Jung to so atlast, low who want begin current sut-ballstuck. As h. count speak a word fryhile, he does not attempt to explain the situation to me; but for an extra, such as Defrants A right, I privately fine at 4° or 5° mesday 18 Jan 7 after breakfast set of with Ali forthe Pyramid . africe a few morn grafite while he come up , making 60 in all before 1700, x 1know of about 20 or never still to come. but not over \$ or 6 are English ; mainly Italians. In Queens Chamber measured all the courses up each corner, or vite each ede of eadwall, subsary because they are so thickly encressed with salt, especially on the lower parts. Then took Deft of flow (or nather of basement speak, projecting thes) below the first two courses; as floor is manifestly prefand for another coat, xi all uneven; situenely from stone to stone, but stones with sunk parts to receive the next course, exactly as on the outside masonry. It not believe it ever had another course, since torn up, as there is no trace git on the walls. Also took height of door Af niche as a while thest my piece need measures of gestinda they agreewell, by separate overlapping yestoday 116.63 116.83 of whole measure to day or in making it Then with details friche which provesthat it never Extended byour 41 from E wall, backwards. Then hung plumblue from A forof on word ; x toch spets to W N X 5 walls. There put plumb him to E wall, as gesterday

I may do so at last, I do not want to begin current  $\underline{\text{sub}}$ -bakhshich. As M. cannot speak a word of English, he does not attempt to explain the situation to me; but for an extra, such as  $D^r$  Grants  $\Delta$  night, I privately give  $\frac{1}{2}$  a part  $\frac{1}{2}$  or  $\frac{1}{2}$ .

Tuesday 18 Jan<sup>y</sup>

After breakfast set off with Ali for the

Pyramid. Copied a few more graffiti which he came up, making 60 in all before 1700, & I know of about 20 more still to come, but not over 1/5 or 1/6 are English; mainly Italians. In Queen's Chamber measured all the courses up each corner, or rather each edge of each wall, not easy because they are so thickly encrusted with salt, especially on the lower parts. <Then out for lunch> Then took

depth of floor (or rather of basement of wall, projecting thus [\*\*]) below ±\*t/<the> first two courses; as floor is manifestly prepared for another coat, & is all uneven; not merely from stone to stone, but stones with sunk parts to receive the next course, exactly as on the outside masonry. I do not believe it ever had another course, since torn up, as there is no trace of it on the walls. Also took height of door, & of niche as a whole to test my piece meal measures of yesterday;

they agree well, by separate overlappings yesterday

116.63

116.83

by which measure to day

- - - 116.61

116.74

C.P.S. is therefore very far out making it 119.1 Then noted details of niche which proves that it never extended beyond 41 from E wall, backwards. Then hung plumbline from [♠] of roof on W wall; & took offsets to W N & S walls. Then put plumb line to E wall, as yesterday,

of took offsets all down F wall, distances to N PS walls every Some gesterday. Then took total lengths along N & Siralls. of in mutte between the plumb lines. This, except for the question of currentum of EXW walls, I have complete sucurures of the chamber for distances & verticality of all the wall, hight of all courses, I every dimension of the make very fully. Wis is all much needed as CP. S.'s menmoes are often out; Ithink he was discouraged by the uneven floor, & the grantely Asalt on the walls; Thave in work cases Estimated allowance for this, Xin perhaps the greater part of the measures secured them on clean surfaces of stone. I find the EXW walls tip in the the E 1.03? WW 0.91 wood so the top is 194 shorter than the floor; or 227.45 below, \$225.57 above, in the mobile: agreeing with side measures of 227.41 N 227.615 on clean wall; all this Shewing CP.S. 226.5 & 227.2 to be too short by sucrustations. Then back about 7, & had suffer the war wearing of Cieling as they were complicated & hearth to do then while clear. then with this to bed abt 11.0. Two travellers who came in , in a breath less state all streaming from the heat & coertion, were astonished on my saying that Istand there 6 hours a day; they said they should be dead in an hour. They are as a whole rather amoning, not mough to be trouble some, & all too but the comfortable to wish to stay, for talk or mis chief. Ali tells fore active man In came over two or three years ago, xwent up the 15t 2 w of 3 md pyramids, all with help; helting Ali when he went to him on the 2 which is very difficult

& took offsets all down E wall, distances to N & S walls were done yesterday. Then took total lengths along N & S walls. & in middle between the plumb lines. Thus, except for the question <possibility> of curvature of E & W walls, I have complete measures of this chamber for distances & verticality of all the walls, heights of all courses, & every dimension of the niche very fully. This is all much needed as C.P.S.'s measures are often out; I think he was discouraged by the uneven floor, & the quantity of salt on the walls; I have in most cases estimated allowance for this, & in perhaps the greater part of the measures secured them on clean surfaces of stone. I find the E & W walls tip in, <(not the N & S)> the E 1.03? & W 0.91 about so the top is 1.94 shorter than the floor; or 227.45 below, & 225.57 above, in the middle: agreeing with side measures of 227.41 N & 227.61 S on clean walls; all thus shewing C.P.S. 226.5 & 227.2 to be too short by encrustations. Then <started > back about 7, & had supper; produced measures of ceiling <mean [ ? ] 30°39' ± 3'>, as they were complicated & I wanted to do them

while <u>clear</u>. Then wrote this, & to bed abt 11.0.

Two travellers who came in, in a breathless state, all streaming from the heat & exertion, were astonished on my saying that I staid there 6 hours a day; they said they should be dead in an hour. They are as a whole rather amusing, not enough to be troublesome, & all too hot & uncomfortable to wish to stay, for talk or mischief.

Ali tells of one active man who came over two or three years ago, & went up the 1st 2nd & 3rd Pyramids, all without help; pelting Ali when he went to him on the 2nd, which is very difficult in any way.

borduesday 19 Jan 7 Did subsleef at all well; the dogs were very noisy after their doubey festival, & Mad run out spelt them. for a sleep in the moon. I threfore Did not finish breakfast oget Itill in . Lettled not to go into A today; it certainly makes one fenerish at right from the bust, close win, & battyness. Went over or manured several ofthe west tomber, Juning afterway. bolled at me arturo points forthe survey, other back to suffer on tomatoes, afterward bothing over trangulation arrangements, & their to her Early, as I find myself ho to. high ; this was also the case on Saturda even, after that well expedition. I see that famest mix inside work, to do it comfortably. Is day was a heavy close here day; our setty in people of ellow. Thursday 20 par 7, Comparing all the road which Mane bea using , shall use for King chamber, with the standard. Find they have the contacts arraje good. In prealist cornec in Islall have truste born fry just measures is to ind s & none brust. This was a long job, & I had brush severel preliminary offermanent changes in arrangements here so had finaled about 5. Then took a run outwett Ali hunting fathery or; & then after suffer sal vove to planning tragulation; settling the best number of been his between all stations so as to give a uniformly accurate reals a matter newing much consideration, stopped at & by with the At her. Small comfort notes on defect found with the little warre for someers I'm attribute by the dyn ofind them all falato date; they agreeing with their being with the true

Wednesday 19 Jan<sup>y</sup>

Did not sleep at all well; the dogs were very noisy after their donkey festival, & I had to run out & pelt them. Got a sleep in the morn. & therefore did not finish breakfast & get off till 12. Settled not to go into Δ today; it certainly makes one feverish at night from the dust, close air, & battyness. Went over & measured several of the west tombs, during afternoon; looked at one or two points for the survey, & then back to supper on tomatoes. Afterwards looking over triangulation arrangements, & was in/<then> to bed early, as I find myself ½° too high; this was also the case <(1°)> on Saturday even, after that well expedition. I see that I must mix inside & outside work, to do it comfortably. To day was a heavy close hazy day; sun setting in purple & yellow.

Thursday 20 Jan<sup>y</sup>

Comparing all the rods which I have been using, & shall use; for Kings Chamber, with the standard. Find they have sh contracted average 1/7000. The greatest correc¹ I shall have to make to any of my past measures is 1/50 inch; & none to most. This was a long job, & I had to make several preliminary & permanent changes in arrangements here, so truly finished about 5. Then took a run out with Ali hunting pottery &c; & then after supper sat down to planning triangulation; settling the best number of obser¹s between all stations so as to give a uniformly accurate result a matter requiring much consideration. Stopped at ¼ to 11, wrote this & to bed. I made careful notes on objects found with the little coarse pots & saucers [元] attributed to 4th Dyn, & find them all of a later date; thus agreeing with their being unlike the true early pottery.

Friday Jan 21

Off to N. air channel <before 10>, & made another effort to get through sand by gas-pipe poking; but ran on bits of limestone, & could only get 4 ½ ft into narrow part of channel; as I was working at top side of channel, the stones there shew that sand must extend some way farther, so gave it up. Then measured size & angle of channel, & then came down as Ali wanted to go to mosque. Must say his devotions are somewhat provoking to an unbeliever, or rather perhaps his pleas. However as I told him I should quickly be going back to  $\Delta$  to go in, he was good, & returned soon today; so after cooling & oranges &c, I went back to inside work about 1, & looked at some points of Q.C. to verify measures; & then had ladder up to K.C. Here I specifically examined course thicknesses; finding them vary from 46.95 to 47.18 in different parts up the corners, <the courses of each of. which measured up from floor to

ceiling, with rods all put together in one length. The mean course thickness, excluding <bottom &> top which is not so certain, is

47.063 mean diff .053

± .013

the bottom course where exposed 47.039 and .059  $\pm$  .023

+.010

top course to ceiling 47.019 and .020

This was all slow

work as the accuracy was to the full limit which I could manage to estimate, on such badly defined edges. About 6 ½ I stopped, & came back to supper: tomatoes as before, but I cannot make them as good as Allison does, too watery; I suppose they want more butter & some milk, but I am afraid of burning the pan if I stew too dry. Then finished settling all the obs<sup>ns</sup> required for the triangulation, about 600; then wrote up this, & to bed about 12. A friend of Muhammeds

Jan 21 Of to N. air channel made author ort to get through sand by gas-pipe poking; but ran on bits of limestine fearly get only 42 ft into narrow part felound. as Iwas working at top eich ofchannel the stones there show that sand must extend some way farther, so care it up. Then meanined size & single fehannel & the came down as somewhat provoking to an unbeliever or rather behalo his pleas. However as Itto him Ishould quickly be going back to A typ in, he was good & network door to day; so after cooling & oranges de, hvent hack to inside work about 1, x looked at some fints of Q.C. to verify menunes; atten hew Tables up toke. Her I specially Examined course cieling with ross all ful tyster in one length. The mean work as the accuracy was to the full limit which I would many to estimate, on such headly defined eager. about 6's 1 stopped Liane back toupper: tomatoes as before, but heaunt they want more better & somewilk but Lam afrai burning the pan of I stew too dry. Then finished cottley Joseph regimed forthe Fragulation, about 600; then with up then, Ato bed about 12. a friend phenhammends

has been up here firing twice why oralwing ne I know got. The shell is settled I think well , a police office, came over to both after the keast here . Atte sheld the him about my being here trail he was thinking the County Cetter, Alla Prefect Mice's per that has all known about by the police, ofthe was to take core twen not modested, this is very good, as all the trabs here are the sure to have hear think the shell only wants to try virilate for balelish tosee the letter, though the tota him spoke tome when Hasser him at A : forerse knowing him forcestam, I skinwed along past own than once without taking any ruther whatever. Hi is strough avere truy giving him anything, & this must be a governe part offir lenne to are ones pochet (Wheneverte is not concerned); or f. thinks a little feeling sometime & Ishall consult kin ou it. The biceron son gave the 2 shells 10 t & carlining shoul; this last than furnished them with gramelling the other taking it out to try & hawh it away in Caird;

has been up here firing twice, why or what for I know not. The shekh is settled I think well; a police officer came over to look after the <viceroys> kiosk here; & the shekh told him about my being here, & said he was thinking of going to the mudir of Gizeh to enquire about me; so the officer told him he need not trouble, as he had seen the Consul's letter, & the Prefect of Police's permission; that was all known about by the police, & the shekh was to take care I was not molested. This is very good, as all the Arabs here are sh sure to have heard it & know of it; & Ali is dryly amused with the affair. I think the shekh only wanted to try & <u>irritate</u> for bakhsheech, which was just the way not to get it; as he never came down here to see the letter, though Ali told him to do so; & he never spoke to me when I passed him at  $\Delta$ ; of course not knowing him for certain, I skimmed along past him more than once without taking any notice whatever. Ali is strongly averse to my giving him anything, & this must be a genuine part of his desire to save one's pocket (whenever he is not concerned); D<sup>r</sup> G. thinks a little feeing desirable sometime, & I shall consult him on it. The Viceroys son gave the 2 shekhs 10€ & a cashmir shawl; this last has furnished them with quarrelling matter for many days, one wishing to follow the judgement of Solomon & halve the disputed property; the other taking it over to try & hawk it away in Cairo;

the first declaring that he did not get proper offers & taking it over to Cairo another day; one saying the other might have it for 5 Napoleons; &c, &c; keeping the community lively; I have not heard the end yet. I heard that Mariette is dead, & that the Museum is by terms of his founding to be divided between French & Egyptian; everyone thought it to be all Egypt<sup>n</sup> Gov<sup>t</sup>, & certainly any such arrangement has been kept very quiet.

I do this up Sat. morn, ready to <u>send</u> in if opportunity offers, so cannot say if any letters are  $rec^d$ .

Shawl settled for 5 Nap. at last; but not to be paid yet.

