (2 x 4) to provide a straight line for the rafter ends, and a top nailer for the roofing.

Where ridge poles or purlins met at the 10 ° angle created by the two sections, they were designed as overlapping joints, drilled and bolted through, with 3/4 inch ready rods (all thread).

Eventually the pace slowed, once the basic log work was finished. The roof became its own thing with small tree rafters that needed to be gathered, peeled, and flattened on one side. The average diameter of these varied from six inches on the butt end to ~ 4 inches on the smaller end. These were to be lag bolted and nailed to ridge poles, purlins and walls. Each had to be fitted separately (the butt end forming the eaves).

A jig was devised to set the uniformity of height of the nailing surface for the 2 x 6 t&g roofing, much as the floor had been levelled by adzing.

The difference was in the technique. Another jig was built to support each rafter as its flat was milled with the 'Alaska Mill'. There were some fifty odd Alaska milled rafters.

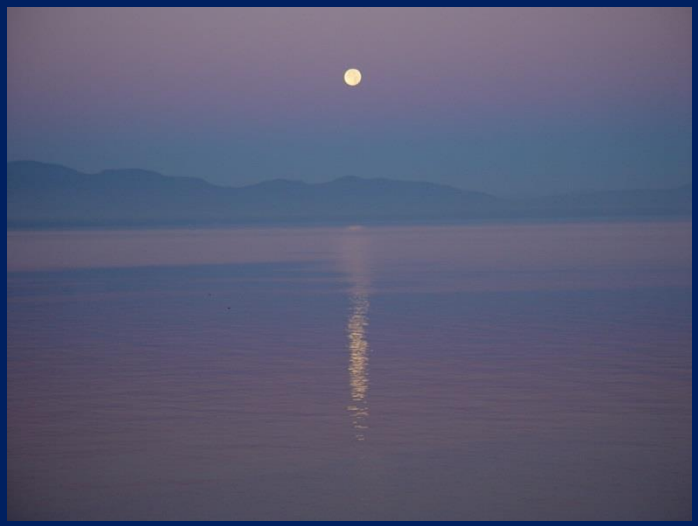
The milling took place under cover, in the shop.

A duplicate jig to the uniformity of height jig was constructed to make it easier to size the rafters at the ground level, and to cut the butt end angle ~ 15°, as well as the top-end angle (also 15°). The butt end was angled to be perpendicular to the earth for the ease of mounting gutters.

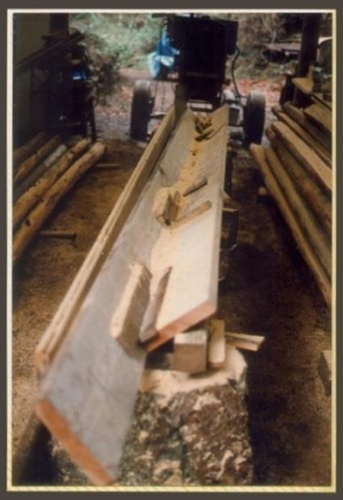
The top end angle was the same angle, fitted to a 2 x 4 spine anchored to the top side of the ridge pole. The lower fastener of each rafter was a ½ " x 6" galvanized lag screw, countersunk with a ½ inch galvanized washer. The upper fastener was 3/8 " x 5" galvanized lag screw, countersunk with a 3/8" galvanized washer. The central fastener was a 3/8 " x 10 inch spike driven into the purlin. The level was achieved using the jig, and either shimming, or removing material, from the purlin and/or top wall log, and the ridge pole. At the wall level, a groove was cut in the rafters to accommodate pieces of 2 x 4, placed to close the gap between the height of the rafter and the top wall log, created by the thickness of the rafters and the underside of the actual roof line. The 2 x 4 ends were shaped to the general roundness of the rafter.

The roof rafters would be placed on 32" centers. The length of one roof with overhangs, was forty feet; the other, with overhangs, was 36 feet, with roughly 2000 sq. feet of roofing area. This was to be covered with SPF 2 x 6 t&g factory milled lumber. In turn, the wood surface was to be covered with lapped 30 lb. felt, then one inch of solid Styrofoam insulation, and finally 'tri-ply', a polyethylene sandwich with a ribbed asphalt matrix, with duct tape seams. Then 26 gauge (.020 thick) 3 feet x 14.6 feet steel roofing was attached with gasketed metal screws, anchored to the wood roofing. The overlapping of the roofing was gasketed with weather stripping. Four skylights at 28" x eleven feet were to be installed in the North roof, along with two other skylights @ 28" x slightly less than six feet.

