I The grotogy in Mexican history / of country, like Mexico, whose chief stuffe is pracious metal has a history and a character premiurly its own. It cannot be measured by the standard of others, now can its commercial prosperity to reckoner by the products above of its agriculture & meen factures The treasure that lies buise beneath it, surface is constantly scattering, with a know capricions hand fortunes to individuals - fortunes as delusive to the commonity of society, which effects even the tone and country is necessarially influences its history; the bush briefly considering its geology The gold - diffings of Samen Herologed and The two precious metals give rise to two classes of mines - those who delve for silver in the primative rocks there who wash and gold, Either from the debris that in it out of the original quartz matrix, when thus not get been disturbed by mountain towents. The Mexican Indian Endily learned the simple pro= - cefyly which shiving bits of gold could be guthered how the vough-rock", a hard-pare - clay bottom hires could wrought into attractive ornaments for

his person, his weapons this wig warm— The only useste which he could concerive of afflying it. The civilized gold-digger white to both art and skill to obtaining a metal what to him is a standard of values. He grickly learned that gold it to be found as abundantly where there is now no signs of himselves water with the bunks & Eddies of Existing streams. He has by the exercise of his intellectual powers winds where the concluded that beneath an Existing range where of hills there was once a water course where his quel had been defosited the Religioner = for some his this man intellight embacks both labor and conclusions to unhasitatinghy embacks both labor and capital in digging a shaft or in drifting" through the Earth & rocks, that (tie between) impede his accept.
The shot be has fixed upon as the probable defosit of an - ance between the Indian the civilogen got die -gre. The one sufflys skill without calculation in The acquisition of a mital, which has no other value in his rationation, There its uses as an ornament The existinger gold digger suffers his intellectual forwars in as much as his hunds in theaquisition of a metal to him to The civilizer gold diggers surpleyment involves him in the muzos of geological science. He Euches for gold as vrudily bruenthe the Everlusting hills beds since the time when the oldest of the present mountain chains were formed. At hat the feelshis way among the views of an ancient world, as he follow, the course of choked up rivers, of a hours

= ted , of subverted valleys & material former, that apparent before Existed long before the advent of Adam = He his duity employment he has to act upon geologie. - each principles, which the other clupes of society are. only subjects of abstract speculation. As doings apon the idea that this Loled Earth has not always cows -timed in as now, since the time of its ereation. There are changes that appear to have taken place in occurred apparently but yesterday, all of which. tin the valleys. He gets bewildered in the speculations to which his daily rupleywent leads they is fiveed to conclude that me infinity of your separates him from that distunt prest - the beginning, when to for A cocale of the matter, which now constitute, this surther To such a mean thrus situated present an aspect different from that weligh the monkish theologian adsigned to He may be & religious more, & if so to tends no cuesain his ! daily speculations afour exective power to less in his vitere of the creation power vuller mercasing his rention for the great author of all things. But the month who will admits no modefications of the traditional in a - l'expretuleur of the scriptures, on any amount of testumony, in assety to decounces us a lupse à herrice though but of a hairs in the from the beaten track of who) conformity with natural laws, which does not melitate againsh a sound Exegesus of the sucred text

tweeth it may against monkish theology. The back & crifture, for obviously wise nasous, lakes cog = nizured only of the apparent in nature - of the sun ising & setting instead of the daily productions of the with. black-letter interpretation having been made at a me when natural laws were imperfectly uncles c lood every new discovery of a natural law involves theological contest - a contest with an interpretation of Leifture which has become hereditary. The month no prosonifies these old wears will hardly admit at the ruth is vound! Science, art, intellectual dedopenient all must be societies to one unbuding ile, that reduces civilized man to the intellectual condition of the lavage. With the Educated mines no ach principle can obtain. Science is the foundation his succep- grology in the discovery of gold deposits; remistry in the reducation of silver ones; & both often nes in the soperation of gold from clay. His very aflyment makes how the autipode of the mouk of the veligious notions received traditionally from this lup of interpreters. And he interprets scripture in con-[The gold-digger goodway + his theology he mines duily avocation restricts his philosofly to the actical. At has no occasion to meddle with the wild speed relations of popular geological between . The general it lives of leading geologists are sufficient for his use. In Ac tuel there may be different theories to which he does not object me may hold, that all the writer of the Ocean to be the product combustion deposited drop by drop until the seas were filled; tal the mountains and the broken surface of the The author never knew booking rotundity of the routh & that was dething The author never knew bortens rotunderly isst that publicly combatted. The 3 O'callaghan

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**PARTITION** 

At the present mount to Vanti-Adamite races that spular grological work is still survived could not be small volume of printes contained represented in Ectures by M. Hugh Millar of an ark of such dinen = denburgh. One cause of the - sions - all this theory rists which of this volume is the on secondary fasil widence straordinary culumstances A second assemption of This went the publisher has certainly the credit of novely exelfully emproved by felling - that at the time of the flood the customary place of a pre- the whole human vace was fuce, with obituary notices congregated in the valley of the of the author Caspian, tof the Ividen, & that the variantable feature of this the letting in of the Black volume is the promulgation of Dea, tof the Presian Sulf the doctrine, that are vaces would produce a flood of animals now on the routh, that would be local, but which originated before the which would apparently Adamite animals were made by miversal. To euch in the ark. He representatives futty results affairs do nor Lunting this doubtful pos of the Almight, when we ection a second necessarially undertake to plain declarfollows, that the animal races - ations of Scripture with were vastly more widely dis- doubtful speculations persed over the south though All flesh dies that moved human funity - The flow of sepon the Earth suith the therefore which would dis = sucres volume, tas the troy the whole human family weight of widence us need only be local , In such a present is in favor of a the Admite animals, while present this belief for the