Cairo -VI-

Saturday 22 Jany

Saturday 22 Jan 7 after futly of last journals ready for at, went with Ali to A. He found a man goin Cours, to whom I gave letter, torder for any letters for Then into A about 11. Went to king chamber; hump a plumb for in each corner from the cirling, (find waxed helders very useful) of took offset of the follow of every course of Each wall; thus plumbing it most throughly. Then with steel take measured distances of plumb bolos on floor, they being all close to 50 inch waster (i-e. 200 400 x 450 owing to plumbling being 4005 insome) so that rumor lengths were all readable with wing real. Elionghe I could not go along N side varing to big lide in floor, or - stone in the way, get Hosh both diagner, 450 Atom it as well as the angles, the only lowing a check. This occupied till 6. attempt I took in bigets I did what for anything, as having plumblines fixed I could not risk travelless disturbing them (especially one over doorway) so worked quickly a head. buly the travellers come, there a hindrance but notrouble; & the only the delay was an uply truth int a bighole quarries By Howard tyse in the floor, which game are a headach trome truises including our on my jaw which bled slowly for some hours; the heat thing it could do, but rather sharp considering it was through Shirkers, this made climbing ladders, Astroping my head on the floor doing the tapo measure, rather unpleasant; but I had too much work spoilt if rul finished If to right, to make me All for a trifle. Then out again showe. Had Supper

After putting up last journals ready for post, went with Ali to  $\Delta$ . He found a man going to Cairo, to whom I gave letter, & order for any letters for me. Then into  $\Delta$  about 11. Went to Kings Chamber; hung a plumbbob in each corner from the ceiling, (finding my waxed holders very useful) & took offsets &/<of> top of <&> bottom of every cornice of each <end of each> wall; thus plumbing it most thoroughly. Then with steel tape measured distances of plumb bobs on floor, they being all close to 50 inch marks (i.e. 200 400 & 450 owing to plumblines being 4 or 5 ins out) so that minor lengths were all readable with ivory scale. Though I could not go along N side owing to big hole in floor, & stone in the way, yet I took both diagn $^{ls}$ , & so obtain it  $[\Re]$ as well as the angles, the only losing a check. This occupied till 6; & though I took in biscts I did not stop for anything, as having plumblines fixed I could not risk travellers disturbing them (especially one over doorway) so worked quickly ahead. Only two travellers came, & were a hindrance but no trouble; & the only other delay was an ugly tumble into a big hole quarried by Howard Vyse in the floor, which gave me a headache & some bruises, including on my jaw which bled slowly for some hours; the best thing it could do, but rather sharp considering it was through whiskers. This made climbing ladders, & stooping my head on the floor doing the tape measures, rather unpleasant; but I had too much work spoilt if not finished off tonight, to make me stop for a trifle. Then out again & home. Had supper,

(towatres again) & then worked out the measures clearly 206.581 max 206.527 max, base well at Nside, 866 tell in at top. This roes the king the borigotal measury as thoroughly as necessary Ithink. The levels of floor I course xieling remain to be done by the of the with two observers. I saw an interesting singone hollow about 4 in wide of to? day draguely across face of big stone over loor, shewing how they worked it plane by cross drafts worked first fall, I also found geter the remains of two big bosses on one ofthe wall stones, which had been dressed out, leaving only abt I raised, but unch gougherthan other part of stone. All these are visible when meaning texaming with a canol beld close to the walk so as to shew the least flustration of surface. Many stones have wary patches in them; most have a slightly grained band around them about 2 in from Edge, perhaps so inch high. Ali found a stone of 3 A the grant casing with a boss on it never chiralled of at all standing insule among the vest ofthe unmound

(tomatoes again) & then worked out the measures clearly, calculating the plan of the plumb lines. The length of K.C.

I find vary	N	S	
•	412.354	412.252 min: at top	
	412.957	412.930 max: at base	of steel tape at 6°F over
probable error	E	W	its standard
about .006	206.286 min: at middle	206.072 min: at middle	temperature.
	206.581 max	206.527 max, base.	

The greatest inclination of any of the walls being the E. wall at N side, .866 tilt in at top. This does the Kings Ch: horizontal measures as thoroughly as necessary I think. The levels of floor, 1st course & ceiling remain to be done by theodolite, with two observers. I saw an interesting diagonal hollow about 4 ins wide & 1/10? deep diagonally across face of big stone over door, shewing how they worked it plane by cross drafts worked first of all, I also found yesterday the remains of two big bosses on one of the wall stones, which had been dressed out, leaving only abt .1 raised, but much rougher than other part of stone. All these are visible when measuring & examining with a candle held close to the wall, so as to shew the least fluctuation of surface. Many stones have wavy patches in them; most have a slightly raised band around them about 2 ins from edge, perhaps 1/50 inch high. Ali found a stone of  $3^{rd} \Delta$  of the granite casing with a boss on it never chiselled off at all, standing in situ among the rest of the unmoved

casing. Thorea batch of 2 nd 3 1 limestone carrier c. angles \ \ \ \ , & about 40 of 1 st A; Ali hus 109 about as many ofthe 2th so Ishall have a fine lot for selection. Only one corner of 3 planes has been found Cately; + I have also secured the only hit get from with affarently a scrap of hieropythic out; it is not a greek or Roman letter; and if hieroglyphin is only a visitors cutting in lyption times, I expect a batch more visitors names from the flowers a faller, after pinerling king chamber; making 73 before 1700, & still Thave to look over the top of the A, every inclif Which is cutwill name; but throwy over are mainly lose ore blocks rolled down a century or two ago; I found Bruce's among then, spould it out to Ali, telling him to show it to day our specially interested in A. opter doing the measures Ithen with up this yest to bed by something past 12. Sunday 23 Jan 7 bolke retter stiff your from my bruise but without any fereinhules from my two days in A. after breakfast , & a nead , will the happy feeling that I was not my July to rush out and an much as possible, I took a stroll, but was not incline top for. On going alongthe gullish on Eface of A Isar sevel but of carrie augles, & hiclard of 4 bottom my I which is rubes commen, & a should prize of two corners to the Abottom . Then

casing. I have a batch of  $2^{nd}$  &  $3^{rd}$   $\Delta$  limestone casing angles [ $\Re$ ] & [ $\Re$ ], & about 40 of  $1^{st}$   $\Delta$ ; Ali has about as many of the  $1^{st}$   $\Delta$  so I shall have a fine lot for selection. Only one corner of 3 planes has been found lately; & I have also secured the only bit yet found with apparently a scrap of hieroglyphic on it; it is not a Greek or Roman letter; and if hieroglyphic is only a visitors cutting in Egyptian times.

I copied a batch more visitors names from top of Grand Gallery, after finishing Kings Chamber: making 73 before 1700, & still I have to look over the top of the  $\Delta$ , every inch of which is cut with names; but the early ones are mainly lost as blocks rolled down a century or two ago: I found Bruce's among others, & pointed it out to Ali, telling him to show it to any one specially interested in  $\Delta$ .

After doing the measures I then wrote up this, & got to bed by something past 12.

Sunday 23 Jan<sup>y</sup>

I woke rather stiff & soar from my bruises, but without any feverishness from my two days in  $\Delta$ . After breakfast, & a read, with the happy feeling that it was not my duty to rush out & do as much as possible, I took a stroll, but was not inclined to go far. On going along the rubbish on E. face of  $\Delta$  I saw several bits of casing angles, & picked up 4 bottom angle [ $\Re$ ] which is not so common, & a special prize of two corners [ $\Re$ ] top & bottom [ $\Re$ ]. Then

the nest thing Isighted was progreenly ofcering of the Lettle Promis which have glas to secure as I had with get seen any evidence ofther being cased, orwhiten a patch of ground full of beads, & bones of buts, swidently the cleanings out of some touts; Spicked them up at the rate of 200 an hour. This place is so full of antiputes that try always tures up to chercone will; some worth retice, to say nothing of the which soul of masons chaips, pottery, About. Some time after I sighted the Asenthim to my touch with some ofther coming, while Hrought the nest. Then after admiring the suset prospect I turned in for suffer. Thurt I shall hunt of the Treslyterious west Sun the church is so broad; not offermuly so, but stills notvery wifiging. The P's are not down in the fuit as having a Church, so perhaps it is a service in their hisians schools; Tuenest ash the frants, Several receives prevay my going blairs every Suday; one is there is restruct to arie a week; another, that of getting up some thou usual Ishaking 17 mily on a Downey is not having a rest, I such I neally want, Walking in I Escher as I know I should be not so active went day, & deaned waste time that way Un Shell Atter village (not the guides) cause & squatter in

the next thing I sighted was fragments of casing of the little Pyramids, which I was glad to secure as I had not yet seen any evidence of their being cased, or whether it was granite or limestone. Then passing them I came on a patch of ground full of beads, & bones of bats, evidently the clearings out of some tombs; I picked them up at the rate of 200 an hour. This place is so full of antiquities that something always turns up, go where one will; something worth notice, to say nothing of the whole soil being composed of masons chips, pottery, & bones. Sometime after I sighted Ali & sent him to my tomb with some of the casing, while I brought the rest. Then after admiring the sunset prospect, I turned in for supper.

I think I shall hunt up the Presbyterians next Sunday, the Church is so broad; not offensively so, but still not very edifying. The P's are not down in the guide as having a Church, so perhaps it is a service in their mission schools; I must ask the Grant's. Several reasons prevent my going to Cairo every Sunday; one is, there is not much to go for; another, I do not wish to be away from here regularly on any given day, so that it <the tomb> should be known to be left <empty> once a week; another, that st getting up earlier than usual & shaking 17 miles on a donkey is not a day of rest, & such I really want. Walking in I eschew as I know I should be not so active next day, & I cannot waste time that way.

The Shekh of the <u>village</u> (not the guides) came & squatted in

the doorway this morning. I was at breakfast, so hander him out that coffee of outer bicut while he chatted to Ali. He had been telling the shekt of the guides that the latte had nothing to so with me; that I regularly suggest a of the village, I have be considered that that ought to be sufficient, other farther as Thou just our the village belonged the will age she let that as he was sater field with my being there, the A shell had no business in the reatter. Ili gove him a long discourse about my valuable backing; & the coursel feveral stone, withe Reis exclability (prefect of Mice) sounder continually in the flow of talk. Ke popped of very unceremoniously, of was not at all on the look for bathsheish apparently . Jam in me hung to begin black-mailing for Ali is dead againest it; It as he say monday 24 Jan 7 After breakfast of to get ofix blocks for the suds of the base; Selected blocks of basalt, as there is now thereabout, share it is early occabut being very common with few of it will not attract the corabs, Eley were about 60 & 40 lb; I wished for a heavier stried to take it with the by respectfule, but found it too much for me. I having there slightly below the surface, with the top worker faces nearly level (within 100 100), & resting on smaller pieces in the

the doorway this morning. I was at breakfast, so handed him out hot coffee & oaten biscuits, while he chatted to Ali. He had been telling the shekh of the guides that the latter had nothing to do with me; that I regularly engaged a man of the village, & hence he considered that that ought to be sufficient; & that farther as I lived just over the village I belonged to the village shekh, & that as he was satisfied with my being there, the  $\Delta$  shekh had no business in the matter. Ali gave him a long discourse about my valuable backings; & the consul, General Stone, & the Reis ez-Zabtiyeh (Prefect of Police) sounded continually in the flow of talk. He popped off very unceremoniously, & was not at all on the look out for baksheesh apparently. I am in no hurry to begin black-mailing, for Ali is dead against it; & as he says "once put your hand in your pocket here, & you never take it out again".

Monday 24 Jany

After breakfast off to get & fix blocks for the ends of the base; I selected blocks of basalt, as there is none thereabouts, & hence it is easily recognised, but being very common not far off it will not attract the Arabs. They were about 60 & 40 lbs; I wished for a heavier & tried to take it with Ali by rope & pole, but found it too much for me. I buried these slightly below the surface, with the top worked faces nearly level (within 1 on 100), & resting on smaller pieces in the

twite (That selected them to be concare not come & below, so as such to roll or sock in the ground with the length in the direction of the have then drilled a like 3 and but not deep as will was blent it all over, but a block of human stone on the wark preserved perfectly I loope, & the course need not be Disturbed in assing it; the bulk of the stone is buther Tireatin ofthe Sports terminal sothat it weed not be pressed by the observer in using it. Then, being findlywell roasted, Iwant of to a fine truck which I wanted to copy; got tucked in, & sent the of this dring bed biscuits & began work . his freeks came in with pato, one surling which made the small chamber almost unbearable, he scribble his name, though Incumatration that it was barbarous of forbible Sworked on & Ali returned, then going a quicken with time holding the cauble, I at last princed by 1/4 to 7, having begins about 2, & which nearly 2000 figures It was very comfortable work, a toterable suffly air, duetter hot non est; so hour glad thate it day, as I am still rather gueer with my bruises A man from the Plice or the Autypites defear twent hosbeen mer giving orders that the shell is not to

hole (I had selected them to be concave, not convex, below, so as not to roll or rock in the ground) with the length in the direction of the base. Then drilled a hole <in each block>, 1/3 inch, but not deep as drill was blunt, put in plaster & left pencil graphite projecting; put sanded it all over, put a block of known stone on the mark, & a small cairn 2 ½ ft S. of it to find it by. This will preserve it perfectly I hope, & the cairn need not be disturbed in using it; the bulk of the stone is in the direction of the opposite terminal, so that it need not be pressed by the observer in using it. Then, being pretty well roasted, I went off to a fine tomb which I wanted to copy; got tucked in, & sent Ali off to his dinner; had biscuits & began work. Two Greeks came in with Arabs, one smoking which made the small chamber almost unbearable; he scribbled his name, though I remonstrated that it was barbarous & forbidden. I worked on & Ali returned, then going on quicker with him holding the candle, I at last finished by ¼ to 7, having begun about 2, & copied nearly 2000 figures. It was very comfortable work, a tolerable supply of fresh air, & neither hot nor cold; so I was glad to take it to day, as I am still rather queer with my bruises. A man from the Police or the Antiquities department has been over giving orders that the shekh is not to

issist any travellers trasceed the promiel of they choose to go up by them selves they may . He shell tothe us when. Ale sours he has been here in pres times ging this and orders; Ali helieus without an authority, + solely to try byet bathesheed from the sheld It to be able to report that he had been then being to the preservation fromments July. This works very likely as any they nothy spicial would forbid the ascent at all, but this fellow herows the travellers would make a now at that so he forbids the trabs accompanying together fees. Ali suys that two lades and a boy went of some time of very slowly dearefully by themselves overthe a most dangerous way owing the step bing all conered with Jelons ; & I would not to it any account. He also says that way unam sion took too ladies up without attendants going before & shawing the way; this is cary & safe enough up the regular corner as it is gut clear & well marked. It is laughable to see a man in huge full Muls baseend, & brought some with a rope round his waist held by one behind. Is the say humburging with rope toget money". After suffer

assist any travellers to ascend the Pyramid; if they chose to go up by themselves they may. The shekh said that he already had an Inglez here who would go up by himself, & had an order to do <for> it; but the official took no notice. Ali says he has been here in previous times giving the same orders; Ali believes <he does so> without any authority, & solely to try to get bakhsheesh from the shekh, & to be able to report that he had been attending to the preservation of the monuments duly. This looks very likely as anything really official would forbid the ascent at all, but this fellow knows the travellers would make a row at that, so he forbids the Arabs accompanying to get their fees. Ali says that two ladies and a boy went up sometime ago very slowly & carefully by themselves over the entrance, a most dangerous way owing to the steps being all [\mathbb{R}] covered with debris; & I would not do it on any account. He also says that Wayman Dixon took two ladies up, without attendants, going before & shewing the way; this is easy & safe enough up the regular corner as it is quite clear & well marked. It is laughable to see a man in huge pith hat on a cool & windy day, being pre helped by three Arabs to ascend, & brought down with a rope round his waist held by one behind. As Ali says "all humbugging with rope to get money". After supper

sketched If much plan of touch to accompany the inscription, especio some of this testimo mal a strong book for common use: for they were s. nothing as the inferil on a windy day; Hother our carl Haag, & Lousdale heavelle (brother of the Pasha) C.P. S., Wypuman Sixon, fill, Prof water, Prof Savidson I there Ishall copy for him. Italy of Alderley had write a good one, but put a ? after every point of recommendate The quided kinting sates faction this own "; x another commended him for being respectful, a truly remon idea, which never occurs to other men to mention. Then with up this & to bed about huesday 25 Jan 7 of tolerably Early to Kuy Chamber, & measured all the cirling joints along both N & Swalls; ladder for Every joint. There is a curious skewners between the two sides in parts, shewing that the beaus are not squal with all alog. Every beam is cracked across close the to the 5. wall & gaping open as much as . 3 inch. Then having prished all ladder work in this Chamber went down to Ruceis ch; & there measured a line orm each gable end to be taken in in bevelling there, measuring all the courses. Then after making notes on the floor, I took all the ladders to out of the Promid. The 140 inch lawder would not go out of Al mamoon hole; so I took a pick & cut away the earth

sketched off rough plan of tomb to accompany a copy of the inscription; copied some of Ali's testimonials into a strong book for common use; for they were so rotten as to be in peril on a windy day; I looked over all his bundle in the morning & selected as good ones Carl Haag, Dr Lonsdale, Mariette, (brother of the Pasha) C.P.S., Wayman Dixon, Gill, Prof Watson, Prof Davidson, & these I shall copy for him. Stanley of Alderley had written a good one, but put a ? after every point of recommendation, a queer joke: two Americans amused me, one said Ali guided <him> "to my satisfaction & his own"; & another commended him for being respectful, a truly democratic idea, which never occurs to other men to mention. Then wrote up this & to bed about 11.

