

2nd trip

date Aug 28 Sep 2 1936

No obs bt F.W. + O.C.

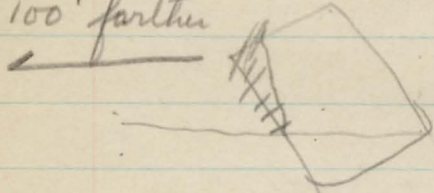
At OC talked Harry Waldgren, who called Meador. They inspected meteorite. file obs; we I rtn 3 lent us ^{Waldgren} sent thru Brown; all will r due course / sent a Mt. Waldgren sent file r "Geary" fireball r 1935 / a Mt. Meador app int + talked some at our idea r exclusive intem; Brown promised piece r many eventually found. Meador didn't know r bought.

r longer art r Sun. Daily Oklahoman. Farm paper r Okla. Farmer-Stockman. OC, Okla. Thence Guthrie.

Next morn / Crescent. Heard stories r possible finds, + went / Johnson's. Boy r 9 yrs old; went / pasture where object fell + saw hole where stone struck, fitt r. Stone \ penetrated $1\frac{3}{16}$ " (3 cm). I measured r card fragment. Eddie showed where fragment found (his bro later lost near point r main hole); fragment r orig found abt 100' fwd r line r flight from hole + r size r end r boy's finger. r represents piece off corner r 72.7 gm piece we r, prob r a "shock" [impact] break off rear upper end r struck main piece.

When stone placed in hole, fracture begins at ground-surface line, extend up (back) thru & across broken corner

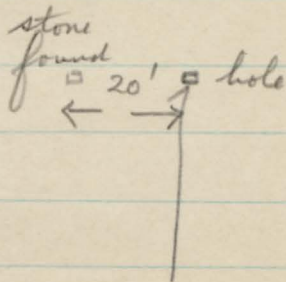
hit 100' farther



✓ true [probable] trajectory — not
⊥ to earth's surface.

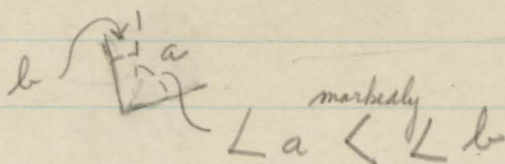
flight

Hole is roughly not square, I pointed I tho made (I penetrat corner. The main stone when picked up rolled 20' about I left of hole look fwd along line of flight, prac. at Rt L's. No way.



tell whether this is single jump & roll, I cleanliness & impact hole & appearance or evide & dirt & met self for 1 jump. Sandy side & met bore main burst & impact.

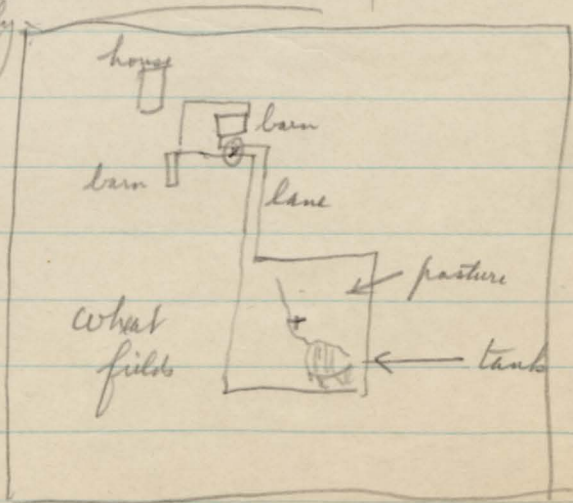
dir of flight



both sides & hole sharp. Right around hole's
a general appearance → gave 1 impres dust, 2-3"
sand etc → blown out & spread (a sort
& concu effect & strike, (no signs & heat.
a turf & grass 2"-2 1/2" from edge & hole,
→ quite undisturbed. No further frags found
here.

Pieces we broken off (hand & ^{maternal} scull
& yd + picked up 1 boy morn after Bob's
1st visit.