The plan was to finish the roof before attempting to do any inside work. This was accomplished in a timely manner (before winter).



Preparing The Rafters
A Long V was Constructed (18 Feet)
The rafter to be milled was blocked
up and supportred in the V



V

Blocked up rafter ready for milling

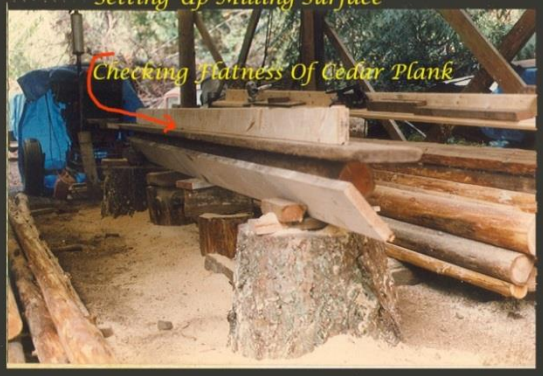
Milled Rafter

Checking Flatness Of Milled Rafter

'Eyeballing'

Using The Jig For Milling Flats On Rafters

Setting Up Milling Surface

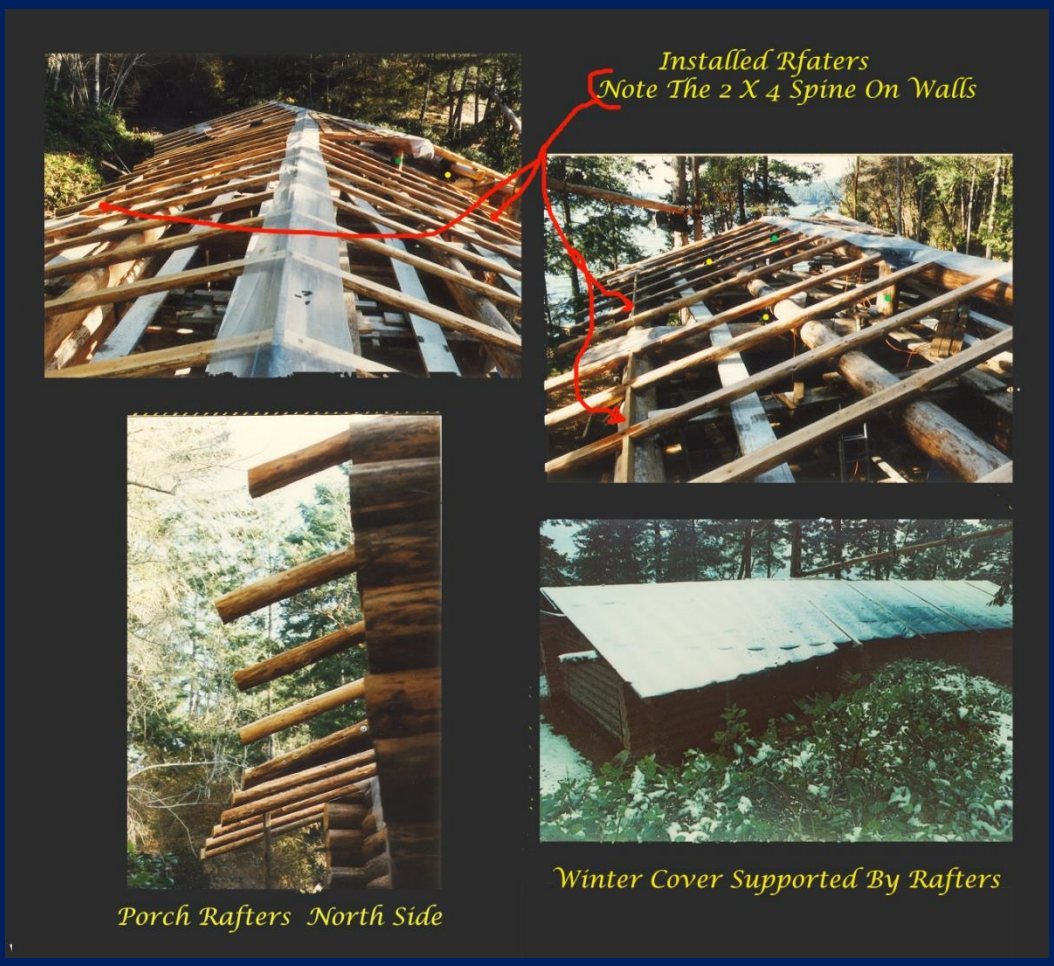


"Alaska' Mill Ready For Cutting Flat On Rafter

The rafter was cradled in the V. The plank was made flat. The plank was held fast to the rafter with short nails that would clear the cutting teeth of the saw.