Tuesday 25 Jany

Off tolerably early to King's Chamber, & measured all the ceiling joints along both N & S walls; a very troublesome job, as I had to get down & move the ladder for every joint. There is a curious skewness between the two sides in parts, shewing that the beams are not equal width all along. Every beam is cracked across close the to the S. wall, & gaping open as much as .3 inch. Then having finished all ladder work in this Chamber went down to Queen's Ch; & there measured a line down each gable end to be taken in in levelling there, measuring all the courses. Then after making notes on the floor, I took all the ladders &c out of the Pyramid. The 140 inch ladder would not go out of Al Mamoons hole; so I took a pick & cut away the earth

in the sutraine panya somewhat; ofound that all the rarth was cleaned at the part nymind, it would just pass the stone; it was taken in in pieces. Hun had lemmade & bis out about 3; & then of with there ht to live for base; paced transled all the critical point ofthe curves of the ground, & after wanting a letth Ali come from his trumer, & fact him to hold a rough levelling staff bit of wood tacher across a not at way 10 in the early wirth) at each front, & took a section thus. Then used the twilight in hunting the rubbish heaf for carried & got 10 pieces more one thefirst piece ofthe corrier arms ough that Ali ord has get see very small that, Igha fine prece of 3 nd armis the therday. Then dropped into touch which lespied the ther day & verified several bout finsarifitie Thee back in dark to suffer. Then trawing If list offills stations status condition of each, which few Stone asked up for. Whyry her offlus, writing this till 1/4 to I the bed. bownestry Jan 26. Ofwith the & uncovered sit & sochet of A'; only found three small rough lives twothing to hear where the cornerius. Then to SE SW, where found a good projecting rectangleant out 1the rock searth in the highly flace; one intelligent man (netions officer Ithink) came that some talk with at least two feet of sand, so could not do anything at present.

in the entrance passage somewhat; & found that when all the earth was cleared at the part required, it would just pass the stone; it was taken in in pieces. Then had lemonade & biscuits about 3; & then off with theodolite to line for base; paced & marked all the critical points of the curves of the ground, & after waiting a little Ali came from his dinner, & I set him to hold a rough levelling staff (bits of wood tacked across a rod at every 10 ins, to be easily visible) at each point, & took a section thus. Then used the twilight in hunting the rubbish heaps for casing & got 10 pieces more, one the first piece of the corner arris angle that Ali or I had yet seen, very small & bad. I got a fine piece of  $3^{rd} \Delta$  arris the other day. Then dropped into tomb which I copied the other day, & verified several points of inscription. Then back in dark to supper. Then <plotting section of base line & considering it;> drawing off list of Gills stations stating condition of each, which Gen<sup>1</sup> Stone asked me for. Copying hieroglyphics. Writing this till ¼ to 1, & to bed.

## Wednesday Jan 28/<6>.

Off with Ali, & uncovered site of <NW> socket of  $\Delta^2$ ; only found three small rough holes & nothing to shew where the corner was. Then to SE SW, & there found a good projecting rectangle cut out of the rock exactly in the right place; an intelligent man (retired officer I think) came & had some talk with me on it. Then lightly covered it again, & to SE; here found at least two feet of sand, so could not do anything at present.

Then If to 3 A I day at tun comers, but found that they were all Encembered with fallen blocks of grante casing, swould take a good deal front to clear them. Then Lad a look over the sate of festing by 3 nd. Then to WE come AD2, & cleaned the rock; found only one rough small list in just the line ofthe corneredge, but nothing like frest Pravid Sochet anywhere. Then have truffer. Iwants to see howined could be cleaned & surveyed quietty & without sugaring labour; & then I know That will be necessary, I how for hunst get officeal permissions or though I should defend on they I did on the from that it was not topind antiquities, but to do the measurements which were permetted. sal- som trunting. Which hieropyphies; wrote rough to watch here at all the sand gets int it so much the silver one stopped altogether threatures double goes by lying quel; the gold me I took intere, & looking into it two days after I found said a paich found shaking about the works, that I sufteed it + put it by again directly. Thursday Jan 27. At breakfast the the hours go over with will smiles ofin the disert which hereported fell of towns; + as tras late I handed him the bay, + tills him he has better go on , & I worth overtake him, as I should walk quicher. He smiled at they sold wheneve for a

then off to  $3^{rd} \Delta$ , & dug at two corners, but found that they were all encumbered with fallen blocks of granite casing, & would take a good deal of work to clear them. Then had a look over the site of pottery by  $3^{rd} \Delta$ . Then to NE corner of  $\Delta^2$ , & cleared the rock; found only one rough small hole, in just the line of the corneredge, but nothing like Great Pyramid Sockets anywhere. Then home to supper. I wanted to see how much could be cleared & surveyed quietly, & without engaging labour; & then I know what will be necessary, & how far I must get official permissions &c; though I should defend anything I did on the ground that it was not to find antiquities, but to do the measurements which were permitted. Then by 8 o'clock sat down to writing. Copied hieroglyphics; wrote rough to Birch; & then this, finishing by 11 ½. I cannot wear a watch here at all, the sand gets into it so much; the silver one stopped altogether three times < each time set off agin by picking sand out, with needle>, & only goes by lying quiet; the gold one I took into use, & looking into it two days after I found such a pinch of sand shaking about the works, that I emptied it & put it by again directly.

Thursday Jan 27.

At breakfast told Ali I would go over to the hill 5 miles off in the desert which he reported full of tombs; & as I was late I handed him the bag, & told him he had better go on, & I would overtake him, as I should walk quicker. He smiled at this, & did not move for a

few minutes, then dawdled about & when he did start went own into therally out This way, & had a talk with a friend. So when That finished I went over the hill into the wady the short way, & found myself whead of him; so hwent strength on at smiles an hour orto, never . In Apping below 4, up to the hill; making some detous to see the valleys on the way. By the time Ight there, linds only see a speck of Ali, which That totales who till it from stone. So I rambled all over the group of hustly frock Thich stand up weathers tworms eaten by the sand, from a huge reaf of limestone sticking up in the mutoth ofthe expanse prolling flint & and will of the decent. Hafter That coplored it all I found Ali come up. He oropped the bag saying he was timed; that I went like a train; that he had been trying to flow me, but Spirst went up the hill then back to the rally, I he would not inmarge it, I laughed & reminded him that I had warned him your him a good start in time; on which he said no more, we then looked all over the place for the tough, Mich now only were said to be wells, Just rock clamber as I had understood. but though he searched to be soil he had only even them by montifet with over offent, & then were I want one find. So at last I returned in trung bay, Is at down in the shade for dinner. It was a levely day; not a scrap of shade in sky or on ground

few minutes, then dawdled about, & when he did start went down into the valley out of his way, & had a talk with a friend. So when I had finished I went over the hill into the wady the short way, & found myself ahead of him; so I went straight on at 5 miles an hour or so, never dropping below 4, up to the hill; making some detours to see the valleys on the way. By the time I got there, I could only see a speck of Ali, which I had to telescope to tell it from a stone. So I rambled all over the group of knolls of rock, which stand up weathered & worm-eaten by the sand, from a huge reef of limestone sticking up in the middle of the expanse of rolling flint & sand hills of the desert; & after I had explored it all I found Ali come up. He dropped the bag saying he was tired; that I went like a train; that he had been trying to follow me, but I first went up the hill, & then back to the valley, & he could not manage it. I laughed & reminded him that I had warned him & given him a good start in time; on which he said no more. We then looked all over the place for the tombs, which <u>now</u> only were said to be wells, & not rock chambers as I had understood; but though he searched & I searched not one could we find <he said he had only seen them by moonlight with Dixon & Grant; & there were 8 in the party; I failed to see the force of this excuse. >. So at last I returned to my bag, & sat down in the shade for dinner. It was a lovely day; not a scrap of shade in sky or on ground

for walking, but an intense clear surstime; a fine north wind which taffled about lest owest, gentle & not testrong, just hept one from streaming, I made walking delightful. after dinen we then outwood I making various boy betour young tach scharat from this seeing many remains of Bedavin camping grounds on the way. I stone or hibble displaced here remains unchanged for thousand fyears probably if with in a water course . ) recessive a touch on that side of the freat Pyramin, & looked at the His sand chamber, but they were so intherably batty that I felt poisoned & hacked out pretty own. Then to suffer. Ali had loaded himself on return with 34 lb of silication wood; Isan many small hills furthing but silicipied ostreas. after suffer, chying heir of their, with I wish, & this; finishing by 12. Let their to morrow & post ship, Def. & gent Stone. Please port enclosed to Dr Direk as ad men at and ofletter

for walking, but an intense clear sunshine; a fine north wind which baffled about East & West, gentle & not to<sup>sic</sup> {too} strong, just kept one from streaming, & made walking delightful. After dinner we then returned I making various long detours, & going back separate from Ali; seeing many remains of Bedouin camping grounds on the way. A stone or pebble displaced here remains unchanged for thousands of years probably, if not in a water course. I measured a tomb on that side of the Great Pyramid, & looked at the Ibis vaul chambers; but they were so intolerably batty that I felt poisoned, & backed out pretty soon. Then to supper. Ali had loaded himself on return with 34 lbs of silicified wood: I saw many small hills of nothing but silicified ostracas. After supper, copying hieroglyphics, wrote D<sup>r</sup> Birch, & this; finishing by 12. I go to Cairo tomorrow to post & shop, D<sup>r</sup> G. & Gen<sup>l</sup> Stone.

> Cairo-VII

Please post enclosed to D<sup>r</sup> Birch, as address at end of letter.

Friday 28 Jany

Friday 23 Jan 7 off by 10 2 to Cairo, afine morning with high wenty clouds which prevented it king too hot. To the post first , you letter of apers; then to Do frank Found that he was out with a bas case withwhom he had sat up last night. We f was pleasant as usual invited inc to lunch : ta sur Hooker came in the is a suce tifer forson fruidlaneous tastes has been unevalogest to a Canada expedition of Inemember night owas interested in un chain (which that taken to her gent stone) the you'd it was a great unprovement in all ways on the My attern; asking also if it was fatured! It f. come in just as we began lend + flowed on in his usual kindly talk of A te. We fin an tuerican as that Juspectio, & her governen also; though neether are detectably so had a long talk on vario malters with the S. . Ir sherrin (that is the very men many name Shower there is well was at duxor. I have was out dring with some Beg. W. Hooker is living with the Is now, for how boy Its gust. Junst sen & for in the place to meet agreeable trutellectual people. was very glad to receive a letter from home, thear that thanks had sent to him for his kind was, On Enguing for a bott make es a pair fruine wanter stitching, the of whitever to send his servant with them to his man; which I gladly agreed to, as they w- probably be better done. I then went to Post, Trew one Juny \$ 5 orders, from a very civil Haliam Micial. Journed Than forgotten to get my packet fournal or sealed up, so went back

Off by 10 ½ to Cairo, a fine morning with high misty clouds which prevented it being too hot. To the post first, & got letter & papers; then to D<sup>r</sup> Grant. Found that he was out with a bad case, with whom he had sat up last night. M<sup>15</sup> G was pleasant as usual, invited me to lunch; & a M<sup>I</sup> < A H.> Hooker came in. He is a scientific person of miscellaneous tastes, has been mineralogist to a Canadian expedition (if I remember right), & was interested in my claim (which I had taken to shew Gen! Stone), & w & said it was a great improvement in all ways on the old pattern; asking also if it was patented! D<sup>r</sup> G. came in just as we began lunch, & flowed on in his usual kindly talk of  $\Delta$  &c. M<sup>IS</sup> G. is an American as I had suspected, & her governess also; though neither are detectably so. I had a long talk on various matters with the D<sup>r</sup>. D<sup>r</sup> Sherrin (that is the very nice man's name, who was there) is well, & up at Luxor. Dr Lowe was out dining with some Bey. M<sup>1</sup> Hooker is living with the G's now, for how long I long < know> not. I must say D<sup>r</sup> G's is the place to meet agreeable & intellectual people. I was very glad to receive a letter from home, & hear that thanks had been sent to him for his kindness. On enquiring for a boot maker, as a pair of mine wanted stitching, the D<sup>r</sup> volunteered to send his servant with them to his man; which I gladly agreed to, as they w<sup>d</sup> probably be better done. I then went to the Post, drew one of my £5 orders, from a very civil Italian official. Found I had forgotten to get my packet of journal &c sealed up, so went back

to of as I neared the house, he called to we over the regardale "10 knot an hour". He impendently gave une can be towar , & ! ord it up. Then posted it, ogon cheese x inte , & suguined about choulate; ablitt will get of it for about 1's for a time, for which they suffly another sort (for which Crosse & B: are agents); & I shall want more as I have some 12 in a month, would have as much on hand. Touly wish the profusion offish which It's not touch, could be converted. It sate 5 forten is scarcely mon than Ishall have they toget it from Suffand rugally, so to save botter Ishall try some of CXB's & if not so good order some Swin. Then took souker your to feel thous or found that howas out making; so straight hime, getting in North dark. The worst bit is that beside the road to the Braunds (this end publich is useless from disrepaired there remy a sort of arm of Vile water, which shallows to wought at the till here; we cross half a mile or so down it, to save a long sandy bend, Atten crossing is a strutch of deep black mud in avery state from liquid to hand; to sit a shaly sort of doubey while he pich his way over this in the Jark is not desirable. Ali has a bund fluding the bey ofthe down this touch west to this) in the said nearly for himself or huchamined. Just now! heard he , a friends grubbing for some time , i at last a cough atmy door Which I haved tosee he's laughing face asking if that the key, I'm return asked him where it was,

to D<sup>r</sup> G; as I neared the house, he called to me over the verandah "10 knots an hour". He immediately gave me candle & wax, & I did it up. Then posted it, & got cheese & milk, & enquired about chocolate; Ablitt will get of it for about 1 ½ fr. a tin, for which they <also> supply another sort (for which Crosse & B1 are agents); & I shall want more, as I have done 12 in a month, & only have as much on hand. I only wish the profusion of fish, which I do not touch, could be converted. The extra 5<sup>d</sup> per tin is scarcely more than I should have to pay to get it from England myself, so to save bother I shall try some of C&B's, & if not so good order some Swiss. Then took donkey again to Gen<sup>1</sup> Stone's, & found that he was out riding; so straight home, getting in about dark. The worst bit is that beside the road to the Pyramids (this end of which is useless from disrepair) there runs a sort of arm of Nile water, which shallows to nought at the hill here; we cross half a mile or so down it, to save a long sandy bend, & this crossing is a stretch of deep black mud in every state from liquid to hard; to sit a shaky sort of donkey while he picks his way over this in the dark is not desirable.

