

PINHOOK SWAMP

3/05 -

Forestry Suppliers, Inc.

1-800-647-5368

#49354 Level Book

CNE

18612

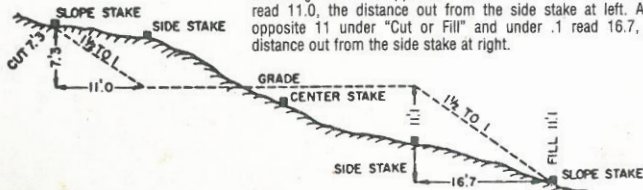
TABLE OF CONTENTS

WELL NAME/NUMBER	PAGE #
CME 18612	4

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

WARREN ZWONKA

SRWMD

800-226-1066

386-208-2465

JT STEGOLY - LANGDALE

(912) 637-5273

The paper in this book is made of 50% high grade rag stock with a WATER RESISTING surface sizing.

NEED:

DUCT TAPE
STAPLE GUN
STAPLES

20 1/2 m. away

2018 42272

2080

30° 34' 36.1" N
82° 34' 07.9" W

3/4/05

CB, LB

ARRIVE @ SITE ~ 7AM
BEGIN SETUP. HYD. LINE
TO CHECK (FITTING IN CHECK
BREAKS.) 45° FITTING.
REPLACE W/ 90° FITTING.
FILL H₂O TRUCK, TUB.
MUD MIXER. MUD NOT
PUMPING VERY GOOD.
BEGIN DRILLING.

- 0-4 DK BN ORGANIC SAND 0-2
GR F SAND 2-4
4-4.5 PEAT
4.5-13 LT BN/GR SANDY CLAY
13-18 GR SANDY CLAY.

FLUID BURNING ON ~ 9'
FROM CURT HOLE. RUN IN 10"
BIT. SET 8" PVC C56 TO
12.5' BS

2081

3-5-05

CB, UR

BEGIN CORING

18-28

SOFT GR CLAY SAND. 1000 PSI

28-38

AS ABOVE

SAND RUNNING INTO CORE HOLES
NEED 2" CSG. TO GET TO
A/O 100' 3" CSG

286

3-6-05

CS, US

PULL NO. RUNN 3' TO 38'
NO BACK IN BEGIN CORING.

38-48 GA SANDY CLAY TO 44

44-47.5 NO SAMPLE

47.5-49 GA/GRN CLAY.

49-58 GA/GRN CLAY TO PHOS LS.

58-68 GA/BLACK PHOS LS.

68-74 GA/GRN PHOS. LS. PHOSINATE
'IS PERMITTED LATER SIZE

PUMP NOT PUTTING OUT.
PULL 20' END WELL

2090

2091

3-14-05

CS, CS

TO SITE. RAINY, THUNDER,
LIGHTNING. BEGIN TAKING
DOWN MONO 316. TO OVER

3-15-05

CS, CS

CONTINUE TAKING DOWN MONO.
REPLACE W/ NEW ONE. LET
PERMANENT SET UP. & PULL N 9.
REPLACE MONO WITH

74-73 OVER MONO CS. MONOIC

73-81.5 AS ABOVE. LAST 3" CLAY.

86.5-82.5 GL CLAY W/ LS / PHOS

84.5-86.5 NO SAMPLE

86.5-88 GL CLAY W/ LS

88-89 AS ABOVE.

CHANGE SIGN OUT AREA

3-30-05 CB, UB

CLEAN OUT BOTTOM OF CORE HOUS.

88-92 INTERMEDIATE DK GR CLAY. $\pm$ GR
LS

FRACTURE/CRAV @ 96' BLS
LOST CIRCULATION. REGAINED
CIRCULATION @ 98'.

~~88~~ CUTTING, CLAY SUCKING. CANNOT
GET CORE LOG TO BOTTOM.
PULL NQ. RUN 3" TO 93'

98-108 LT GRAY MUD. $\pm$ TO 97. 97-108
DK GRAY/CLAY CLAY

108-118 DK GR SMT CLAY TO DK GR
LS @ 118

118-122 INTERM. CLAY/LS

FILL 4207-44

2166

3-31-05

CB, LB

128-133

LT 4 DK 6R LS TO

CLAY w/ LI.

138-144

LT 6R LS TO DK GR/GRN
CLAY

144-148

NO DEC.