Milled Rafters Being Transported And Stacked

Rafter City



Installed Rfaters
Note The 2 X 4 Spine On Walls

Porch Rafters North Side

Winter Cover Supported By Rafters

What comes after the rafters?

Presumably the sheltering from the elements.

But no more logs. Just 2 x 6 t&g SPF. Nails instead of notches.

Charline's cousin opined the low end of the labor market is occupied by roofers. That was after the author had already roofed away. It is the author's opinion, based upon what he has witnessed, the low end of the labor market has many claimants. If a roofer roofs expertly, his roof doesn't leak; that is the test, whether or not he or she is to be considered a candidate for the low end of the labor market. The author is not an expert where it comes to skylights. No matter how much he thought of water, he was unable to defeat capillary action, surface tension, water vapor migration, even gravity, which seem to be associated with water (H_2O). The author doesn't know whether or not Charline's cousin roofed his own geodesic dome, but it sure leaked after a time. God needs to engender some good roofers, who, if they install a roof that does not leak, they should be considered for the highest end of the labor market, along with lawyers, doctors, and elected representatives..

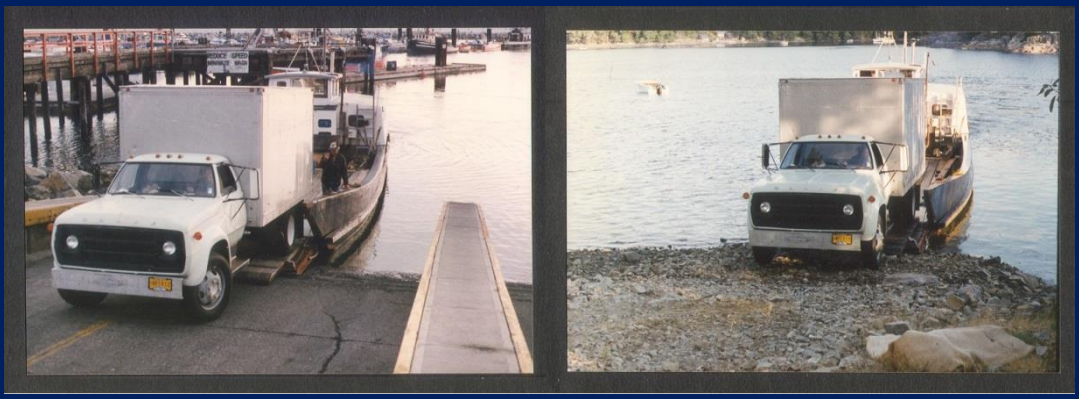
The log part of the 'house in the bush' was pretty much over when the rafters were installed. It seems idle conjecture to claim any pioneer credits for what has been accomplished with chainsaws, tractors and wrecking trucks. The remainder of the construction can lay even less claim to pioneering. The one exception might be the gin pole; however much its construction depended upon modern devices, such as gear reduction boxes and aircraft cable, plus all the tools available for fabricating with metal.

Beginning with the roofing materials, we slip rapidly into the 20th century with ready available tongue and groove dimensional lumber, asphalt felt, Styrofoam, Tri-ply, and ribbed galvanized and painted steel, with gasketed fasteners.

The gin pole was taken down at this stage (to eventually be re-erected on the beach – where it was used to raise and lower a skiff, until one day it was swung too far back, past its balance point whereupon it fell over [just like a Zorba contraption]). Since then some of its parts were used to mount broadband antennas in various trees; and more recently, its parts have been rounded up for picture taking.