Ali has a knack of hiding the key of the door of his tomb (next to this) in the sand, ready for himself or Muhammed. Just now I heard M, & friends grubbing for some time, & at last a cough at my door, which I opened to see M's laughing face asking if I had the key, I in return asked him where it was,

of assured him I did not know taking could out to helf the search. I think A must have pochetis it, Maryor. the moisy shother also comes round at might is the velege quand whom the has bespohe to include mohammed ( orguly) in his nowinds. Now it is so vilach, & ) really will go to had something like a proper bour for once. Juany thanks to all kind writers at home; the weather is not such that Hough share it, the account in Pat. Op. are equally empleasant Some pay figurey journals might as well go to 54 Hall, as) Every him howit is so much lost time from useful work to be done here; as I want so week sleep, that the Such ofthe dark is not too long for that & suffer the I am much dis affortes affinding that my want in food who to go with little of setter. Saturday 29th Jan 7. Of after breakfast to arrange for the station marke the put on the rubbish NohA to form on to of some it after wond Examination found that another mort could with shifted to accommodate it; so after some core fixed it; but it will require a plunk line from tripo stand tree it. Then put 2 marks on No the tree pavement where casily cleaned. about To court come up to day to carry stuff from A nubbish heals tomend the road. Had some thought of persuading them to charalum twant but as they only want chips put the ordinary larger places they don't went toclear where bryang

& assured him I did not know, taking candle out to help the search. I think A. must have pocketed it, & forgot. It seems the noisy shooter who comes round at night is thevillage guard whom Ali has bespoken to include Mohammed (& myself) in his rounds. Now it is 10 o'clock, & I really will go to bed at something like a proper hour for once. Many thanks to all kind writers at home; the weather is not such that I long to share it, & the accounts in Pub. Op. are equally unpleasant. Some of my figurey journals might as well go to S<sup>y</sup> Hall, as I have not time to write to him anymore than to many others. Every line I write is so much lost time from useful work to be done here; as I want so much sleep, that the whole of the dark is not too long for that & supper &c. I am much disappointed at finding that my wants in food & rest are quite as great as in England; I had hoped to be able to go with little of either.

Saturday 29th Jany.

Off after breakfast to arrange for the station mark to be put on the rubbish N of  $\Delta$  to form one triangle round it. After much examination found that another mark could not be shifted to accommodate it; so after some care fixed it; but it will require a plumb line from tripod stand to see it. Then put 2 marks on N steps to see pavement where easily cleared. About 20 < 20 > carts came up today to carry stuff from  $\Delta$  rubbish heaps to mend the road. I had some thought of persuading them to clear where I want; but as they only want chips & not the ordinary larger flakes they dont want to clear where I require

it; also it wi be more truble to them, as it wis be on low level? & Ishould have to baldsheed them sloth after them; so as i must get fermit ( which I have no doubt of doing via fund Stan for many the cleaning I thought best not to try to just them except to prevent anything los subwant. I course Ali x) will heep a good both out for casing, but they do not want large stone to will leave them; but Ith Ah to fee a france each for any pieces of theree planes they are so rare that I shall risk have many, I way Hall much want some. Then fut in new mark by gill SW sochet, Shil is Nestroyed; also mach own a likely front to find, found one fills browse granes there, without any lines or it of therefore probably not used; so I left it as it was not an place for use. Then routed with this in 3 1 rubbish found a preze of a corner of a corner-casupstone along each edge much decayed in part, but with good surfaces remaining to aged it & back to the sainth henches; but stations on the N & Somes (requiring some cleaning to find in parts ) of on the trial famous. Istell must mark the other two trenches, other can begin tollect still days for torramplation , / cannot now rish leaving it later, as it will be probably 10 days work, or this well of need our a month by selecting good days. Hen by heard beauthrechon an its being coll enough offer from sand, so asture in strument

it; also it  $w^{\underline{d}}$  be more trouble to them, as it  $w^{\underline{d}}$  be on low level; & I should have to bakhsheech them & look after them; so as I must get permit (which I have no doubt of doing via Gen<sup>1</sup> Stone) for many other clearings I thought best not to try to guide them except to prevent anything I do not want. Of course Ali & I will keep a good look out for casing, but they do not want large stones & so will leave them; but I told Ali to offer a franc each for any pieces of three planes; they are so rare that I shall not have many, & Sidney Hall much wants some. Then put in new mark by Gills SW socket, which is destroyed; also mark over a likely point to find pavement. Then to the little  $\Delta$  by the 3<sup>rd</sup>, climbed it & put mark on top, & found one of Gills bronze squares there, without any lines on it & therefore probably not used; so I left it <alone;> as it was not in a good place for me. Then routed with Ali in  $3^{rd} \Delta$  rubbish & found a prize of a corner of a corner-casing stone, [\mathbb{R}] about 10 ins along each edge, much decayed in parts, but with good surfaces remaining: bagged it, & back to the Azimath Trenches; <found some curious cuttings in the rock &> put stations on the N & S ones (requiring some clearing to find in parts) & on the trial passages. I still must mark the other two trenches, & then can begin, & select still days for triangulation 5/<.> I cannot now risk leaving it later, as it will be probably 10 days work, & this will spread over a month by selecting good days. Then by March I cannot reckon on its being cool enough, & free from sand, so as to use instruments.

Ithink the trangulation han so alone, but the levelling 1/23 west try to hook some lumpean from Cairo to help in. I have hope of or Sherrin when he comes town Nile in about a mouth. Perhaps Hooker would soit. Eo day it flashed in are that he is the Agest H. Holeer Now Spurnell tolday of, I would his name for me in case twented to make as granteness in Caro; hunt her of this west time I see him: there can be no doubt, as he is in chemical him How back to suppose & Junes; Much lasters some hours downly over Pat op, Sam very glad that all papers are so gainet Sale of Euraght, specially times; of good does not fare much better about meland. then boling over trangulation arrangements; writing hat of places broant to clean, to give fur! Store . I shall & not try weight to get it done efficially, as 1st must fee any Micish that come here to be it . 2 w They would delay probably, + drive we totate. 3m. They would not do it as hourt, but to much here, two beingh there. 4th Ihr Espeny fell destr for now is notower att \$ 20 despect , & ? should have to we nearly as much in balebolish to spice Dof. song that for vicery to lend a boat of the you of rumous; it costs much more than taking a steame Jask for all sochet, of all As to be cleaned (3 f A' & 3 f A and mark clear now). Part Maving cleaned. Entrance passage cleaned. Asimuth mench suds cleaned: & as secondary clearances, ground in centre of tranches, Roch trenches NE of D'

I think the triangulation I can do alone, but the levelling I must try to hook some European from Cairo to help in. I have hopes of D<sup>r</sup> Sherrin when he comes down Nile in about a month. Perhaps <A.H.> Hooker would do it. To day it flashed on me that he is the Ayerst H. Hooker whom Spurrell told me of, & wrote his name for me in case I wanted to make acquaintances in Cairo; I must open up this next time I see him: there can be no doubt, as he is in chemical line. Then back to supper & dinner; which lasted some hours slowly over Pub. Op. I am very glad that all papers are so against Dale & Euraght, specially Times; & Gov<sup>t</sup> does not fare much better about Ireland.

Then looking over triangulation arrangements; writing list of places I want to clear, to give Gen<sup>l</sup> Stone. I shall try not try another[?] to get it done officially, as  $\underline{1}^{st}$  I must fee any officials that come here to do it.  $\underline{2}^{nd}$  They would delay probably, & drive me too late.  $\underline{3}^{rd}$  They would not do it as I want, but too much here, & not enough there.  $\underline{4}^{th}$  The expense of all I ask for now is not over abt £20 I expect, & I should have to give nearly as much in bakhshish to officials: <& men who came.> < $\underline{5}^{th}$  I should not have such control over them.  $\underline{6}^{th}$  It  $w^{\underline{d}}$  be an obligation.>

D<sup>r</sup> G. says that for Viceroy to lend a boat to take you up Nile is ruinous; it costs much more than taking a steamer ticket <or even a dahabiyeh>.

I ask for all sockets of all  $\Delta s$  to be cleared (3 of  $\Delta^1$  & 3 of  $\Delta^2$  are nearly clear now). Parts of paving cleared. Entrance passage cleared. Azimuth Trench ends cleared: & as secondary clearances, ground in centre of trenches, Rock trenches NE of  $\Delta^1$ ,

Trial passages, Parts of pavecunt of 2 w x 3 m As. Thefe to get ful Stome to order me to have it some, as a geodeter survey work (perhaps in his name) I clear of the antique reportment: now is a forwarable tun as just after mariette dutt all is in confusion there. Voen with this till 4th 1 x to bed Sunday 30 fam 7 After breakfast, toying up, Arcading, I twent out for a stroll about 3: I up to west tell for sucret This west Hell command the Whole Pyramid plateau, Xia large Expanse of bare, windswept, sandpolished, bin estorie, all fa greater wentral tent. In parts of a cliffy nature, where I has been cut away, the saw has work out the softer part so that it looks exactly What as if it had been blown over by a hurricane when half melter. It is a special feature of sand-wear that it is in lines; showing the direction in which the wind usually blows over the rock. They back round the N-face trace what the degrees have some. My are cleaning away rubbish of A steps just one step above pavement outher wand of Noise, which is what all a bad place for me. The parts I seatly want are for one peason or they not what they like to work on, being incorrecing in one way or other, but they will be useful think . One big corner of a tip joint of caring store is turned up, but it is about 60 lbs too much for me to take away I fear. It is a very low me, not at all browned, having been sauded up

trial passages, Parts of pavement of  $2^{nd}$  &  $3^{rd}$   $\Delta s$ . I hope to get Gen<sup>l</sup> Stone to order me to have it done, as a <u>geodetic survey</u> work, (perhaps in his name) & clear of the antiquity department: now is a favourable time as just after Mariette's death all is in confusion there.

Then wrote this till ¼ to 1, & to bed.

Sunday 30 Jan<sup>y</sup>

After breakfast, tidying up, & reading, I went out for a stroll about 3: & up to West Hill for sunset. This West Hill commands the whole Pyramid plateau, & is a large expanse of bare, windswept, sand polished, limestone, all of a green/<im> neutral tint. In parts of a cliffy nature, where it has been cut away, the sand has worn out the softer part so that it looks exactly like as if it had been blown over by a hurricane when half melted. It is a special feature of sand-wear, that it is in lines; shewing the direction in which the wind usually blows over the rock. Then back round the N. face to see what the diggers have done. They are clearing away rubbish off  $\Delta$  steps just one step above pavement on the W. end of N. side, which is not at all a bad place for me. The parts I exactly want are, for one reason or other, not what they like to work on, being inconvenient in one way or other, but they will be useful I think. One big corner of a tip joint of casing stone is turned up, but it is about 60 <or 80> lbs too much for me to take away I fear. It is a very low one, not at all browned, having been sanded up

very sarly. Then traffer. Tourations as usual self & chowlate of course, ship bicuit at libition. Hi had a long & tall, withaving seen him since anorming; Heave him himself on Sunday, o'he takes good sheer of the day; but rially selvous want he Gronday 31 Jan 7 & windy day with runch sand in the air, so beening was out ofthe question. Put in two station marks for the ENE trench; & then took advantage of wind to sept earth for bears, got a considerable quantity. Then If to lell beyond splink; while at several touts there, & sifted for more beard, getty the feet ofther in all; Ali hurew the best places in that hill, which is all a mass of tombs like their, Alter ground white with bones turned out. It was a unserable day the out; clouds of stinging steed blown an only face that was Eyes continually; we have none suchin Ryland, the grains are so large that they seem to cut in hitting the face, leasured three counterable touts, Cany home in the dusk, with rather a headache from the strain of blinking the sys, with sys office some with saud. after saffer arranging the order of bervatures in the in transplation on which a great deal defends; putting them so that a shift of the instrument may be instantly detector, & minor shift may not affect small bestreets but only produce smors on which Extent, as far as possible There worth the at 72, & to bed, In Mecca Caravan returned

very early. Then to supper. Tomatoes as usual, eggs & chocolate of course, ship biscuit <u>ad libitum</u>. Ali had a long talk, not having seen him since morning; I leave him to himself on Sundays, & he takes good slices of other days; but I really seldom want him.

Monday 31 Jan<sup>y</sup>

A windy day with much sand in the air, so observing was out of the question. Put in two station marks for the ENE trench; & then took advantage of wind to sift earth for beads, got a considerable quantity. Then off to hill beyond sphinx; looked at several tombs there, & sifted for more beads, getting far < over 10> <13> feet of them in all; Ali knew the best places in that hill, which is all a mass of tombs like this, & the ground white with bones turned out. It was a miserable day to be out; clouds of stinging sand blown on ones face & into ones eyes continually; we have none such in England, the grains are so large that they seem to cut in hitting the face. Measured three considerable tombs. Came home in the dusk, with rather a headache from the strain of blinking the eyes, & with eyes & face sore with sand. After supper arranging the order of observations in the triangulation, on which a great deal depends; putting them so that a shift of the instrument may be instantly detected, & minor shifts may not affect small districts but only produce errors on which extent, as far as possible. Then wrote this at 12, & to bed. The Mecca Caravan returned to day.