Eddie Tal x, in lane, N at time & fall, →
saw as fireball, & heard an explo, (no
noise apparently, directly
connected with fall & this
piece, & ♂ nearest person



gear section

Scale not
correct;
S end of pasture
prob at gear sec
line.

Alleged pieces - 5 - Ed Baker ^{of Crescent} 2 pcs pumice stone
found on banks of Cimmarron Riv - washed - from
Dr Drex. Dodd, 5 m. W. Cres., 1 pc -
glassy slag. Newspaper (Guthrie Daily Leader) art
men M.A. Knecht; a seal - was from flashlit
cell, melted 1 pc shape - 3 mi E. Johnson's place.
Polak ["Buick" pro "Boik"] - Knecht's bro's place
across road from M.A.K. \ 2 pcs slag. No business,
1 Polak will surely watch! Local judge - sort -
collector - Carl Swanson - 1 pc - chert - old.

Rush Roberts, DE part - Guthrie, thought 6 found
pc - his front yd - slag. City clk - Crescent
also collector, 1 not very active. Reed Hall, 1 m
W. Johnson's place, 1 chert, judged / so (talk - Hall's bro, not seen 1 Brown.

Talked over Yenger's Loud Speaker System!
Above Sat + Sun.

At Lovell on Sun talked 1 Doc Laughlin, 6 saw
cld at S 50° E alt 28° [prob 1 low]. 6 saw
Seary fireball ^{end} 1935, due W + his bro at ^{6 mi N of} Hennessy
saw \ end a little S of W.

Sun late, after dark, at Stillwater, just
could read Brenton, talked / Alma Stalcup,
[send him 1 - 2 Bull.] + got his obs., g. v. with
correc^s. Brenton set $\sim 90^\circ$. δ happened
I see \ while watch gasoline pump 90° fill car,
+ I look up. His measurements I made
with protractor, while train still \sim air. From δ
with nearly full δ , train was 2° wide, 4° long
[1 x 2 miles real dimen] $4\frac{1}{2}^m$ after seen,
 δ heard xplo. Note δ / 3 pieces emerg.
 δ seemed I think 1 particle dropped slightly after
1 xplo, \rightarrow may be δ - δ - δ 's idea at
Lovell δ stones I com directly toward him.
More than 1 confirms Stalcup's "blue flame" with
deep red follow.

Ervin Harmon Davis Okla said object ~ 36
inches diam [computed as $12" = \frac{1}{2}^\circ$ this is $1\frac{1}{2}^\circ$] +
held metronite low at arm's length \sim cf., say
frisball $\tau = \rho$. [this $\sim 3"$ at $30"$. This \sim about
 $5\frac{1}{2}^\circ - 6^\circ$] Began δ $12^\circ E$ alt 20° ; his
atten^y called ρ / another man. Cloud ended
at δ $12^\circ W$ alt 12° . Should / good obs as δ used
wires + objects 600 ft away (particularly good \sim alt)
Particles continued \sim point behind trees, prob
 $4^\circ - 5^\circ$.

Amateur - Guthrie John W Farrow, Jr.,
716 E. Noble - tele home made high school boy.
Airplane pilot Berry Mullins at Crescent.

Crater (?) on river near Crescent. Negro lived ~. Well
shelved - no drainage.

Said no pec rocks (ever found). Not noticeable from plane.

Copied
for
other
file

One man (at Spiro or Kesta?) told this
back of meteor + experience - a feel like a
"push" on his back.

H. F. Eppens saw met. from Howard's
back yard; beginning alt 95° az N 14° E as
measured by Brown Brunton transit from
Howard's description 9-12.

Piece found τ alt center - quar sec: NW $\frac{1}{4}$ -
30-18-91 - 3W ^{Range} - a pasture - a slight draw (Eddy Gene Johnson, son - Ed Johnson. 4 mi N + 1 mi E of Crescent, Logan Co., Okla. Crescent - a larger town. Place of find is "Rose Hill Townsp". Brown thinks this piece - definitely a "carry-thru" fragment, as τ found about 8 mi (ground-project) from cloud-point, + 4 mi. back from sub-final point.

alt 11 am?