148-155

DK GR/GRN CLAY TO GR LS

155-158

NO REG

158-168

GR CLAY TO GR SANDY CLAY
TO 162 GR LI TO 168

168-174

GR LS TO GR SANDSTONE

~~174-178 GR LS TO GR SANDSTONE~~

~~178-182~~

4-1-05

CS, LS

178-188 GR MRMC LS 178-181

181-182 CAVITY

182-184 GR MILDC SANDY LS

184-186 GR ~~MR~~ SANDY CLAY

186-188 GR SANDY LS w/ p. H. V.

LAST CIRCULATION 181' 181

188-198 GR SANDY LS 188-194

194-198 NO SAMPLES. WASHED
OUT.

198-201 NO REC

201-205 GR LS

205-208 NO REC

208-218 GR/GRN CLAY TO SANDY

CLAY. GR UNB. LS @ Bottom
of Run

2.982

2.910

2.850

.132

2.968 upper
2.974 ~~transmission~~ unit
2.966 name

4-19-05

CS, CS

put transmission back
together. ~~OK~~ NP. DID NOT
WORK. REBUILT TRANSMISSION.

4-20-05

CS, CS

pull NP. put NEW
CONES BE TOGETHER MISSING
LAMPING RING. ORDER PART

4-21-05

Ran in 3" CRG to 200'
PLW and CS₂

4-22-05

ran in 2" CRG to 200'
LIVE and NP/-
LAMPING RING @ DISPERSE.
FOR FOR RINGING.

42305

CB, U7

pot Lanthanum Ring in
Core sec. Run NQ in
3rd Drill out Bottom in
3rd Drilling : 5 sec.
DEG / Lanth

218-228 GR FOR MUAL U. Broken
UR PDR REL

228-230 GR MUAL, ASH U.

233-238 AS ASH, Broken UR

238-248 AS ASH

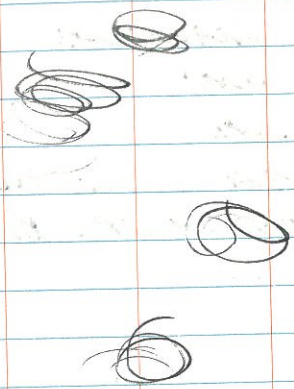
3

4-24-05

03, LD

243-248 LR/HR GRANITE.
248-250 NI RGL SPT
253-258 NI RGL SPT
258-262 TAN SPTCL BGL n/ LI. QUARTZ
262-268 LR LI. QUARTZ NO RGL DRILLS
SPT

2130



5-3-05

CB, LD

268-269.5 porous / weathered granite w/
 (BRYAN?)'s mica fossils.
 plugged shoe. ^{RR} ERM shoe w/
 THERM SAMPLE BAG under same
 RING. 3rd GSK.

269.5-272 GR CALCARENITE 2' REC. RR
 SHOE. 3rd GSK.

272-272.5 AS ABOVE. PLUGGED SHOE.
 NOO RENTED TO ERM FOR
 NEXT RUN

272.5-276 AS ABOVE 3' REC

276-283 AS ABOVE. 5' REC.

283-284.5 AS ABOVE. PLUGGED SHOE.

284.5-288 AS ABOVE

288-293 AS ABOVE

293-297 AS ABOVE

BRIE SHOW UP w/ INTERNATIONAL
 TRUCK SLOWLY ANTIFREEZE CURE
 LEAK. TIGHTENED ONE FITTING
 1/4 TURN. GLASS FITTING GOING
 INTO RADIATOR IS GALLIED.
 NEED IN GO TO SERVICE

2177

270



200' TREMIE

Pallets SAND

SAND BUCKET

~~QUICK CEMENT~~ QUICK CEMENT

FOR WARREN 5/4: DRILL THROUGH
CALCAESITE & INTO SAND? SET
BOTTOM OF WELL ON TOP OF
SAND.

5-4.05 CB, LB, BC

297-303 GR CALCAREOUS. MORE CLAY
MATRIX THAN PREVIOUSLY.

DET. 6' REC. 200 PSI PULLDOWN.

303-307 AS ABOVE. PULLED SHOES.

REPAIRS SHUT-OFF VALVES.

ON INNER BEL. NEED NEW
BEARING ASSEMBLY FOR INNER
BEL. NEED TO REPLACE FROM
SHUT-OFF VALVES DOWN

307-318 AS ABOVE. PULLED SHOES @
" 310. PULLED INNER BEL.