Tuesday 1st Feby

<Finished arranging order of obsns during breakfast.> Not very windy, so determined to try triangulation: looked up all the apparatus, & had to make small plumb bob (¼ inch high) to centre theodolite by, when not on stand. Off by abt 12 ½, & fixed to do the middle of W side, as that sta did not require corners of  $\Delta$ , & I found screw cap of N-W. immoveable to pincers, needing the proper key, which I must get from Gen<sup>1</sup> Stone. Tried spectacles but found them so much in the way, that they soon returned to my pocket. G Levelled & centred theod, adjusted collimation & examined other points; then went off to put up my plumb bob synch; they are easy to place, even on a windy day like this, & with a stone about 1 lb weight on top they stand pretty well; I only had to replace 2, & the wind was such as to blow the sand up occasionally, & by the time I had done the horizon was hazy with sand in the air. Then getting Ali to stand to shade me I took the azimuths. Then took dip to nearest 5' or so, for any corrections required, & packed up; went round & collected signals & home. The placing all the signals (which will involve 3 miles walk, beside climbing, & time of <del>(adjusting)</del> in some cases, and 1 mile or so at the least) is most the most

in some cases, and 1 mile or so at the least) is most the most troublesome & tiresome business for one observer to have to do; & I must take them in every night for fear of stealing, & in any case I should have to go to them all <every morning> to see that no one had shifted them. I reckon 3 or 4 hours every day will be taken up in this. While returning Ali called me over to the rubbish

triangulation: looked up all the appearatus, & had to make small please bob ( "4 inde light) to centre there of the that sta did not require corners of the of found screw cap of woventh to pinces, needing the proper key, which I must get pour few Stone. Theed spectacles but found than so much in the way, that they soon relieves to my pocket. develled xcentred theod, as juster collination & examine the points; then went of the put up my plumb bob signed they are say the a wer on a windy day like the o with a stone about 1th weight on top they stand fretty well; I only had trufflace 2, with wind was such as to blow the sand up occasionally, of the time Had some the horizon was hary with said the air. Hen getty Al to stand to have me Stock the armother. Then took of to nevert 5 or so, for any correction required, & padded up; went round & wheter signals & home. The placing all the seguals which well an orber Truly walk, besidelimbing, theme of any ast in some cases, and built or so at the least) is another most troublesome othersome business for one been thought ? ; & found take them in every night for fear of steating, a in any can Ishould have to go to them allow to see that us one In shifted them. I neckon 300 4 hours every day will be taken of in this. While returning Ali called me over to the rubbish c

heaf, just und - A sutrana : x there, the joy! was Howard Vyses carrie stone uncovered, by the cartes in gette grow material. They are working just when I want tothe E. o. W. in the cut of the heef und the cutrance & Hook of caring stones on the other side; also they work on level of I course, i-e. just our dry carrie, at wear the W. w. corner. They are within Eft or so of persevent in the rendslex clearing away withat level. It is clearly a false report that the carring stones were broken of after H.V's leaving, Young have been said by some one who could rubser then for subbish, as on the side of the is EXCAVATED pointed, justas H.V. painted on the air channel &c: Sothis is his first stone trust author. Sals with nothing to Johney Hale enclosed for porting. After suffer I ordered the Dos of today; of without mean soror of I pointry (4 very ready) from all causes ( except the grown flewelling instry is only 1.3, which is about is to wich on from , according to distance of star. This is as near as I could hope worsh to come, I considery that it was a gusty day of a very awherend place for theroolt needing to rise the sown continually, it is prousing for the final results. There was no clear soidence of shift in a zimuth possibly to not more \* as it was proffer of at one food with a scrap ofstone this was good. Igo into Cairo to morror tree gen! Stone, get hey for sta, marks, & order to clear the societs if I can.

heap, just under Δ entrance; & there, oh joy!, was Howard Vyse's casing stone <u>uncovered</u>, by the carters in getting road material. They are working just where I want, both E. & W. in the cut of the heap under the entrance, & I look for casing stones on the other side; also they work on level of 1<sup>st</sup> course, i.e. just over any casing, at near the N-W. corner. They are within 2 ft or so of pavement in the middle, & <are> clearing away on that level. It is clearly a false report that the casing stones were broken up after H.V.'s leaving, & must have been said by some one who could not see them for rubbish, as on the side of this is EXCAVATED painted, just date beneath?

as H.V. painted on the air channel &c: So this is <u>his</u> first stone & not another. I also write on this to Sydney Hall, enclosed for posting. After supper I reduced the dos of to day; & find that mean error of 1 pointing (4 rer<sup>n</sup> readings) from all causes (except in errors of levelling <&c.> instr) is only 1.3 <40>, which is about 1/12 to 1/40 inch

on ground, according to distance of stas. This is as near as I could hope or wish to come, & considering that it was a gusty day, & a very awkward place for theodolite, needing to rise & lie down continually, it is promising for the final results. There was no clear evidence of shift in azimuth, possibly ½", not more, & as it was propped up at one foot with a scrap of stone, this was good. I go into Cairo tomorrow to see Gen¹ Stone, get key of sta. marks, & order to clear the sockets if I can.

Ight letter from Wagmen desan, very friendly & glad that I am here. Ilso from CP: 5. folitely peculiar in his fashion, but sging that he will ruch trouble me with any private out that what he want Jone, has been fullished for 12 years: i.e. base cle I he will not believe in anything silve that is Euglish of it. As to Structure espies I think the paper with but of the sent with the sent dashed fet, i in the 3 orange from follow from the chest or 6th pour top, of Inchember them neight, along with all the Ather SH. papers, which are along with my stock of plans. Please soud Antechamber meaning beck to 5- Hall when they come from St. J. S., for him theef tell my neturn, as they are many down for his sates fection. a or work to come or consider that the a a substi

I got letter from Wayman Dixon, very friendly & glad that I am here. Also from C.P.S. politely peculiar in his fashion, but saying that he will not trouble me "with any <thing> private", but that what he wants done, has been published for 12 years: i.e. base cleared, & he will not believe in anything eil else, that is the English of it.

As to Stonehenge copies I think the paper with list of to be sent, with the <u>sent</u> dashed off it, is in the 3<sup>rd</sup> drawer from bottom of Bouell's chest, or 6<sup>th</sup> from top, if I remember them aright, along with all the other S H. papers, which are along with my stock of plans.

Please send Antechamber measures back to  $S^{\nu}$  Hall when they come from St J.V.D., for him to keep till my return, as they are mainly down for his satisfaction.

Cairo, VIII-

(1)

Wednesday 2 Feby

Off by 9 ½ to Cairo; went to Gen¹ Stone's house, he was said to be at Kasr en Nil, so went there, but his room was locked up. Then up to Ezbekiyeh & Muski; <to post, no letters in>; got some rice, & strolled

about the city, for having come in early I had nothing to do till I saw D<sup>r</sup> Grant after dinner. Then had dinner & lounged about till ¼ to 2 when I went to the D<sup>r</sup>'s; found him at dinner, & had a talk. He strongly says that it is best to ask no leave to uncover anything, but do all I want as quietly & quickly as possible, falling back on my permission to measure if anything is said. He was very glad to hear of the casing stones, but told me to keep it quiet, even in England; as the French are very jealous, & might interfere if any notice was attracted to me or these things at present. He had set Ali to dig some time ago for <the> casing, but unsuccessfully.

My boots were capitally mended. <Heard of a meeting of two companies yesterday, a social & not political affair.> Then off to Gen¹ Stone's house, found him in, & handed him the statement of Gill's stations & their present condition. He also tells me to do any uncovering I may want without any hesitation, as part of the measuring; & that if any objection be raised he will write me a line to the Prefect of Police stating that I am only surveying; I can safely challenge them to say whether I am in the least likely to find anything in the places I shall clear. I shewed him the chain of which he much approved, & asked him about graphic reduction of triangulation. He says that they tried it for the Faium survey lately, but it was not approved & there was a strong feeling against it: I st spoke up for it, & he was

wednesday 2 Febr off by 9 to theirs; went to fen! Stones how best to ask in leave to un cover anyther but so all hount as quetly squidly as possible, falling back Thear ofthe casing stones, but told we to kee Helias set the today some time ago for casing but insuccent the fart for the affair. It long both were capitally manded. Then off to fine House, house, , I handed him the statement of fells station bresent condition. He also tells we to do any ancome Imay want without any heretation as part of the measuring that if any dojection should be raised he will write me a line Prefect Mila stating that I am only surveying; I can safely challenge them to day whitten to find anything in the places Johall clear. I showed him the chain of which he much sporous, rasked him about graphere reduction of transplation. He says that they true of forther Jaium survey lately but it was rul approved there was a strong feeling against it: I sto spoke up for it, & he was

put made thelieve in it. He is with head ofthe turning un a be Coloin has the post. but he said he would try that I should see a her mitchell , who is in the survey when the Faire & has had to do with the neduction, of have a talk with him: he comes in every tradey, or every there, & I shall be very currous to hear their mode of working Then set of home sorry by 34, ogst in just after Suesset. after lighting thattone I took my bay, I went up to fetch in a batch of stones has left; I continually full heafer together here othere, to be cleaned of whenever convenient, or Ali has caches on every sile of the Branis. Reyous sundry besalt hammers dan old whitstone my main hand was a bottom corner fa corner caring stone of from one of the lette branis in black basalt unberrow I believe in casing, or Ali had never seen any such before. The angles are close to 52° of their seams no doubt outto matter. Ale brought in and the corner of caring stone Ting & gun the promette augh fottom corner of about I & bus on the forces he se cure also the snorwy: probably many more well turn up, but anything moreable he promptly brings down here for safety, I shall have an awful Wt of "geolyrial specimens" tocle at the Customs if this goes on; but I Meet everything in here trust sort much before Spack , a large corner I devotes to got A coming is full tourflowing, some 50 pieces in it:

quite ready to believe in it. He is not head of the survey now, a M<sup>I</sup> Colvin has the post; but he said he would try that I should see M<sup>r</sup> Mitchell? who is in the survey up in the Faium, & has had to do with the reduction, & have a talk with him: he comes in every Friday, or every other, & I shall be very curious to hear their mode of working graphically. Then set off home early by 3 ¼, & got in just after sunset. After lighting the stove I took my bag, & went up to fetch in a batch of stones I had left; I continually put heaps together here & there, to be cleared off whenever convenient; & Ali has caches on every side of the Pyramid. Beyond sundry basalt hammers & old whetstone, my main haul was a bottom <u>corner</u> of a <u>corner casing</u> stone [♠] from one of the little pyramids in black basalt, a substance hitherto unknown I believe in casing, & Ali had never seen any such before. The angles are close to 52°, & there seems no doubt on the matter. Ali brought in another big bottom <a big top> corner of a casing stone 7 ins & 9 ins long from the angle, a large bottom corner of about 8 & 6 ins on the faces he secured also this morning: probably many more will turn up, but anything moveable he promptly brings down here for safety. I shall have an awful lot of "geological specimens" to clear at the Customs if this goes on; but I collect everything in here, & must sort much before I pack; a large corner I devoted to  $Gr^t \Delta$  casing is full & overflowing, some 50 <or 60> pieces in it:

of them are books of other things. I brought in to day a granite boss which I friend ging in a hole, just as it has been knowhed If a large block, when the journey was over sit was no longer wanter. It is 12 x of outh under fraction force, & 2 = thick in I hearth wind blowing high now (11.0 pm) which does not gound like surveying to morrow. Thursday 3 tebr after fully thenking over the author, I have settled not truncover 3 A sochets at present, as that is a big job; At fut much on course over 2 \$ SE which is definished. thus Ishall only want gt As NE char, other Intered treat to shell here or, as a sweetener; it is less black mailish to let him be soorbitant over a small job, than to pay him bablisheest for nothing. Then Intend afterwards, when the travelles season is one, best the & shekh to clear the sutrance parage, towar simultaneously to do As sockets; then finding something for each, & preventy gether from wishing to binder or stop we from Ingging going into Cours is worth I or is, in value of time hore, & gapenses; it is bitter worth while towaste a few pounds on the shells here is high charges, than to let them ster mischief which would hinder me, Inequire several journey blairs probably at the best . I on going out Juterview Mehl Aba Talib (throw Me was unfudent

& there are hosts of other things. I brought in to day a granite boss which I found lying in a hole, just as it has been knocked off a large block, when the journey was over & it was no longer wanted. It is  $12 \times 8$  on the under fractured face, &  $2 \frac{1}{2}$  thick [ $\Re$ ]. I hear the wind blowing high now (11.0 pm) which does not sound like surveying tomorrow.