In the pioneering days one might live with an earth floor, and a sod, or thatch roof. Also any construction would necessarily have to occur over a shorter time period than the one under construction in this tale. Given that several years were expended in its construction, this was made possible only by light weight large polyethylene tarps. Much rot and subsequent bug infestations would have made short work of the logs if exposed to the elements for too long. This fact was corroborated by the house construction of the other log house builder on the island, whose house suffered a long interruption before its completion. Rot had set in, particularly in the lower logs. Even coated spiral nails, driven through predrilled holes, were used. Duct tape was used to seam the overlaps of the Tri-ply. Strips of sticky foam tape were used between the overlaps of steel roofing.

The 8000 board feet of 2 x 6 t&g roofing/flooring was being trucked to friend's place in Qualicum, and stacked and stored there until the author could find a way to move it to the 'rock'. None too soon it eventuated, because in the short time it sat (over winter) rot and bugs had found a haven. The moving was accomplished with a used army ordinance van with a 14 foot box (the flooring/roofing came in 16 foot lengths). It required two barge trips from the French Creek barge ramp to 'Rideout's' barge ramp to move the whole pile. This was achieved in one day with help unloading and stacking on the island end, for the first load. The barge operator waited for the return trips.



Observing the chronology of actions in order to make things clearer to the reader. The planning for the chimney began when the partitions (walls), and actual space occupied by the log work

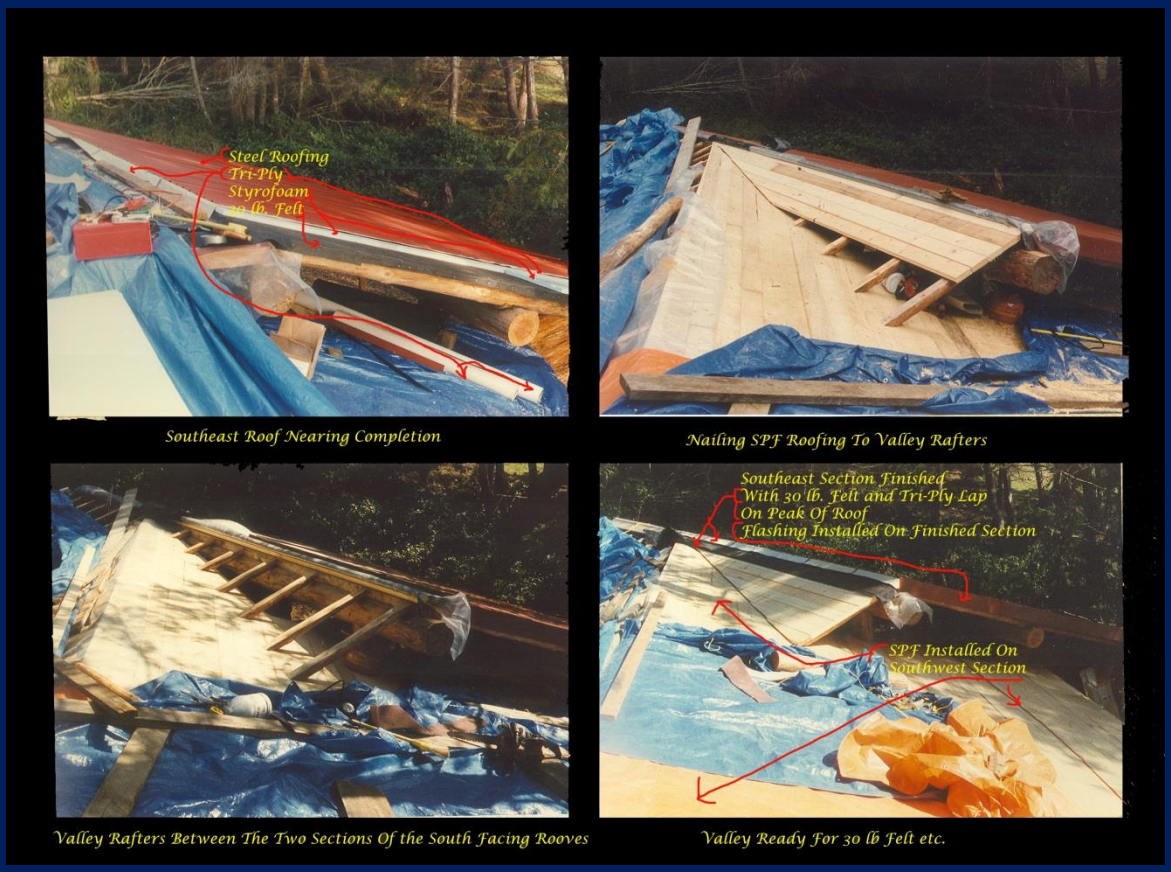
Truck Loaded (under blue tarp) With 4000 Bd. Ft. 2 x 6 x 16 t&g SPF
Truck Unloaded Into Shop Area With Happy Campers Posing
Truck Returning For The Second Load Of SPF 2 x 6 x 16 t&g
Man Operating Barge Is Ian Liang, The Fellow Who Built WithLogs,
Recommending The Author Do The Same.