Picked up / boy rabbit hunt \wedge (age 8-9) on Thu
Wed. Aug ²⁰ 19, + got from him (Brown Thurs Fri
Aug 21 5 p.m.

SE quar of 32-18-3 ^{Jay?} J. Logan 6 saw cld alt
alt 80° or SE. Judged durat cld (6 did not
see flight) 15^m. 6 showed cld - cf + - Brown's
it orig met cld τ 10° long x 5° wide. 6 noticed
drift \uparrow SW, more S. Report reminded him of
rapidity - machine gun fire - 5 to 7 blasts. with later
rumbl. Don't know \angle dist - cld d. refl.

Beginning

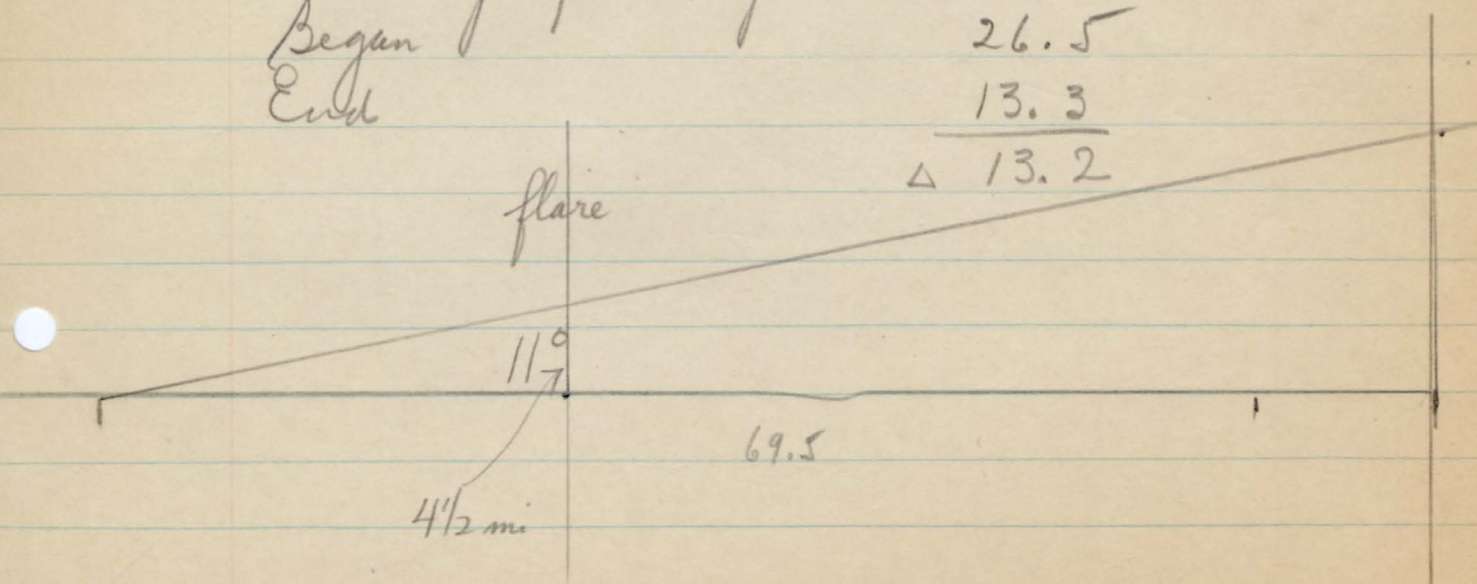
Station	d mi	alt	height
1	59	30°	34.1
2	59	25°	27.5
9	66	15°	17.7
10	73	20°	26.6

$$4 \sqrt{10^{\circ} 5.9} = 26.5 -$$

range 17.7-34.1

Ground projection path : 69.5
 Began 26.5
 End 13.3

$$\Delta 13.2$$



Flare $4\frac{1}{2} + 13.3 = 17.8$

End Point

Station	d (mi)	alt	flare	height
7	23	35°		16.1
10	16	35°		11.2
13	5.5	70°		11.8
12	19	40°		16.0
11	17	45°		17.0
5	25	30°		14.4
3	49	15°		13.1
4	49	10°		8.6
2	49	15°	13.1	—
1	69	10°		12.2
6	—	—	[?]	—

$$\begin{array}{r}
 \hline
 9 \overline{) 120.4} \\
 \underline{13.3} \\
 8.6 - 17
 \end{array}$$