Thursday 3rd Feby

After fully thinking over the matter, I have settled not to uncover the  $3^{rd}$   $\Delta$  sockets at present, as that is a big job; & to put marks on course over  $2^{nd} \Delta$  SE which is deep in sand; thus I shall only want  $G^t \Delta$  NE clear, & this I intend to set the shekh here on, as a sweetener; it is less blackmailish to let him be exorbitant over a small job, than to pay him bakhsheesh for nothing. Then I intend afterwards, when the traveller's season is over, to set the  $\Delta$  shekh to clear the entrance passage, & Omar simultaneously to do  $\Delta^3$ sockets; thus finding something for each, & preventing either from wishing to hinder or stop me from digging. As going into Cairo is worth £1 or so, in value of time here, & expenses; it is better worth while to waste a few pounds on the shekhs here in high charges, than to let them stir mischief which would hinder me, & require several journeys to Cairo probably at the best. So on going out I interviewed Shekh Abu Talib (the one who was impudent

to Ali before) & Shell Horaline also joined of immediately. Ith him That come to finish langell's work, as he had asked un Ho; that he knew than perminon from the Achenet Paska Prefect of the (forthe police office overhere the other day to him that Has the letter, Athat he was bound tree that no have happened to me or more), of that I wan wanter Iw. gill's mark uncovered, tohould fireboby went ther thing also afterwards. Abu Talis was remarkably subdied Apolite & scarcely omiles, Moraline on the other hand tree to take the mather up of shaking bounds, & assenting to everything Isaid; so I just paid him swough allention to leave the job not very clearly assigned to setter of them, so as to make it a joint thing if possible. Thetathing over to was prodigious as Iwent up the Prairied, & Isafector pres it done soon, but rishous of the lary rescals of the guedes would fut their hands to work, you bolling abit in the rowing who stone I would to it in a hour or two sarily. May walt to get a fellah to do such a merical matter. I went up A & by mustake past the place to turn forth air channel so being meantly went on & afried all grafite before 1700. and many, those outher If toelf. Then down, to North

to Ali before) & Shekh Ibrahim also joined up immediately. I told him I had come to finish M<sup>I</sup> Gill's work, as he had asked me to do; that he knew I had permission from the Acheneb Pasha Prefect of Police (for the police officer over here the other day told him that I had the letter, & that he was bound to see that no harm happened to me or mine), & that I now wanted M<sup>E</sup> Gill's mark uncovered, & should probably want other things also afterwards. Abu Talib was remarkably subdued & polite & scarcely smiled, Ibrahim on the other hand tried to take the matter up by shaking hands, & assenting to everything I said; so I just paid him enough attention to leave the job not very clearly assigned to either of them, so as to make it a joint thing if possible. The talking over it was prodigious as I went up the Pyramid, & I expected to see it done soon, but not one of the lazy rascals of the guides would put their hands to work, & on looking at it in the evening not a stone was moved, though I could do it in an hour or two easily. They wait to get a fellah to do such a menial matter. I went up  $\Delta$ , & by mistake past the place to turn for the air channel, so being near top went on & copied all graffiti <(Names of travellers recorded on the stones)> before 1700; not many, & none on the top itself. Then down, & to North

Channel wouth: ke selected a fact of a stone visible , swoothed it Tuest from below gives the seast place of an plan, & the a point in course of panage to fix it vertical section. It was blowing nather hand, trunch southere inthe air which had decided on not to trangulate today; so it was not placeant crowl along the rotten trucumbered steps of the Brain Sociation leaving the 5. channel, but afterward would try. It was to windy to along the 5 face round to it, so we went up me the NE arris of own this w Which are kept clear by travellers paring; thence crawled along to the I channel, of flow stoffing Town griffing the stone while a gust tone by sending showers of clups woust flying about us. In mouth Atta channel is grute clear; & dropping a stone in, it the rolls along bown for a very long way, so tshall poles at the bottom to see if it is possibly the cleaner.

Channel mouth: hen selected a part of a stone visible from two stations below, smoothed it by scraping, & put on a vertical band of pencil, 1 inch high x ¼ wide, to be seen from below easily in telescope; & a thinner cross line. Then hung plumb line beside it, & measured off to passage mouth below, the distance of passage <channel> W of it, & dept depth of plane of floor vertically below the horizontal mark. Thus fixing that mark from below gives the exact place of passage on plan, & the a point in course of passage to fix it in a vertical section. It was blowing rather hard, & much sand haze in the air, which had decided me not to triangulate to day; so it was not pleasant crawling along the rotten & encumbered steps of the Pyramid. I decided on leaving the S. channel, but afterward thought I would try. It was too windy to go along the S face round to it, so we went up on the NE arris, & down the SW, <body><br/>
<br/>
<br/> crawled along to the S. channel, off often stopping & sitting down gripping the stone, while a gust tore by, sending showers of chips & dust flying about us. The mouth of the channel is quite clear; & dropping a stone in, it fly rolls along down for a very long way, so I shall pulse at the bottom to see if it is possibly to be cleared.

I fut a similar mark on the channel, only on a block mark & of channel : also taken of mark below plane of chair I think it important to fix these, as they Embouched at exactly the same level; shence as one is at 45° ofthe other at 31°, assuring the A to be Symmetrically built, they give the the position face at a high pourt, theree the Ex I slike Level - all up the faces; soprad socket flows; then to 3" offer suitable steps to the sel sochets, from Swich to sight Jon with small theor hit as they are cleaned had increased so that all the country gradually into absolute have at 1's miles or so, & then it cleaned of

I put a similar mark on this channel, only on a block of the flooring still remaining, but shifted; having to sight a plumb line in plane of <each> side of channel, to measure distance of mark E of channel; also taking dip of mark below plane of channel by sighting. I think it important to fix these, as they probably embouched at exactly the same level <i.e on same course>; & hence as one is at 45° & the other at 31°, assuming the  $\Delta$  to be symmetrically built, they give the the position of casing face at a high point, & hence the exact angle of slope [ $\Re$ ] all up the faces; otherwise we are quite ignorant of the thickness of casing above, & therefore of the ancient height & slope, as the  $\Delta$  might be [ $\Re$ ] having thinner casing above.

I also fully measured angle (45° 5'  $\pm$  5') & dimensions (8.35-8.65 wide, 8.7-8.9 high) of hole, angles of it & form of stones about it. Then we went off to  $2^{nd}$   $\Delta$  & put station marks on three exposed socket floors; then to  $3^{rd}$  & put mark on nearest suitable steps to the sok sockets, from which to sight down with small theodolite as they are cleared; the the wind had increased so that all t the country gradually faded into absolute haze at  $1\frac{1}{2}$  miles or so, & then it cleared off

in the Evening. We then went to SEL of A defin sand, that much on step overit, then how hougher. arrived to be all pightfully weathered (sulife How " the round fibbles"), & I clearly see that it has never with a great bulk nesing 6 or I wiches borithe face, all intended to be oversed own live, but only done so in parts. No weathering could finished surfaces ofthe outre good state perhaps 1 or 12 gove by scaling. Talso I gam on bulbour unfinished faces two bosses indeplace stones, besid the one a site which huentime before we looked over the carters begging in evening. Hey are taking stones also to trull a wall & took tim preces of carry which the head picked out; so we runs out; have however as much or more, than asking if Their an ancle"; but he explained he mean't a valter's blutter"

in the evening. We then went to SE of  $\Delta^2$  deep in sand, & put mark on step over it; & then home to supper. I examined the  $3^{rd}$   $\Delta$  granite casing, which has been assumed to be all frightfully weathered (see Life & Work 1.257 "like round pebbles"), & I clearly see that it has never been finished in parts; for it is thus [ $\Re$ ] with a great bulb rising 6 or 8 inches above the face, all intended to be dressed down to the dotted line, but only done so in parts. No weathering could make 8 inches of solid granite where it did not exist before. All the really finished surfaces of the outside are in fairly good state, perhaps .1 or .2 gone by scaling. I also saw on bulbous unfinished faces two bosses in displaced stones, beside the one in situ which I mentioned before.

After supper, writing this, &c; & to bed by abt  $\frac{10 \frac{1}{2}}{10 \cdot 10}$  for a wonder <alas 11  $\frac{1}{2}$ ! ->

We looked over the carters' digging in the evening. They are taking <u>stones</u> also to build a wall, & took two pieces of casing which Ali had picked out; so we must look out; I have however as much, or more, than I can think of carrying off. They have uncovered farther along Vyse's casing stone, & also farther in other directions. Ali quite puzzled me today, while at work with one foot stuck out, by asking if I had an "ancle"; but he explained he mean't a "vather's bluther".

Friday 4th Feb

Very windy, Attrough not sandy in more than a mile a bout I oclock an weet atily went up for the

Very windy, & though not sandy in morning, I could not see more than a mile about 1 o'clock it came on so thick. Went up & found about half of the socket uncovered, only about 9 ins deep in sand & stones: Abu Talib was very polite & staid as before, but asked that most uncomfortable price "anything you please"; & he & all, preferred talking through Ali in Arabic, rather than to me in English, though Ali said before them all "they can all talk English well as me". He also said he would leave it till I had more done; but I told him I might not have more for some time & I preferred to settle now, so gave him 2 fr, which was probably 3 times the true value of the work at least, wherewith he was very well satisfied. I intend for heavy jobs to try to contract as Gill & Inglis both did; they are accustomed to the idea. Then went to the N. face & found a man smashing up unwieldy pieces of casing stone with a big hammer, close to Vyse's; I shuddered & Ali immediately went up and told the old Arab who has the contract for the job, that he must take care that no harm happened to them. He was frightened Ali said afterwards at my inspecting his works so closely, as he feared I was going to forbid his quarrying there; but it suits me admirably. The About half of Vyse's second casing stone is now cleared. I paid 1 1/4 < d. each > for two good

pieces fearing joint; other wen finding ouch a deliver runn few before them, brought up all sonts flits, with face, & without; but the xx sxplained that we wants frice, not sprare twith a nel side, they are sure took & after them now, but several his pieces lave gove to build the wall. In piece get is a comer of a corner stone, bout wellout any arms the then went & who well over the executaris in the 2 temple, interry to plan it; but roun threatens, so brush off to the toubs, & spent the day meaning a done of them. Ali turned who a little search covered with gold foil (worth probales 3 on & intrasin) in the sourth therown out of our touch; he present we to have it, but I aisisted on his keeping it; Igo on the plan of taking all I want ofhis finds, when out with me but leaving him anything I do not require. I my wants are mainly prece, Jearing, this basalt hammers, de he is aprecable tothe incompenent. It raised smartly twee, & again just as Test home. Hugged down a prear of coming of 30 lb or so, & lastright the the sent Muhammed to heave down a byger prese with a lule halfway here, out of the way of the carter, so as take at hand in case there are enjoines for such from England. After supper hords this, & which form of this testimonials. The after any usual suplitants of talistoranges to but by 10 %.

pieces of casing joint; & the men finding such a silver mine open before them, brought up all sorts of bits, with faces & without; but Ali & e/<I> explained that we wantdsic {wanted} pieces not square, & with a red side. They are sure to look after them now, but several big pieces <of joint> are gone to build the wall. One piece I got is a corner of a corner stone, but without any arris [♠]. I then went & looked well over the excavations in the  $2^{nd} \Delta$  temple, intending to plan it; but rain threatened, so I made off to the tombs, & spent the day measuring a dozen of them. Ali turned up a little scarab covered with gold foil, (worth perhaps 3s or 4s intrinsic) in the earth thrown out of one tomb; he pressed me to have it, but I insisted on his keeping it; I go on the plan of taking all I want of his finds, when out with me, but leaving him anything I do not require. As my wants are mainly pieces of casing, & big basalt hammers, &c, he is agreeable to the arrangement. It rained smartly twice, & again just as I got home. I lugged down a piece of casing of 30 lbs or so; & last night Ali & M sent Muhammed to heave down a bigger piece into a hole half way here, out of the way of the carters; so as to be at hand in case there are enquiries for such from England. After supper I wrote this, & copied <del>down</del> <the rest> of Ali's testimonials.

Then after my usual nightcap of dates & oranges to bed by 10 1/2.

Saturday 15 5 Feb

Saturday \$5 Leb a fine day with not too much wind: so took up the or that to station on 2 w Pyramind temple; levelled it that the toshade it, while I fut of sted signals. Visitest took about 3 hours brish, & at (ast I began observing.) had most provolingly toleave a few Merrations undone, as it began tiget dark after doing 39 complete No " of 4 mading, each in about 32 hors. buy time is all guesswich, as law Obligato leave my water at home, for fear ystoffing it altorether with said. Then took attitudes of a few points, & excentricity of theorothe; for I find it would be a very long it ind as well as levelled; the levelling series shift it in turning, perhaps I can avoid this by using sheet lead in stead of standary them I weet on the stone, but excentrate is voy little conflication in graphic reduction, & so los retrieved having it. he practual use I so not the the signal of plateflan, wire frame, & workest wine, 1st clause tikely toget broken, fasticularly as it glodestif but on stores not level. 2 It is heavy boarry, the wires cumbersome . 3 It is liable to unfercion derangements A, of level used. B, of worend straight. C, of bearing from frame, this last very difficult to detect. In please bob signal, on the ther hand council have unoticed sorrors, & are not troublesome beentre. Then, after packing instrument, havent off in slight mornly fet to get in un signals. This is a Disjusting affair to spend half ones time or more one waste work; if I walk trust any one to. centre them, I would smalle un to do nuch more;

A fine day with not too much wind; so took up theodolite to station on 2<sup>nd</sup> Pyramid temple; levelled it, & left Ali to shade it, while I put up slab signals. This last took about 3 hours brisk, & at last I began observing. I had most provokingly to leave a few observations undone, as it began to get dark after doing 39 complete obsns of 4 readings each, in about 3 ½ hours. My time is all guesswork, as I am obliged to leave my watch at home, for fear of stopping it altogether with sand. Then took altitudes of a few points, & excentricity of theodolite; for I find it would be a very long job to get it centred to 1/100 inch as well as levelled; the levelling screws shift it in turning, perhaps I can avoid this by using sheet lead instead of standing them direct on the stone, but excentricity is very little complication in graphic reduction, & so I do not mind having it. In practical use I do not like the signals of plate glass, wire frame, & vertical wire, 1st Glass is likely to get broken, particularly as it glides <off> if put on etc/<sto>nes not level. 2<sup>nd</sup> It is heavy to carry, & the wires cumbersome. 3<sup>rd</sup> It is liable to unperceived derangements A, of level used. B, of wire not straight. C, of bending of wire frame, this last very difficult to detect. The plumb bob signals on the other hand cannot have unnoticed errors, & are not troublesome to centre. Then, after packing instrument, I went off in slight moonlight to get in my signals. This is a disgusting affair to spend half ones time or more, on waste work; if I could trust anyone to centre < some of> them, it would enable me to do so much more;

I a writer to with Merration for bells some one to read to miero, havor getty up & som, of my gutly round 139 theod - sonytime, would be a great assistance. But I I not spect that seouth get anyone accurate enough in Cairo tobelf. habout an lover that got in all my signals, except two very out fray ones; but it was bad work stumbling therang my weeks on the questers heaps of rubbish in the faint light a climbing to the top of one Ither small pyramin shalf up another. It we and hile brought the boses down, A got in by 7; that some suffer. June by 72, for had not stopped to satorything all day sua breakfast. Then after suffer reduced all the mion reading, stock means ready for restition floriagles. Then wrote this, It bed abt 11'2. Un average for both error of a complete observation today wers 1.4 Sunday 6th Feb 4 Had a good long sluf after yesterday's works. then after breakfast & reading stolled roundthe Nicols the what the certin were dony. Vyse's stones are wit farther in covered, they are working a little way from the face of them along the base line I quantity of bit were brought tome but I pointed out that nearly all were square, Ins good: the worker , ihr the fricial, are a merry pack if you tate them right, & as I always govether the newson for

& a writer to note observations, (or better some one to read two micros, to avoid getting up & down, & going gently round theod! every time), would be a great assistance. But I do not expect that I could get anyone accurate enough in Cairo to help. In about an hour I had got in all my signals, except two very out of way ones; but it was bad work stumbling & turning my ancles on the endless heaps of rubbish in the faint light, & climbing to the top of one of the small pyramids & half up another. Ali meanwhile brought the boxes down, & I got in by 7; & had some supperdinner by 7½, for I had not stopped to eat anything all day since breakfast. Then after supper reduced all the micro readings, & took means ready for reduction of triangles. Then wrote this, & to bed abt 11½. The average probable error of a complete observation today was 1".0/<4>.