318-326 AS ABOVE. PULLED SHOES.

326-331 AS ABOVE. PULLED SHOES

331-338 AS ABOVE

5-05-05 Rain + Storms all day
serviced rig - refueled

5-6-05 BC, LB

338-348 - Grainstone / calcarenite.
run becomes more rx/zd around
343'.

348-350 Dolomitized grainstone
350-351 poorly indurated grainstone

~~350-351~~ 351-352
~~351-352~~ - soft mud like void
losing significant amount
of water up to 353'. ^{LB}
348-353 / losing water ^(LB)

351-358 - calcarenite with ~5% sand.
dropped ^{most} visible forams.

358-360 calcarenite w/sand & forams

360-361 - Foram bed w/sand

361-363 calcarenite w/rx forams.
Sand present.

363-372 - Same as above

~~372-375~~ Same as above

375-383 SAA See next page

383-393 - SAA B. Crane

5-7-05 LB, BC

372-375 Calcareenite w/ sand
and rxl forams

375-383 - SAA

383-393 - SAA

393-400 - SAA almost a packstone

400-~~400~~ 401 rxl (packstone)?
drilled like solid rock.

TD @ 401

Tripped out NQ.

5-8-05 LB, BC

Tripped out 3"

cleaned site - packing - left 1:30

HR
2134

5-17

CALO

pull 3" csh storm beam
 begin running in $5\frac{7}{8}"$
 start w/ $6\frac{1}{4}$ cwt str.
 to 113'

compressor just need way
 to transfer mud from pit
 to mud machine

then send compressor
 down

5-18

CALO

use KC centerline to
 run mud.

113-153' storm
 just blank KC centerline
 mile machine, not?
 small centerline run
 516 investigations

519

00, L15

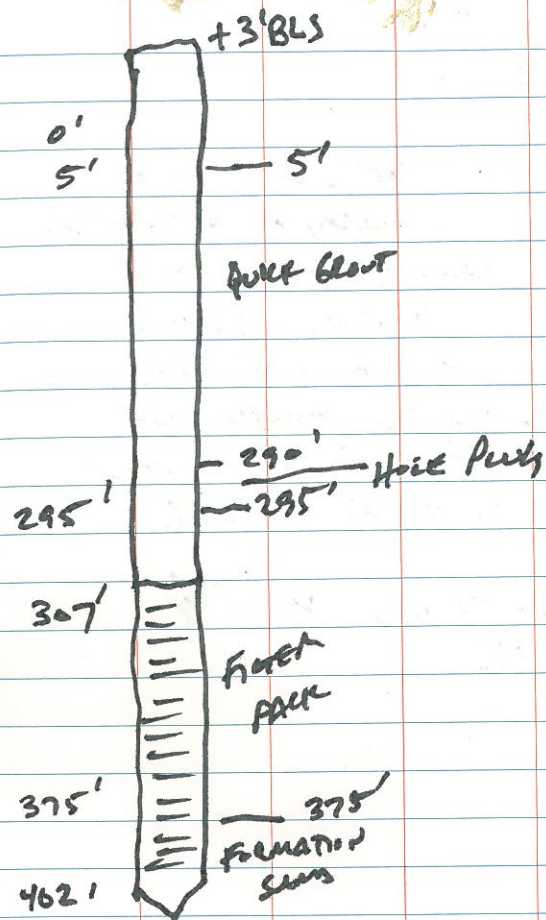
CONTINUE OPENING HOLE 153' TO
293'. MIN PUMP DOES NOT
HAVE ENOUGH VOLUME TO MOVE
CUTTINGS, CAN RE. MAKE
ARRANGEMENTS THROUGH ELIC
PSE TO GET 185 CFM
COMPRESSOR. DRILL 1 1/4"
TO 203. GO TO LATER CAY
TO GET COMPRESSOR. ARRIVE
SPACE AT 185. SPENDING

8-20-

03, 01

GET TO UP. LET PUMPS RIP
CORN ON TWO MOUNTAIN CENTRIFUGAL
IN CORN METERS. TEAR DOWN
TO REMAIN. REPAIR. SPARKS
WILL NOT RETURN RIP CORN.
PULL STACING ASSEMBLY OFF
ICE PUMP & PUT ON PUMP
ON TWO MOUNTAIN WORKS.