became evident, as well as a possible opening in the joists, that seemed appropriate. This was done before the flooring was begun. It was decided to start the chimney erection by first creating a base on the ground beneath the floor. The roof was completed before the actual chimney work began, but the flooring had not begun. The chimney was completed before the flooring had begun. At that time space was also provided for the location of a water tank to be thermally heated by the wood stove which would be located nearby; eventually, a heat-exchanger constructed of stainless pipe with a double bend (exposing four lengthwise pieces of pipe to the flames) was installed in the Shraeder Wood Heater.

Southeast Roof (w/ chimney Hole Looking West

Southeast Roof Looking East This Part Is The Largest Expanse @ 36 feet by 14 '. 6 "

Roofing Throughout: 2 x 6 t&g SPF; 30 lb. Asphalt Felt Tri Ply (Pe Fiber matrix, Pe); 26 gauge ribbed steel, 42 inch x 14.' 6" Rustic Red



Southeast Roof Nearing Completion

Nailing SPF Roofing To Valley Rafters

Valley Rafters Between The Two Sections Of the South Facing Rooves

Valley Ready For 30 lb Felt etc.

Styrofoam, Tri-Ply and Steel Applied Over 30 lb Felt To Southwest Section

Mostly Finished Southwest Section Including Valley And Ridgecap

Beginning North Roof Looking East

Beginning North Roof Looking West

North Roof With Skylights, Looking East

North Roof Looking West

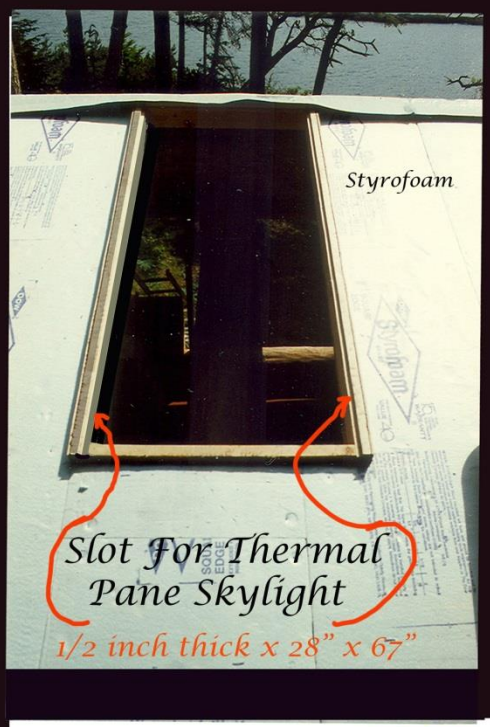
North Roof w/30lb. Felt And Skylights Looking West