Timber begins / shows as on map, g.v., Mt Lowell +
Crescent, runs ^{about} 1 mi S - where met picked up,
thence slightly E - S, prob finally curve up N
around river. Brown did not get much of region
N - NE - here. Timber includes prac all "Woodland
Township". Region N - timber line mostly exposed
"hard-pan" - red clays, + sandstones on outcroppings,
+ pasture where rock found normally fair grass (now
heavily grazed + short sparse turf).

Timber mostly black jack. + N + S - timber line
softer deep sands - presumably shifted up from
Cameron River cover red hard sub-soil, make
search + find highly difficult.

Worked definitely sec marked X, either in whole -
part.

14

#

Cloud 7 prob over ~~14~~-17-3, + this a bad
region for met - deep sand, timbered. Report a
whizzing noise 7 heard on sec 8-17-3 (man
not personally interviewed / 2 verifications of his
statements / others + talked 1 small boy who 7 with
him.

Sub-final point is favorable region - recoveries.
- wheat fields + prac no timber except on draws
+ not thick - primarily on non-cultivable lands.
Part - area worked near sub final point (see
21-28 tier - 33 Oakview Township) in oil well
district.

No responses S - Chickasha, I didn't inquire much.

① S S Sullivan, A - Chick. on US 81 on N bank
of Washita River, 7 settler E side - his full sta.
His wife saw an object begin 5° N - E all abt 30° ,
ended 15° E of N all abt 10° . Heard noise on
2-4 min. Train seemed past 3-4 min.

② Pocasset, US 81, $1\frac{1}{2}$ mi N of town, O. Ship,
saw object begin due E ^{down the road} all 25° ended his pt
N 40° E all 15° [prob wrong].

Geo Baker heard report + claims to hear whiz
before he did report; did not see object - Minco.

Homer Tye, Jr., at Leonard's f's place, visit
from W Tex, saw light - green illumina away from
direction.

measured near Chickasha
along section line road

③ Union City US 81 - German, DaGatz, sitt on
his E porch with Frau G. Pointed begin
[1 for S] S 60° E all 30°; end N 20° E
all 15°. Heard report 1½-2^m later. ♂ objects
very close (judg begin; distant) - end.
Brenton corrected approx Dec. 16° E. Claimed flight
lasted 10^s - [wrong]. ♂ got up + move P see
1 end → would otherwise be behind column, + Brown
judged his rehearsed ac 2-3^{sec}, prob.
true durat flight.

④ Across st. Joe Coley's family, Union City. Little
girl pointed begin S 50° E all 25°; end N 20° E,
all 10°.

still
morning of
Wed! } ⑤ El Reno, [obs n.g.] Velta Siler, didn't see
begin thought end N 40° E all 30°.

⑥ — Dellingham's fill sta, 6 mi S Okarche
on US 81, hard talk with, heard 2 distinct
reports, end N 75° E - refused alt est. Says ♂
stones on field — ♂ knew were not full.

⑦ Eat at Kengfisher. A R Thompson, saw
begin S 65° E all 20° end N 55° E all 35°.
No noise. (Brown thought wrong at 1st!)

Then E, State Hwy 33, & after many requests,
found Roy Evans a boy who saw from 10 mi W
(8) & 1/2 mi S of Guthrie, not very well, began S 20° E,
alt not est; end N 25° W all roughly guessed 30°.

No observers at Guthrie found. At Mulhall,
(9) G W Brooks, gro., saw begin right over tree
from bench where he sits on E side of bldg.,
began S 30° E alt 15°, went behind bldg (S W
him) Heard noise.