Sunday 6th Feby

Had a good long sleep after yesterday's work; then after breakfast & reading strolled round the N. side to see what then/<e> carters were doing. Vyse's stones are not farther uncovered, they are working a little way from the face of them along the base line, <also at a low level 3 ft or so over paving on NW.>. A quantity of bits were brought to me, but I pointed out that nearly all were square, & no good: the workmen, like the officials, are a merry pack if you take them right, & as I always gave them the reason for

end stom not being what hounted on the deficien to those who stord by there was generally a laugh over each failure, which was pretty flu joined in by the calibitor. got our pice Mottonjon, some bottom corner. There are four while casing stones ( I'm placed lying inthe rubbil, i.e. with top, bottom, oface, more orless chiefled; & Jagreed with this ty a preserve them from being broken up, by speaking to the neis, twenting them with chancoal; as there are plenty of other stones, Thefe this may succeed in keeping them for found inspection of those showing wish bree such; for I shall throw down the subbirt cliff over yet's before I came as otherwise they may be carried of for both buildings. I so norwent to put them in Mind care as that is worthless shought be much in my way found I then went round by the Sphune of panets temple, I true the side Athedesert by the 3mf sitting trying the reen leisurely, Ihich is morethan I ever is in ordinary. It is the firest point base the bill . everything, all 9 Pyracins, both tenflis, Shime, quantiterafle, big tomb maliff, trees, shaliful cliff, causeways, & suclosures around the Grammis, are all visible; the only refect being that the 3 has under frommence from being the nearest. Then back in twilight with brilliant orange resimion clouds, overhead, which made the besent glow, & showe arrow the green valley ofthe vile to the profile lighted cliff of whatland hima Alter distance begon Helmon, feeding with blue after sufter to bed abt 10, in hope of a long day to more.

each stone not being what I wanted, & pointed out the deficiencies to those who stood by, there was generally a laugh over each failure, which was pretty often joined in by the exhibitor. I got one piece of bottom join, & one bottom corner. There are four whole casing stones (displaced) lying in the rubbish, i.e. with top, bottom, & face, more or less chipped; & I agreed <this evening> with Ali to

try & preserve them from being broken up, by speaking to the reis, & marking them with charcoal; as there are plenty of other stones, I hope this may succeed in keeping them for general inspection of those who may wish to see such; for I shall throw down the rubbish cliff over Vyse's before I leave, as otherwise they may be carried off for Arab buildings. <I do not want to put them in official care as that is worthless, & might be much in my way in working.>

I then went round by the Sphinx & granite temple, & b/<o>ver the side of the desert by the  $3^{\rm rd}$   $\Delta$  sitting & enjoying the view leisurely, which is more than I ever do in ordinary. It is the finest point to see the hill; everything, all 9 Pyramids, both temples, Sphinx, granite temple, big tomb on cliff, trees, stratified cliff, causeways, & enclosures around the Pyramids, are all visible; the only defect being that the  $3^{\rm rd}$   $\Delta$  has undue prominence from being the nearest. Then back in twilight, with brilliant orange & crimson clouds, overhead, which made the desert glow; & shone across the green valley of the Nile to the purple lighted cliffs of Mokattam & Turra, & the distance beyond Helwan, fading into blue. After supper to bed abt 10, in hopes of a long day tomorrow.

(4)

Monday 7<sup>th</sup> Feb

Off by 7.45 with Ali to station on hill top

W. of Pyramids, placing signals on the way there. Then began observing; but the wind was so high that three times I had to leave off, & take a run of \(^1\)4 to \(^1\)2 mile & back to replace signals blown over; also it kept the theod: in a shiver, so that I had to steady telescope & micros by hand in order to see anything; and it was dull & cloudy so that I had not enough light on the distant ones; to add to which a gust continually came driving sand into ones eyes, & making one screw them up for a minute before anything could be seen again. However having no sun I was free from tremor of the air, & expansion of instrument. I pegged away at the work, & on reduction find it better than previous days, only 1."0 mean error by one obs<sup>n</sup>, after allowing for a shift of 4."6 in azimuth at one point. Then had biscuits & dates about 2 ½, & then moved over to another station on a small  $\Delta$  by  $\Delta^3$ . Ali had vanished for sometime (as I after found taken up by a traveller who knew him) so I had to go  $\sigma$ /<to> & fro moving things; the theod: of 36 lbs was a lug to carry 1/3 mile, & then up a slope of rubbish. H/<Th>ence I took azimuth to 5 stations, <the wind gone down then>

& then just finished by sunset, packed up; & then went round & collected signals; getting in by 6 ½. After supper reduced all observations, & then wrote this, & to bed about 11.0.

Tuesday 8th Feb

Not up very early after yesterday. Went up with Ali intending to give the other shekh a job of having stones moved, but

he was in Cairo, so left it. Looked over digging on N. Face; could not

monday 7th Jeb If by 7.45 with the to statem on hill the We of Praise, placing signal on the way there, Then byen Overving; but the wind was so high that three times that to leave If, statu a name of it to inile black to replace signal blum over also it kept the theod in a shiver so that I had to steady telesches & micros by hand in order tree anything; and it was dull reloady so that Had not snough light on the distantones; to ad to which a gust continually came driving sand into ones eyes, & making one seven them up for a wind before author will be seen again. However having no sur has free from tremor the air, & expansion finstrum I pegged away at the work, How reduction find it better than previous days, only 100 mean error Jone dos", after allowing for a shift of 4"6 in a simult at one point. Then had brief & Saly about i'm, of then moved over to another station on a small A by A3 . Ali had ramished for sometime (as lafter found taken up by a traveller Shokerer him) so I had byo to 4 fro then up a slope of mobish. Thence I took as in the to statung, Athen just finished by sunset, packed up; of then went round & Wester signals; getter in by 6 %. After suppor neduced all Oservations, other works this who about 71.0 Tuesday oth Feb Nor up very Early after yesterday. Went up with the interdry by in the other shell a job of having stones wowed, but he was in Cairo, so left it. Lorhard over digging on N. face; could not

see anything of two of the casing stones I saw before; but numbered the others, & two large pieces of corner, with chercoal The offen goes on very saturationed true; one more such pull at the beaf of there would be a chara of the W-part of it warly all through. hen back of got in strument boxes; I went If guide, it being 11'2, & how I to be of at the Sour channel by noon; Igot up from ryre's Who 8 from to the 3 is corner; if to chand level (270 ft) x crawled along the rotten face, in 10 minutes; found in good time, of as I had cale - from dep of francye) the sun show night down it to day. Hoth teles whe up with me & examined it; it expands somewhat at one or two blocks from bresent sud, it better worked; et turns about à it breatt 80 ft from awath judging by the focus of the telescope. I forgot take weight strong to measure it. Then span; but the greatily rather than internet, Athe heat was wet mee on the mobile of a So face with the sun full out at woon, a Iwas not exactly comportable. I then but signals, or took azimuth around statem at vyse's hole ( wind. 5. side). The level was gueer with the radiation prouchet stone Ithink , & fluctuates; so that it was awhowers; other, just as ) fed began, the unbrilla ft blew down thurched the teterape, so has to relevel, It last Ignet all done, &

see anything of two of the casing stones I saw before; but numbered the others, & two large pieces of corner, with charcoal, Ali giving injunctions that they were not to be broken up. The digging goes on very satisfactorily to me; one or two more such pulls at the heap, & there would be a clearance of the W-part of it nearly all through. Then back & got instrument boxes; I went off guide, it being 11 ½, & I wanted to be up, at the S. air channel by noon; I got up from Vyse's hole, <going> down to the SW corner; up to channel level (270 ft) & crawled along the rotten face, in 10 minutes; found I was in good time, & (as I had calc<sup>d</sup> from dip of passage) the sun shone right down it to day. I took telescope up with me & examined it; it expands somewhat at one or two blocks from present end, & it is better worked; it turns about ½ its breadth to the E. at at f the farthest point clear, which is about 80 ft from mouth judging by the focus of the telescope. I forgot to take weight & string to measure it. Then down again; but the quantity rather than intensity of the heat was not nice on the middle of a S. face with the sun full on it at noon, & I was not exactly comfortable. <dizzy &c.> I then put up my signals, & took azimuths around station at Vyse's hole (mid. S. side). The level was queer with the radiation from hot stone I think, & fluctuated; so that it was awkward; & then, just as I had begun, the umbrella fel blew down & knocked the telescope, so I had to relevel. At last I got it all done, &

finished by twolight; getting in any signals by awardight as usual Heft 3 rather out-of the way ones up fortrusorow, there they will not be stolen. Then back the Juffer. Ale brught upmy letters, which hurbound has get to day in Cairo. heavy thanks for them all, Pub. Op. Jam flow that Lamin guffet the winter, it is a horrible mess in England. after suffer reduced by my two then finishing abt 1/2, a bad both out for work to morrow. These soon to Day 1.6 south suggestions the paralle suffered the foreign the paralles stone levelus after the paralles stone levelus due of the paralles stone levelus due of the paralles of the levelus to the ten on 3.4 temple; found 2 of my 3 signed, left out head blown down, with third that to alter; so leaving them out, only sound collecting last right: after putting of all signals, set up theor, other took a simuttes till susset, then rough attitudes spacked up; took in several eigenly, but left sout as a trial, the risk is of Bedawin finding them, when out predigther camels in the neighbourhood. Her home to suffer. I was rather dution short theme, so the took the chat that? had nothing suitable; & after sging good right, sent up vry kindly abani of stewer rice faith vargar. I begon on it, but som has beth, + train of the sea of better swiming on it; after that it was very bearable. Then returing ob. (party before suppor also); fact ell the dop around made such an incesant row that I could hardly get on , That a headache; of

finished by twilight; getting in my signals by moonlight as usual. I left 3 rather out of the way ones up for tomorrow, & hope they will not be stolen. Then back & to supper. Ali brought up my letters, which Muhammed had got to day in Cairo. Many thanks for them all, & Pub. Op. I <u>am</u> glad that I am in Egypt this winter, it is a horrible mess in England.

After supper reduced obsns, & wrote this, finishing abt 11 ½, a bad look out for work tomorrow. Mean error today 1."6

Smyne turned up this morn, to get specimens from Ali for his present employer. I gave him coffee, & shewed him the paraffin stove.

Wednesday 9th Feb

Off with instruments to station on  $3^{\rm rd}$   $\Delta$  temple; found 2 of my 3 signals left out had blown down, & then third I had to alter; so leaving them out, only saved collecting last night. After putting up all signals, set up theod, & then took azimuths till sunset, then rough altitudes & packed up; took in several signals, but left 5 out as a trial. The risk is of Bedawin finding them, when out feeding their camels in the neighbourhood. Then home to supper. I was rather dubious what to have, so Ali took the idea that I had nothing suitable; & after saying good night, sent up very kindly a basin of stewed rice & milk & sugar. I began on it, but soon had to stop, & drain off the sea of butter swimming on it; after that it was very bearable. Then reducing ob: (partly before supper also); but all the dogs around made such an incessant row that I could hardly get on, & had a headache; also

Ivas istering to catch a mouse in a biscuit tim, as I han Done twee before; at last it went in, but the box tipped + I tried to grat it by hand, but it get off : hope the fright will scare it off. Finish by 10 2 to bad. Thursday 10 Feb a very windy day, with sand have so I did not attempt surveying; went up to the N. face, & hunted over the Diggings: two good pieces Had marked are gone; I marked some more inthe of possibly preserving them. The men brought a quantity of pieces, but only one good but, a corner perfectly sharps. I measured the angles of all the pieces lying about, for pean they should disappear, & also approximately the orghe ofstones in situ, in case they should in any way be covered your. I want to so them with the big still square, xdig for pavement, till all the men are your others work done. The mean inclination was 57°49'±14 with average difference 3'2, which is guit as close as the roughened face Ith stone would be likely bying with only a 10 inch gomomete, + as near as reading on a protractor of in raunter could be expected to come. Talso levelled the top surface ofthe carring in 4 parts; it is beautifully true; the level base being only 6 in long, the coror of level varied from 2'2 one way to 4 the ther, in in wort; a from to to 5 from Et W. The mean of all being 2'21" = less than too inch on the length of the level. Then I went & took angles of shop of nearly all the good touts, for quantity of 2 st casing faller, & found one block in site within 20 feet of a sochet, ging afine fixing of the truplane. Then measured augher of 3 steasing h

I was listening to catch a mouse in a biscuit tin, as I had done twice before; at last it went in, but the box tipped & I tried to grab it by hand, but it got off: hope the fright will scare it off. Finished by  $10 \frac{1}{2}$  & to bed.

Thursday 10 Feby

A very windy day, with sand haze; so I did not attempt surveying; went up to the N. face, & hunted over the diggings: two good pieces I had marked are gone; I marked some more, in h hopes of possibly preserving them. The men brought a quantity of pieces, but only one good bit, a corner perfectly sharp. I measured the angles of all the pieces lying about, for fear they should disappear; & also approximately the angle of stones in situ, in case they should in any way be covered again. I wait to do them with the big steel square, & dig for pavement, till all the men are gone, & their work done. The mean inclination was 51°49' ± 1' ¼ with average difference 3' ½, which is quite as close as the roughened face of the stone would be likely to give, with only a 10 inch goniometer,

& as near as readings on a protractor of 6 ins diameter could be expected to come. I also levelled the top surface of the casing in 4 parts; it is beautifully true; the level base being only 6 ½ ins long, the error of level varied from 2' ½ one way to 4' the other, in in & out; & from ½' to 5' from E to W. The mean of all being 2' 21" = less than 1/200 inch on the length of the level. Then I went & took angles of slope of nearly all the good tombs, of a quantity of  $2^{nd}$   $\Delta$  casing fallen, & found one block in situ within 20 feet of a socket, giving a fa/<i>ne fixing of the true plane. Then measured angles of  $3^{rd}$   $\Delta$  casing

(5)

both fallen & insite . By this time it was down; so back to after. after which not having wench writing of obser to so, wrote to we B. To bed abt 1/2. A roar froid sounded not bry ago, so fierce that hour the door your inthe cloudy woonlight a whirt ofwhite rust is and from Earth to sky travelling acrosstuplain, about soo feet across. The sound was astounding, & I should think the trees ofthe avenue must have suffered. It is strange how much noisette and makes on the steps of the Pyramid; guit a boul when a blast comes past. Friday 11 Zeb. a very windy day, worse than before; the fierce gusts that almost blow one over, changed with small shot of sand are very nasty. Twent up & bothed well allong the accoration; they are doing better still, & clearing the parement now by the casing stones; if I virected them myself Swald not better arrange the work of halfsof them at least. They have cut at both side of the heaf w. of the sutrance with it is merely a ridge at the tip, running Jour at the augh frest on each side. I sepect tree some casing at the wentling soon if they go on . They are also Triving a trench along pavement level nearly, in the work is of the heap. It is really beautiful, if they only would not carry of the good casing Shich I marked; but there is more than I can possibly want. Ight some good fits, a very nice top, fabottom, corners beside joints.

both fallen & <u>in situ</u>. By this time it was dark; so back to supper. After which not having much writing of obs<sup>ns</sup> to do, wrote to M<sup>rs</sup> B. To bed about 11 ½. A roar of wind sounded not long ago, so fierce that I went to the door & saw in the cloudy moonlight a whirl of white dust & sand from earth to ska/<y> travellig<sup>sic</sup> {travelling} across the plain, about 500 feet across. The sound was astounding, & I should think the trees of the avenue must have suffered. It is strange how much noise the wind makes on the steps of the Pyramid; quite a howl when a blast comes past.