North Roof Looking Sotuh

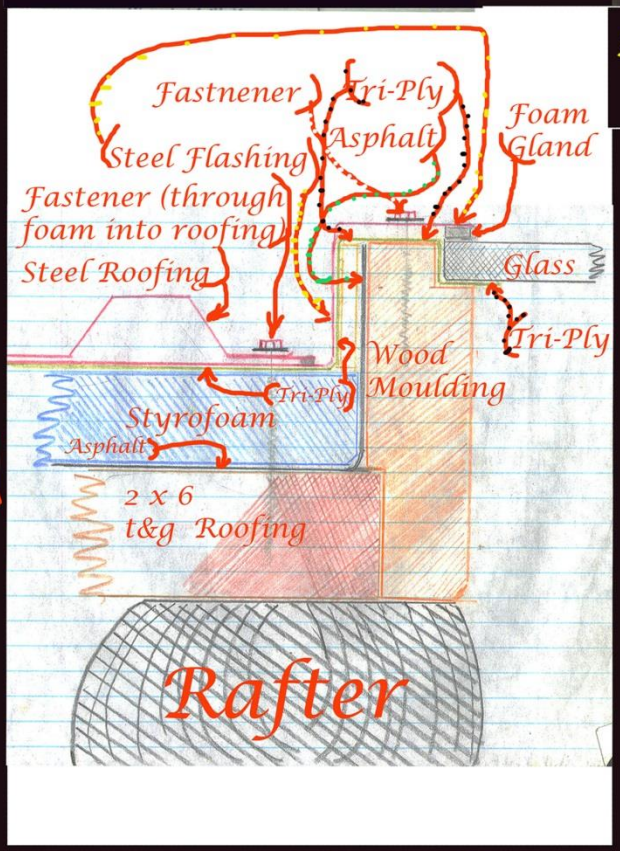
Styrofoaming North Roof Facing South

Styrofoaming North Roof East End Facing South West

Plugging Away On That North Roof Facing South



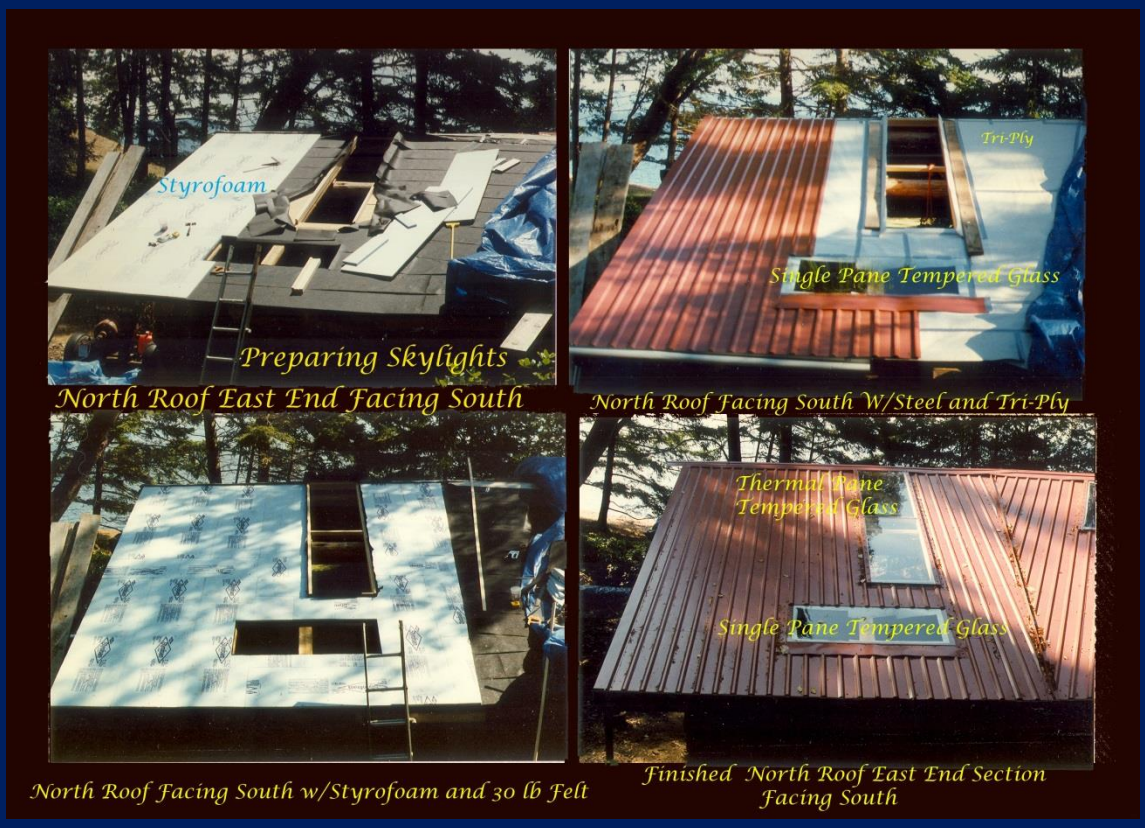
North Roof Facing South
Ready For styrofoam



Drawing Of Skylight Architecture

Old Smokey: Stack For Franklin Stove

Log Housing In The Bush



Now that the long sought after roof has been achieved without the help of the neighbor, who so inquired after it, one can relax, before taking the next step.