Orlando, drug store girl, Lucile Nida, 3 mi
(10) N + 1/2 mi E of town, on apt on E side of house,
began S 25° E alt 20°, end S 30° W alt 35°
[not final end]. Heard no noise. Figured 1st
big break (smoke clouds) S 15° W. Train lasted
18-15 m. [cloud]

Went up & circled to Enid, on US 77 / US 64,
thence Enid, (inquiries brought no results. Stayed
here at night, down 81 & morn. Inquiries on way
down, 1 man at Bison saw & heard no noise.
No excitement at all at Enid - no comments come in papers.
[Ground point should (near).]

How
Thurs

Helen Martin, Dover, R 1, ^{oute} 7 1/2 mi E - Dover.
 Couldn't say where saw begin, (end N 85° E,
 all 45°. I heard no noise. ^{5th} horseback
 (11) drive - cattle. Also talked Frieda McKnight &
 town; she outdoors & saw begin (Toilet!) S 65° E
 (12) all not est; end N 85° E; all 40°. Heard no
 noise.

Peg-legged man 6 mi E - Dover, — Chew.
 [+ I did!] Saw - obs n.g. heard noise.
 This takes us / negro.

At 5 mi W + 5 N - Crescent R reports -
 noise com — from 1 E — no 1 saw ^{of} region
 (stock all looked E.

(Smith Tables: 36° 96° 1930 9.1 E
 36 98 ✓ 10.0 ±
 36 100° 11.3 E Inter)

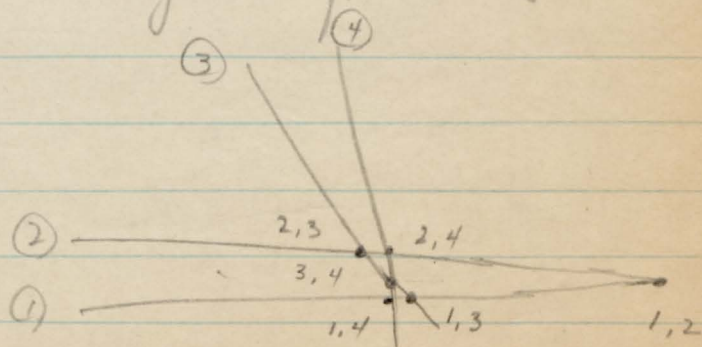
Observations are along 98° + 36°

Oklahoma Farm + Stockman - OC?

In Crescent Thers eve + Clarence Tontz I said
 I seen 1 fireball. I cld T practically overhead N E, he said,
 N not quite overhead judg I his pointing. For 1 end S path,
 I pointed 60° all due N. Brown thought wrong at time (these
 data very good in general.

Sta - agt at Lovell - a T & S F RR - named
 P A McLaughlin - wheat field 2 mi W + 1/4 m
 N of Lovell, SW quar 31-19-4. Only
 few hundred ft from county line. I saw fireball
 com out NSE; first said saw bright
 streak, saw burst + form large ball + ring
 from → emerged bright "ball of fire" →
 continued →, also leav streak, + finally
 burst + give off shower + sparks. Ended at
 alt about 70°. No report. I impressed
 1/2 fut R com directly tow him. After
 xplo I + his bro-in-law (it) turned + off
 direct + placed hands over back + head, fear
 some particles would strike heads - protec,
 not I listen. R heard noth. Did not cover
 ears. I seen Heringer Coll + read of subject.
 App independent simul reac! I judged train
 lasted 5-8 m. Wouldn't say how far back down
 path train T.

(13)



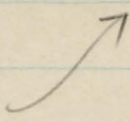
Abt 8 mi W of Crescent, ^{Brown} talked to a negro who
did not see & heard 1 report of 3 distinct, separate
blasts, followed (rumbl). By rabbit hunt
(quit!) for woods.

Abt 6 mi W of Crescent, man reported hear
noise from inside his house. & run^{ned} out & find
cattle all look E. Reports in many places
directly underneath path - closely & sth stampeding
affected + chickens gittly affected.