BETTER PULLING IN 6 1/4
203-293.



Lat: $30^{\circ}34'35.699''$
 Lon: $82^{\circ}34'07.775''$
 64.77'
 56.18 NGVD

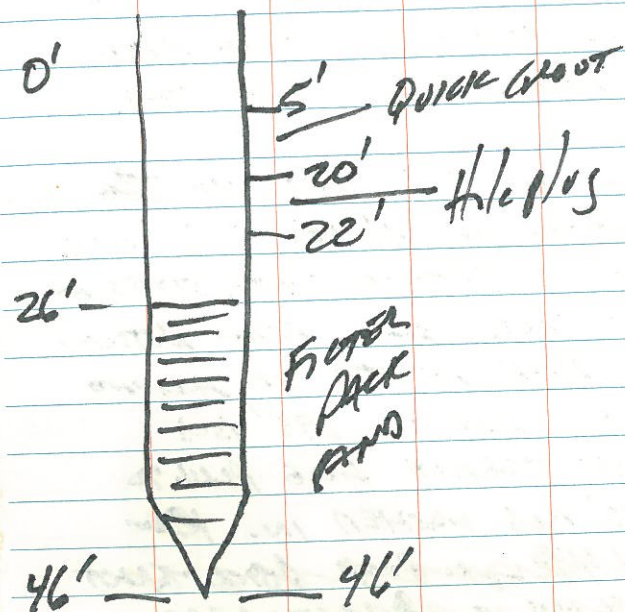
5-21

CB, CS

Began opening hole 4/6/77
 293-402 TO. CLEAN BOTTOM
 OF HOLE. pull 6 1/4 SAG.

HAS TO
 PUSH WELL
 IN LAST
 20' THRU
 FROM SAND

RUN IN 2" WELL TO
 BOTTOM OF HOLE. 402' BLS.
 RUN IN TENSIE LINE. STOPS AT
 325' BLS. JAIL FROM BOTTOM
 OF HOLE PUSHER IS ALONG
 SCN. SAND TO 295' BLS
 PULL TENSIE HOLE PLUG TO
 290' BLS WASHED IN. RUN
 AS MUCH AS POSSIBLE
 THROUGH IN WASHING
 HOLE. RUN 2" WELL TO
 AIR LINE WELL. NOT MORE H2O
 LET. RECKING OVER NIGHT



Lat 30° 34' 35.636"

Lon 82 34 07.878"