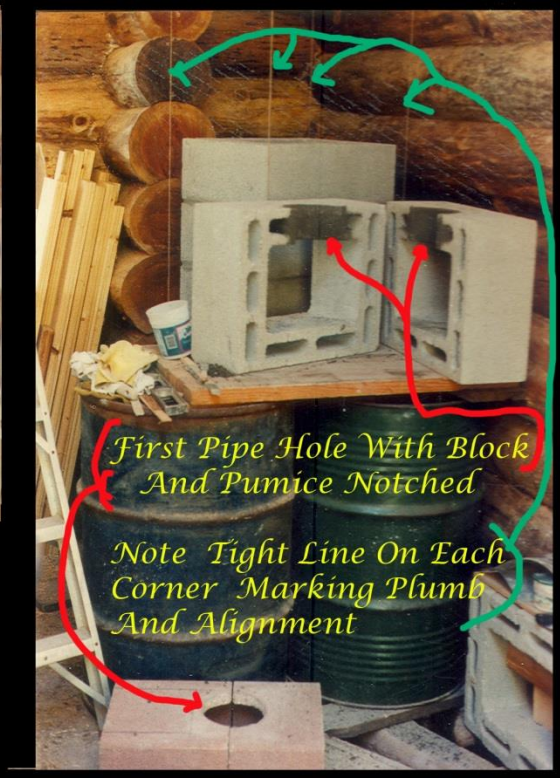
Windows. As mentioned earlier, the glass became etched as it was stored in crates out side (right side up) under tarps (for approx. four years). There were to be 16 46" x 76" thermal panes installed, all facing the water. These windows were of a sandwich construction with an aluminum core and some rubberized adhesive between the core and the glass. The glass needed to be supported on its ends with some hard rubber gasket. Both pieces need to share the same support in order to prevent the effects of gravity from creating any movement of one pane in relation to the other. These particular windows were 'seconds' obtained from Pittsburg Glass by a local individual who made a business of selling them. He informed me the units were declared 'seconds' if spots showed up on the interior. Some times the spots would be formed when the glass became depressed enough for the panes to touch. Other 'seconds' were generated by leaks, which the seller blew up with a bicycle pump, seeking the leaks and repairing them externally with a rubber sealing compound.

As noted, the etched glass could be restored by polishing with a slurry of jeweler's rouge, or fine pumice, loaded onto a padded orbital sander. Each unit requiring such restoration took about 8 hours of polishing. Let see, each window cost only $44.00; add so much for transportation, and add a lot for polishing. The economics are not apparent.

Omitted from the photographic record is anything to do with the windows, their transportation, their storage, their polishing and their installation. Maybe it all happened without the author's knowledge. He apologizes for the lack of documentation in this regard. However, be assured, the windows found their place before the flooring was tackled. It is evident that the windows were installed before the floor was begun.