186

32° 45' 97 20 new WB - post office
Lake Worth

32° 50' 97 25'



λ

ϕ

186 units = 1°

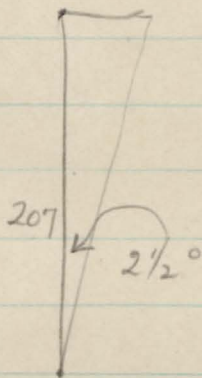
229 units = 1°

77.5 = 25'

38 + " = 10'

1° of ϕ = 69. + mi

3° of Lake Worth = 207 mi



$\tan (5 + 1/2^\circ) \times 200 \text{ mi} = 22.8$ flare height

had 13.00

20.00

20.00

1111

33.00

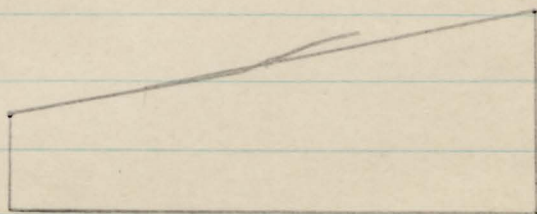
4±

left 1.50
\$31.50

5⁰⁰ Bailey
Mathis

inc { 5.00 for mel
3.00 ph call

1000 mi @ 2¢

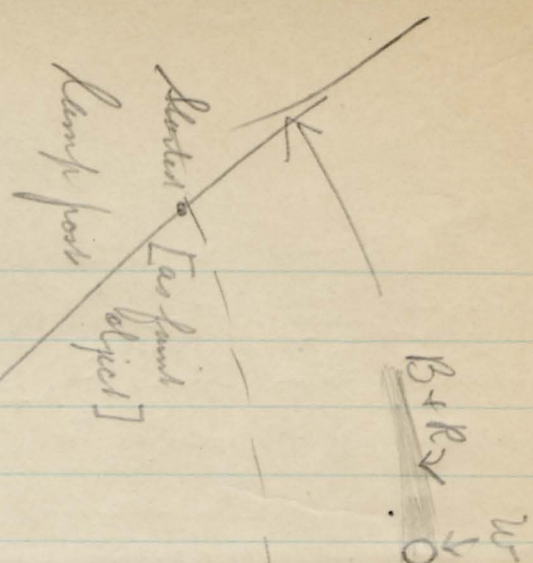


Mr Alma Staleup 924 Main Stillwater Ok
wrote Wahlgen 1936 8-18 ^{send} diagram + offer
help. Began az $S45^{\circ}E$ ^[ok Brunton] $\wedge 42^{\circ}$ alt $[45^{\circ}$ Brown
Brunton] end az $S58^{\circ}W$ [Brown - Brunton
 $S70^{\circ}W$] alt 28° [Brown Brunton 30°]. Staleup used
protractor + finished obs before cld disappeared - within
15 min. Was at 10th + Main St - fill sta.