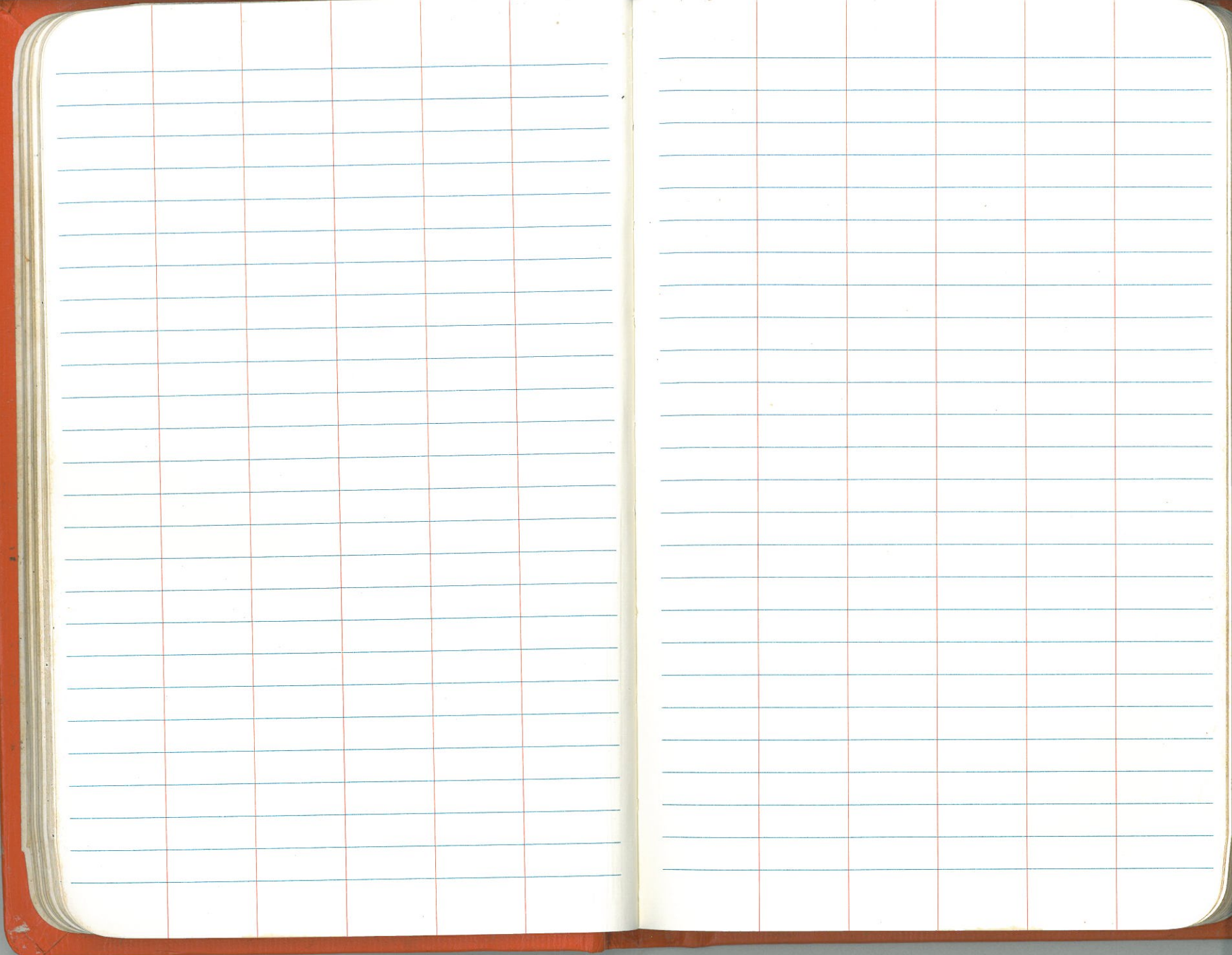
6.21'

114.69

5-22-05 03, CA

Ran in NQ to 280' BLS.
ALONG SIDE WELL. MIX
QUICK GROUT AND PUMP THROUGH
NQ TO 280' BLS TO 5' BLS.
HAD TO SET NQ IN THROUGH
SOME SPOTS.

FOR DIRT MORE FIRMER
SET UP. DRILL 6 1/4"
TO 46' BLS. PULL P.O.B
SET WELL. SAND PACK
HOLE PLUS, QUICK GROUT TO
5' BLS, DEVELOP.



thurs.

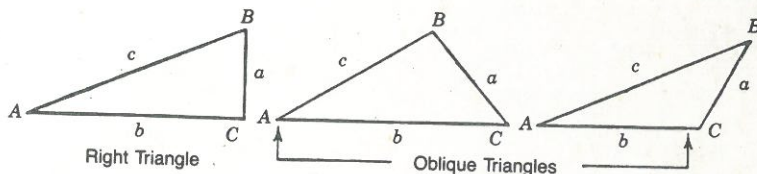
ANA HIR BRIDGE E of
BRIDGE

Amelia Island Yacht
Club

1st L of bridge

Dock E slip 21 @ end

TRIGONOMETRIC FORMULAE



Solution of Right Triangles

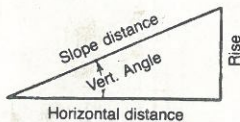
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\csc = \frac{c}{a}$

Given	Required	
A, B, a	A, B, c	$\tan A = \frac{a}{b} = \cot B$, $c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B$, $b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A$, $b = a \cot A$, $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$, $a = b \tan A$, $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$, $a = c \sin A$, $b = c \cos A$

Solution of Oblique Triangles

Given A, B, a	Required b, c, C	$b = \frac{a \sin B}{\sin A}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C$, $\tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$, $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}$, $\sin \frac{1}{2} A = \sqrt{\frac{(s - b)(s - c)}{b c}}$, $\sin \frac{1}{2} B = \sqrt{\frac{(s - a)(s - c)}{a c}}$, $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}$, $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{b c \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. From Table, Page IX. $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ ft.

Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. $\cos 5^\circ 10' = .9959$. $1 - .9959 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ ft.

When the rise is known, the horizontal distance is approximately: - the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