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The Selver min an Y. The silver-miner has an Entirely different mis = sion. Ar searches for a les précions mineral - que contained in ones, in the vifts of primative vocks. HE capital & a such combination of tools labor & of science · Seology is aff 2 ale of to in the person for you & the most intricate processes of chamestry in their sepera-- tion . Hite the highest grade of Engrusering talent is requisite the evaduet the Execution of the shafts. A first clap silver mine suploys more men & animals than would be necessary to build a moderate pyramid. white a mountain of primative formation is some times pinces with more galleries than the rock of Sibralter. The succep of these princely investments dependenthin sucrep entirely on chemical process = RES - processes it is not very likely the Agtees we macticer Attest is not likely that the Spaniacos found the Aglecs in possession of silver not-2 with stunding the fabrilous stutements of lorters Let us now run over the many chemical processes that here been resorted to in order to separate the silver from the ore. The foll-brimstone, that has been procured in Durango, or in the volcano of Popocatapetl, is Jahull often Rubstitute ng brimstone is confor it the phrase Indo ien carefully collectm, on which sulphur European the term I vaniantained by this distiltuken from the country it is found in the silmes amounts to ten I run ] which us it is silver, but does not parated from the silsearcely possible to doubt awn off and poured the silver is preworks the original about · blue vitriol, - proof the race a mint, is sold to the is employed in ob-Inchards physical the company obtain Last history of Munkin while the lime they After all these hard Souden, 1841. Wol wife 7to ten per cent. of of bonanzas, which ofitably worked only in those countries where labor commands the lowest standard of wages, after the introduction

The gold miner avoids the primatery 10 Gold & silver countries districts apprine to have tu bun alike subjected to the action of routhquakes and se these volcanos. But the price of the action in the gold res on districts much have preceeded similar disturbeney years. Election action for some the hour operates = THE unt rath gold. The scient floods that have swept the district, most abundant in gold, have spread it broad cash over wally the fort-hills at the mountains base - (suff) the winter the torrents have born the several particles of gold into the faire walleys that then existing that which may have smarry cests diet hith thurford secondary formations & in his of sill. He is ties Ma perchance one of these may have thrust up into for some rully, which has made turnelling necessary to get the llow ral elly hich It is not so with the mines for silver, His lubors them ED, are exclusively confined to the mountains thrime rede of Souvra t where the matrix even of solver districts of the · Suc w Drems to have decayed. The ore affecting often times to As The geologist worth probably say It is only a millet the + the - un of years, or so, since These silver ones first afther the = heured on the surface - Thrust up through the our the same of those rocks that hat bevold under by w a heavy pressure - the principle. Thus the the os mountains of his metals among rocks into in ever the interior chambers of which he has penetrated, e to Ry The

10 the air of gun- powder, I cash steel; without these Liber has yet been procured in the country of the Agles The geological was reminating the fourth clay have now done with the goology + the chemistry necessary our metals - sufficient to show why gold-firleds the hands of Auglo-Supons yield a veturn so in = causely greater, there in the hands of the intellectually weeker debused Spunish - Americans. And that the gists · duction of silver requires a combination of seizuee while that possession of gold was not inconsistent with this but arise rechanged powers, unknow to the Aglees. He may Ents which must be refered to in the progress of this Regioning then our secretific notices with the adinto of Adum - the newst insportant of all secretion onsters, that previously inhabited the Ewith had all Deisher, as such creation of him things before them things the fore of with when sod undertook the work of fitting the end for a hurgian hubitation. The vapors that has for throuded the rurth in ducknep had been ifted up & light for the first time personaled its this was the first geological-days work of the the first was an atmospher formament. Then the waters floating when the own face of the rurth were guthered into seas, I the dry and brigan to bring forth grup, heibs thait. On the worth day the light of Sam tof the moon, tof the 2 turs penstrated the stars atmosfhere & showe in anthe first time upon a re-modeled world. furnishing a standard by which time could be The of the

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neasure for the feeture by the most important in in the rolls history. On the fifth day the newly made atmosphere the newly founded sea were filled with whabitants. On is sight the work was perfected with the present race of nimals the important addition of man. After which Hr Ester I was refreshed" The chougest of all figurative lana that the work of long continuance, than the meters were been discorded by hete grotogists Exodus XXX-17 + the whole period divided into he geological notices necessary Dix goological was. With the Elucidation of Early Amer due difference to authorities fun history must meess arially or have ventured to adoft a brief as to preclude a lengthy vinz puch of both theories the allow (Ecotion of theories differing in that the days were grological etail from some of the lutest and

horitus. For the sauce vrason potheses are in some instunis stated as though they were the doctives. This has been voider as much as possible a wonder in volation to this, www scarcely fifty years old, is cot that there should still be do rateable ground, but that their hould he so much that is cettled. The doctring of Chalmers - that in incalculable number of · sus intervened between the BEgiving mentioned in the fresh for of the creator; And There men tioned were natural days - has