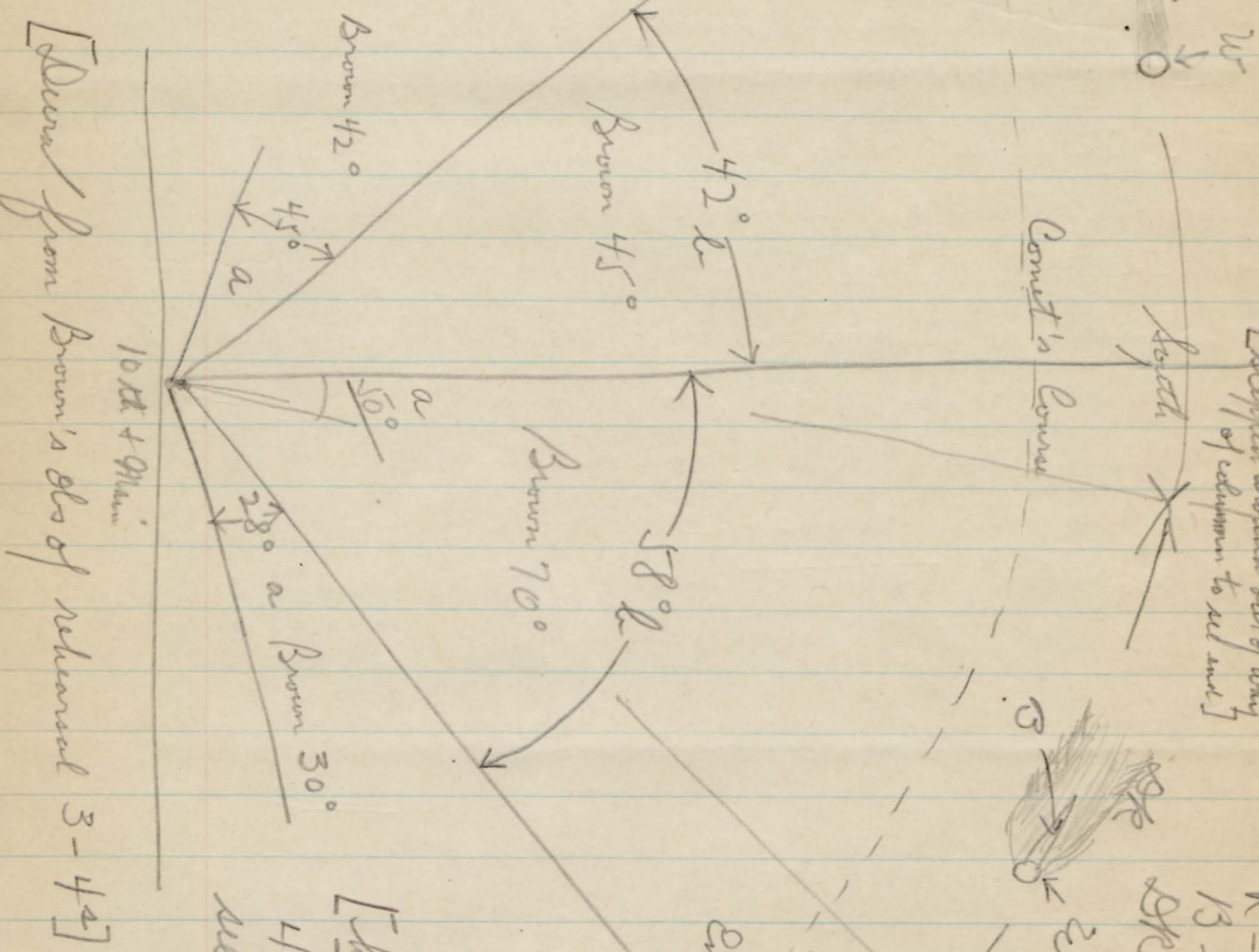
6 saw big xplo + smoke cld 10° before above final
end. This measurement + info obtained 1 Brown +
Brunton the cloud τ shown separately on diagram.

6 est cld $\rho 2^{\circ} \times 4^{\circ}$. I guess put 1 Brown of
with D full then \sim sky. D τ high enough I /
rid \sim "big effect" τ "redness" τ at alt same all
where cld τ seen. ~~This τ Sept.~~ Brown τ Sunday,
Aug 30; moon full 9-1. 6 stayed 1 + eaten supper.

6¹ put gas on a car, looked at bowl I see gas
amt, noted ^{relatively} faint object, stopped I watch, hang
up gas line + spout, stepped so I get column
out way; object disappeared.



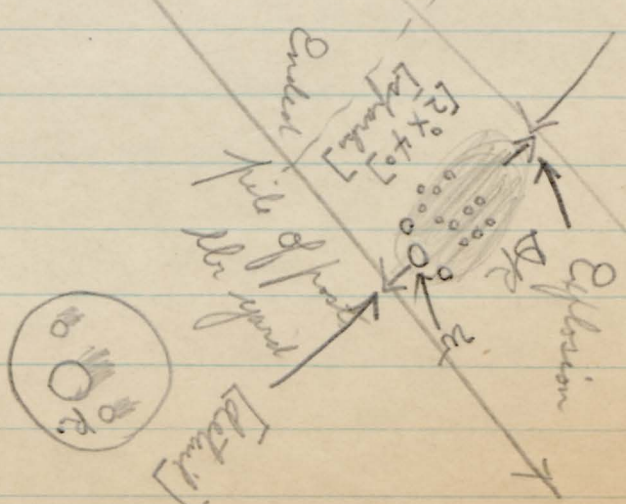
$L =$ asymmetrical
 $a =$ [of all]



[??]
 [Applied around out of way of rehearsal to red end]

W - white lot
 R - Red ✓
 B - Blue
 DR - Dark Red

[Shard on 4th] more
 4 1/2 min after
 all



Clinton Ice Co.