Friday 11 Feb.

A very windy day, worse than before; the fierce gusts that almost blow one over, charged with small shot of sand are very nasty. I went up & looked well all over the excavations; they are doing better still, & clearing the pavement now by the casing stones; if I directed them myself I could not better arrange the work of half of them at least. They have cut at both sides of the heap W. of the entrance until it is merely a ridge at the tip, running down at the angle of rest on each side. I expect to see some casing at the W cutting soon if they go on. They are also driving a trench along pavement level nearly, in the work W. of the heap. It is really beautiful, if they only would not carry off the good casing which I marked; but there is more than I can possibly want. I got some good bits, a very nice top, & a bottom, corners, beside joints.

Then She having gone of for his devotions at the mosque ( being miday) I lugged the bay of bits some home; athen went over to the trubs of 2 w A. Istopped on the way at the little As by the A' , I picked out a lot of easing ; from the rubbish, some corners. Then went on planing the toubs one was too deep to get into the doorway having been fitted with a door of the place used as a resort of dervishes, I gotin at a broken ventilator; so twent tach for a rope ladder, picked up the & went in; it was a most interesting touch with the casing half stripped out, shaving its arrangement capitally. Un evening was beautiful, crimson clouds in the East, rosy in zewell, you one side a sursky was hit up towny by the setting seen & raining in black streaks across the blue sky verienson ofthe East, with a rain box (only) on its black side; the Which was ofthat filmy wish translucent cloudiness which the me half shines through. after supper I worth to Miss marston & Spurrell, which Isuclose; &please, Amon brought up a letter from Dr f., which a fooder currier had brought out from Cains, saying that Prof Towarow, & in viting me to join them; so ford I ruley , I shall be of about d'i; pooling this & doing Here circula level the the day; it may turn of out I much will correspondence.

Then Ali having gone off for his devotions at the mosque (being Friday) I lugged the bag of bits down home; & then went over to the tombs by  $2^{nd} \Delta$ . I stopped on the way at the little  $\Delta s$  by the  $\Delta^1$ , & picked out a lot of casing joints from the rubbish, some corners. Then went on planning the tombs; one was too deep to get into, the doorway having been fitted with a door <by the sherif>, & the place used as a resort of dervishes, I got in at a broken ventilator; so I went back for a rope ladder, picked up Ali & went in; it was a most interesting tomb with the casing half stripped out, shewing its arrangement capitally. The evening was beautiful; crimson clouds in the East, rosy in zenith, & on one side a smoky mass lit up tawny by the setting sun & raining in black streaks across the blue sky & crimson of the East, with a rainbow (double) on its black side; the whole mass of that filmy, misty, translucent cloudiness which the sun half shines through. After supper I wrote to Miss Marston & Spurrell, which I enclose; & please post. A man brought up a letter from D<sup>r</sup> G., which a fodder carrier had brought out from Cairo, saying that Prof. Lewis & M<sup>I</sup> Chester & perhaps D<sup>I</sup> G. go to Tel el Yahoudieh tomorrow, & inviting me to join them; so I ordered my donkey, & shall be off about 8 ½; posting this & doing some shopping. I hope you will approve of the varied style of my correspondence.

I lost circular level the other day; it may turn up, but I much wish for another.

Cairo, IX-

Saturday 12 Feby

Saturday 12 Feb 4 the downkey did not come round here I till 9:10 by my watch (which Threen was somewhat slow) wistend of 8.30 as I ordered. I started, twent usual pace tairs, straight to Hation supposing Levas in good time. Leving nothing steering lashed one of the Spicials twee told the train had gove I minutes, ofound Iwas 20 min slow, though only supposing dor 10 min: 20 that I really started an hour later than Intended. Finding I could do nothing I went also to fort got letter sporter were, other to Dr f. ; found him just alighting, I saying that he was occupied too late to catch from himself; so after a few words, he ashed me to lunde, a I went of thos slufeping. for cheese, sugar, chould matche, I back to the Dr. Form los J. expecting some friends from Sheppeards Hotel; after a time they come, we helville a joing Spicer from hidia, also escorter are uncle this house from hidin as far as lain, There he died , consemption. A him Hayes & a With girl had come from England to see the said unch, before his death at lairs. They were very for astrony in antiquities, but pleasant enough in a jeweral way. Had another both our the dri sussemme with them, he has a fine Meetin certainly of all tit wearly every day. I should think he must be running, on at about \$ 50 a year, perhaps more, in that line. Then about 3 I started back, getting oranges on the way. After suffer brown up to the Pyramid tree what had been done; some carting from & face, but nothing unportant. Looking over paper, xc. Tobed about 11.

The donkey did not come round here till <nearly> 9.10 by my watch (which I knew was somewhat slow) instead oł/<f> 8.30 as I ordered. I started, & went usual pace to Cairo, straight to station supposing I was in good time. Seeing nothing stirring I asked one of the officials & was told the train had gone 8 minutes, & found I was 20 min slow, though only supposing 8 or 10 min: so that I really started an hour later than I intended. Finding I could do nothing I went also to post get letter, & posted mine, & then to Dr G.; found him just alighting, & saying that he was occupied too late to catch train himself; so after a few words, he asked me to lunch, & I went off to do shopping. Got cheese, sugar, chocolate, & matches, & back to the D<sup>IS</sup>. Found M<sup>IS</sup> G. expecting some friends from Sheppeard's Hotel; after a time they came, M<sup>I</sup> Melville a young officer from India, who escorted an uncle of his home from India as fas as Cairo, where he died, - consumption. A Miss Hayes & a little girl had come from England to see the said uncle, before his death at Cairo. They were very far astray in antiquities, but pleasant enough in a general way. Had another look over the Dr's museum with them, he has a fine collection certainly, & adds to it nearly every day. I should think he must be running on at about £50 a year, perhaps more, in that line. Then about 3 I started back, getting oranges on the way. After supper I ran up <in bright full moonlight> to the

Pyramid to see what had been done; some carting from E face, but nothing important. Looking over papers, &c. To bed about 11. -

Sunday 13 Feby

Sunday 137cb4 Very tird villely after my ride yesterday for Ali having I find purchased the Downbey for 5 Naps (probable one chowing trainburse a good deal fit from my payments; has also get a new saddle, which saidly wants working into softness; turn 24 hrs after dam rewinder gets effects. after breakfast treading Istrolled out picking of sanding odd truds in my way; went round tothe 3 1 x berned what I has before suspected, that the highest remains ofthe growth carry on each face (the stemp backs of one or two blocks) is at exactly the Dame course at on all sides; which very strough suggests that that is the highest course towhich it Extended. They round home, picking some ofther desert by center on the way; they are light clove brown, othough without smell when picked I observed a faint byacuth order boling at them in the svening. Some gradually making up a allection plesent plants. after depositing sundry specimen I want not again for a look at the rubtish heaps; nothing more has been done on the N face, to only a cart or two has been at work on the Eface, the job being nearly complete. I picked up a few pieces fearing joint, one good corner, vanther poorer. Then secured a heap of unicellaneous which then piled up on first going out, & back to support the came in that a long that. The Shekh has the wandlear out all the rest ME socket; just as well, for Idid not order it, only toth him I should want it bye xbye, & it shows they wish thelp & get

Very tired & sleepy after my ride yesterday, for Ali having I find purchased the donkey for 5 Nap<sup>s</sup> (probably one choosing to reimburse a good deal of it from my payments) has also got a new saddle, which sadly wants working into softness; & now 24 hrs after I am reminded of its effects. After breakfast & reading I strolled out, picking up sundry odds & ends in my way; went round to the  $3^{rd} \Delta$ , & observed what I had before suspected, that the highest remains of the granite casing on each face (the stump backs of one or two blocks) is at exactly the same course at on all sides; which very strongly suggests that that is the highest course to which it extended. Then round home, picking some of the desert hyacinths on the way; they are light clove-brown, & though without smell when picked, I observed a faint hyacinth odour on looking at them in the evening. I am gradually making up a collection of desert plants. After depositing sundry specimens, I went out again for a look at the rubbish heaps; nothing more has been done on the N face, & only a cart or two has been at work on the E face, the job being nearly complete. I picked up a few pieces of casing joint; one good corner, & another poorer. Then secured a heap of miscellaneous which I had piled up on first going out, & back to supper. Ali came in & had a long chat. This Shekh has set made a man clear out all the rest of NE socket; just as well, for I did not order it, only told him I should want it bye & bye, & it shews they wish to help & get

some stray cash. He caplained the regulations of the community. Juy traveller paying the regula fees the shell the honey is divided is thishelds, the rest squally among all the trubs. Then if by pestering, they was can get extra ballsheeth, that is divided among the guide, "family"; not family of relationship, but family of guides, they forming brotherhoods of about 4 each, who equally divide the surplus sports which any of them get. And a social regulation is that the goods to a party must be taken out of different families, or comrabeships, so that satra bahlsheich may not fall too much into one party's hands. this is all far more complex & communistic than I had unaqued; a frather think hardly any montaile houle knows ofit; I know the grants, New know more than most people, are guil in the down about it. Is bed about 71. monday 14th Febr windy Houndy, no surveying practicable. went up & began holing at NE socket, when her chester, a hun what the land affermed; he settled about the latter going what the turning round hemetime. He was very pleasant as before, + after going a little way my mention flowing store inflements to brought him down to my touch , with sim B. They were much amused at the arrangement, Isheined himselias That got, the said Franks at B. W. would be very glad of some of them. He arrived my batch potenago, & got some more of the lung of also having some; they chaffered over let of carabaci

some stray cash. Ali explained the regulations of the community. Any traveler paying the regular fees to the shekh, <(or anything the shekh may get from me<del>)</del>/ublicly)> the money is divided, ¼ to the shekhs, & the rest equally among all the Arabs. Then, if by pestering, the guides can get extra bakhsheesh, that is divided among the guides "family"; not family of relationship, but family of guides, they forming brotherhoods of about 4 each, who equally divide the surplus spoils which any of them get. And a social regulation is that the guides to a party must be taken out of different "families", or comradeships, so that extra bakhsheesh may not fall too much into one party's hands. This is all far more complex & communistic than I had imagined; & I rather think hardly anyone outside Frank knows of it; I know the Grants, who know more than most people, are quite in the dark about it. To bed about 11.

Monday 14th Feby

Windy & sandy, no surveying practicable.

Went up & began looking at NE socket, when M<sup>I</sup> Chester, a M<sup>IS</sup> Brown; & two lads appeared; he settled about the latter going up Δ, & then turning round he met me. He was very pleasant as before; & after going a little way my mention of having stone implements &c brought him down to my tomb, with M<sup>IS</sup> B. They were much amused at the arrangements, I shewed him what I had got, & he said Franks at B.M. would be very glad of some of them. He admired my batch of Ptolemys, & got some more of Ali. M<sup>IS</sup> B also having some; & they chaffered over lots of scarabaei

with various dealers. Wir B. was rather at sea in autymites, imaging the stone scarabs inscriptions tall were fossil beattes! Then they went off, we c pressing me to some tree him in douders close to B. In. Iwent of twen weavered socket; putting a cross scratched wear each corner, of meaning distances & diagonals of the rectangle one point being fills station; as I have not got bey to unsaver caps of his 3 capped station marks, I adopt the turing centre whe of the cap this must be concentric with the Screw, & therefore with the ming round starmark, hance it is independent of exp, & cross lines on platinous inside, are probably not 50 inch out of the centre. If Hooseved the caps they would probably be ettlen. In calculating the check diagonal from the their measures in even, it only differs : 017, x Jouly anexumed to 01; have it is very patifactory; vas it is abound to measure sochet neares than I in this is abound accurate. They stretching a sille thread on the measuring rood by a bush from at cach end! thus, to define the position of offsets along the side; then cetting this so that the thread passed verticall over to of the corner marks (+5 or gillistation gresoribe this fully as it is really new method, lengthlying tack of straight enjoyed or promises to be use for Hoth thet alongthe side, this was specially necessary as the outer corner ofthe sochet has no definition for sor in along each side, lany over a very finand tiracked free froll, which has never been dressed down to socket floor level in the corner; hence the trend ofthe sides is all one can go by. The so called cut of in the incerconcer, is really 3 blocks ofstone inserted, very roughly

with various dealers. M<sup>rs</sup> B. was rather at sea in antiquities, imagining the stone scarabs <u>inscriptions & all</u> were <u>fossil</u> beatles!! Then went off, M<sup>E</sup> C pressing me to come & see him in London, close to B.M. I went up & wen measured socket; putting a cross scratched near each corner, & measuring distances & diagonals of the rectangle <thus formed>, one point being Gill's station; as I have not got key to unscrew caps of his 3 capped station marks, I adopt the turning centre hole of the cap; this must be concentric with the screw, & therefore with the ring round sta. mark; hence it is independant of cap, & cross lines on platinum inside, are probably not 1/50 inch out of the centre. If I loosened the caps they would probably be stolen. On calculating the check diagonal from the other measures is even, it only differs .017 <inch>, & I only measured to .01; hence it is very satisfactory; & as it is absurd to measure socket nearer than .1 in; this is abundantly accurate. Then stretching a silk thread on the measuring rods by a knob of wax at each end, thus, [\mathbb{R}] I had a truly

straight line stretched quite free & with the measure to define the position of offsets along the side; then setting this so that the thread passed vertically over two of the corner marks (+5 or Gill's station)

top view

I took offsets along the side <I describe this fully, as it is really a new method, supplying lack of straight edge rods,

& promises to be useful.>. This was specially necessary as the outer corner of the socket has no definition for 8 or 10 ins along each side, passing over a very fissured & cracked piece of rock, which has never been dressed down to socket floor level in the corner; hence the trend of the sides is all one can go by. The so called cut off in the inner corner, is really 3 blocks of stone inserted, very roughly