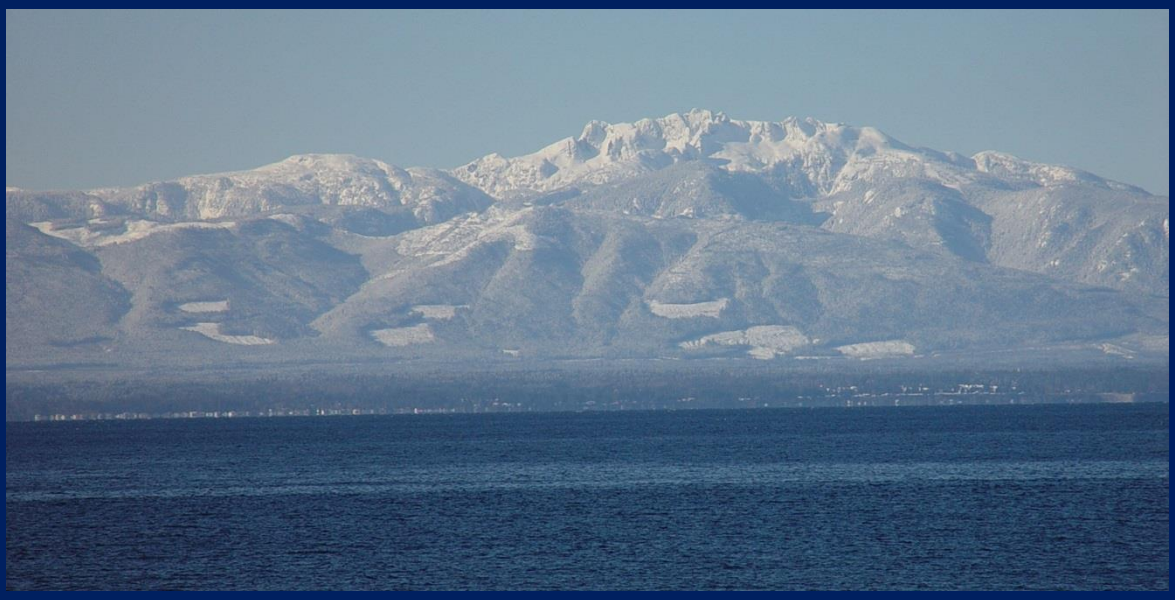
Log Housing In The Bush

Chimney. Material 17" x 21" x 8" Cement Block. With *8"x 12" x 12" Pumice Liner. Chimney Base Is A Poured Cement Block Resting On A Conglomeraste Matrix. Two Floor Joists Were Notched To Allow Construction Through Floor



Bottom Of First Pipe Hole Cemented Checking Level Of Pumice Liner Top Half Of Hole To The Left

Second Pipe Hole Above And 90 Degrees From Previous



Log Housing In The Bush

Now that the roof was on, it was time to start on the windows, to close the place in before beginning the flooring. In preparation for the windows and doors, dimensional lumber was needed.

Also in preparation for windows and doors was the recessing of the 2 x 6 framing which served a dual purpose; to keep the log work in alignment with a tight fitting spine, also to add rigidity to the framing pieces. This was accomplished with a Makita 3612BRA 3 HP (Plunge) Router. The author is uncertain the meaning behind 'plunge', since 'plunging' any powerful electric tool into any workpiece is a dangerous operation, regardless of the tool, whether it be a 'Skilsaw', radial arm saw, a hand planer, a powerful drill with an expansion bit, or a router. A device that retracts from the workpiece seems essential from the standpoint of safety. However the Makita does 'brake' instantly when the power switch is released. Since the author is not selling or promoting products, he would rather describe the actions and precautions taken when using such a tool.

First of all, the tool did the job. The dangerous part involved any free sideways movement, when, with such horsepower, the cutting edge 'climbs', that is, the cutting edge tends to pull into the workpiece; if there is a fair amount of depth to the cut, side play can result in an almost unmanageable situation, instant brake, or no instant brake.

The author needed to make accurate recesses, plumbed, and to the proper width, cleanly (no ragged edges). The edges of the logs were uneven. Cuts would be across the end grain. The average depth for each individual opening depended upon the door or window size, and the rough opening size of the log ends. The average depth of cut varied between ~ 1 inch to 1 ½" inches, accomplished with incremental (3/8" to 1/2" depth passes). Several passes were necessary to finish a recess. Guides were essential for control. In order for the tool to cut to a uniform depth, boards were nailed to the log ends; upon the boards were fastened shallow [narrow] (1/4 inch Ply) additional pieces as guides or stops. The idea was to hold the tool 'firmly' against the guide while the base rode on the board, and the cutter extended beyond the board into the workpiece. Holding the tool against the guide was direction sensitive. Most cuts were made with a downward motion (using gravity to advantage, since the tool was heavy). (However the left hand edge required the opposite direction). Since the cutter was rotating in a clockwise direction, tending to pull the cutter into the work on the right side, the router was being guided from the right hand side. Both edges of the recess were done first, in stages, until

the desired depth was attained. Then the interior part was done, of course, moving the board and the guides as appropriate. Since the tool would not cut all the way to the end of the recess, the balance of the opening was achieved by using hand chisels, with mallet. The foregoing elaborate description was given because self-evident photos were not taken of these setups, although a boards and plywood strips are shown, as part of a finished product. It will be evident, from the extant photos (using the PDF Zoom) the number of passes required to accomplish the task.

If the author's memory serves him correctly, the doors were installed before the flooring. Keeping animals, even as small as mice, out of the house, was an explicit objective of enclosing the space. If you recall, the underside of the floors was enclosed with galvanized mesh. *Ex eunt* to Part III