Harold D. Cooper 1007 Avant Ave Clinton Okla
letter 1936 8-18 to Wahlgren: meteor seen shortly
after 7 at about 22° alt slightly N of E track almost
horizontally toward NE loss slight alt. "Up
1st observed a bluish streak I seen & C shoot across
sky, no doubt I while object I still in strato-
sphere, I change suddenly I a fire-ball of brilliant
efflu red & orange resemble a comet with tail,
become more abundant & a sudden, I burst I a flare
& disappear. II Follow this flare I resembled an
xplo a sort, I not heard, a large gust & white mist
I seen I despired immediately with nothing else
observed from here. At I time this flare I seen, I
object I still at a point I alt 20° above I horizon. I
entire observance cover I space I around 5 sec.
I would state this meteor never reached I ground
except I fragmentary [sic] pieces".

Astro. enthusiast I years I wants data I this.

J
Hudnall & Pirtle - geologists - Peoples Nat Bldg.,
PO Box 988, Tyler. Phone 777. Letter to Harry
Wahlgren 1936 8-20

Clipping Tyler Courier Times - Mrs C. F. Cardwell
2.2 mi S 24° E of Tyler approx 3^m till 7 p.m.
by her clock. Hudnall went S her res next evening
with engineer's transit, us trees & front S res
fact P Tyler & located & dirie meteor & last seen;
I believe his obs [with transit] - correct within 1° or 2° .
1st seen alt $33^{\circ}30'$ az $N 9^{\circ}33' E$. Disappeared in
sight S Mrs Cardwell az $N 25^{\circ}5' W$. Transit where
she was sitting. Angles turned off Polaris 8.30 p.m.
[Elongate Polaris calls - 1° correction]

Us - this obs + newspaper reports & course Shawnee -
to Kingfisher Hudnall computes: P met T 137 mi NE
of Tyler at alt of 92.76 mi when 1st seen by Mrs C.,
take acct curvature & 2.80 mi. Last seen I
assumes alt 2° to 5° . If 2° , $\sqrt{225}$ mi away,
approx over Shawnee 13.45 mi alt (7.85 mi tan 2°
+ 5.6 mi curvature). If 5° , $\sqrt{25.28}$ mi above
Shawnee, Oba, - Hudnall believes more nearly correct.
Us - hts of 92.76 + 25.28 + project, meteorite
would struck ground 10-12 mi SE of Kingfisher.
Hudnall guesses newspaper explains time lag of
3-4 minutes at time meteor would apparently struck

(⊕) + (time) p xplo^r heard & attributed p meteor
requir — some time p form sup gas, steam, etc. p
Cause p xplo + blowout " & prefers ord. sound travel-
time 1100 ft/sec \equiv 3 min / 37.5 mi. " p meteor did
strike (⊕) 37.5 mi from p observer & 3 min lag, p
xplo would occur at exactly p same time p struck p
ground."

Tentative calculatⁿ o assumpt p meteor p fall
straight twd p center S ⊕ + p any L from p vert
would p due entirely p rota S ⊕ show meteor p traveling
492 mi/hr p last obs 5° alt + 581 mi/hr p 2°.

Wants more info o path so p can make more calculatⁿ.
" (info \rightarrow I p used definit^e course across Obla.
carries p from Kingfisher SE, go from 2 to 5 mi.
N of Obla City + a similar distance S of Mc Alister. "
Is worried because p L o fall o due p ⊕ rota course
should p \nearrow E-W than as just described. Wants 4 or 5
obs. with transits & thinks true course & pt of strike
then determinable with 1-2 mi., even p accurately
with rate o sound trav. C to GE Meador.