Eras until their would really be an apparent day by which time will be measured, tace Evening ta morning mode to affect the fourth day . See such a suggestion would dispose of the objection to Chalmers Thereon. The absent notion that the Ack vister three mouths refore Arenal - above the live of perpetual evour is one of the stupid errors that men who have never climer a mountain are aft to fall into It would have required a nightly nivacle to be hiesers the freezing the contents of to

notes to here 10 Chief It I - Fian quide Knew no " After a wearison & indeed dans more of this stately moun = grows orde un found ourselves steen, to him a kind of Mythin on a enewy fletfour, vairguted land for bryond the wruch with Alpine plants. The tivery of human toward, than streams which trickeled through that it was soithing the the ice wire Edge's with forgettercitories of the Mosewite no nots of the landerests blue, Bushut - tumahumda: + with many well vem em bard from this points alone Unopean fores . I chimed up was it visible two suw a Solitary vock to take bearings it no more during the of the principle freks around Journey . The bruing I MOUNT ARARAT.—An interesting acscent of Mount Arant by five Englishmen.
The natives believed the feat to be impossible,
and that the summit was guarded by Divine prohibition. It is 17,323 feet above obtained of mount Ara à avaites me. = rat (1.15 ° 30") cours = I high above he son level, and terminates in a precipitous snow-capped cone, which has hitherto foiled of the attempts of explorers. Major Which the attempts of explorers. Major White Stewart, who was one of the party, - pouds correctly with its in the snow a short doublepresition on the best mufo rites the account of it from Erze-. Our distance was They also drank the health of ry fret rose one the Oct on this he observes, "Her Marsty's name is probably the first that the Marsty's name on that solemn height, that the marst permanent perma about 145 miles. since it was quitted by the great patriarch of the human race, as no record or traditioning in the Verys before." Laqueds Sineveht Bubylon pyr 362 + Seursis 8-4 I Genesis XI.2 not bemistaken; it was mount Ararat. My Meto:

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notes to her 10 Chief 111 "After a wearison & indeed dans Fian guide knew no = grows vide un found ourselves more of this stately moun. on a energy fletform, vairgules steen, to him a kind of Mythis with Alfine plants. The triery land for beyond the vruch streams which trickeled through of human towel, than the ice wire Edged with forgetthat it was within the na nots of the tenderests thee, tercitories of the Mosewite + with many well vem un bored 12 ushut - tumahumda: Unopean forvers. I chined up from this points above a Soletary work to take bearings was it visible two sur of the principle preks around it no more during the ms. A sight us mugnificed Journey . The brainey I as unexpected awaited me. obtained of mount Ara= Fur to the north, I high above = rat (1.15°30") cours = the dark mountain veriges, = pouds correctly with its which spread like a troubled presition on the best mus sea brueath my fret rose one . Our distance was on olitary cone of mishitted about 145 miles. The hete speckling in the varys Laqueds hineveht Bubylon the sun. Its form would pgr 362 + Seursis 8-4 not be mistaken; it was # Genesis XI.2 movement Ararat. My treto:

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L'acadiae grologically heated ) 20 As we shally have occasion to depart from all they ideasony of antiquity contained in block-letter authors we much in == - large our grulagical survey. The traditional location 6 of the Garden of Eden on the tuble land above or north of 46= Mesopotamia appaars to hove no other foundation, their that the name Emphrates is applied to one of the four bran :ches into which the great river of Eden divided itself :The contradictions this litteral roding involves are he avoided by supposing the four gratest rivers known to The ancients - Tives which could not have had a com = an z mon origin - were named to convey an idea of the unnewsity of this wonderful river 4 its Extensive della or llephow Softing in the sacres volume itself contradicts a the = Its ne now to be the bottom of the O court the bottom of maney of the - us inter then seus now to be dry land. onis One seas The day been of the auto-delevious ?? the tota vistage of the auti-deliviour world has come down to these to past-delivious, save sach as boah brought with him 1 - the = self into the arte, . HE have existing ring of structures uch built by descendants of the auto-deluvious immediately after that cutastrophy, tit is difficult to suffose a years= the to Suburiquee would obliterate utterly the creations of , men whose average befor time lives were near a thoras - Land years. Their architecture must have been cy: es\_ = clopian were if Their buildings were only to continue a single life. The objects two of the flow too would hardy = 2 mst have been accomplished had bout this family been rewh = instated in their old abodes amed the memorials of the depravity of a drowner world - in a land felled with uninhabited citie & villages, & putris corpses. But if the

28a because dry-land & the dwelling place of the family that of Noah + the world of the auti-deluvious had passed away for wer then we can explain diver grological phe = us = nomina without a conflict with anything more srians than the foolesh traditions of monkish inter = H= = preters of sacred wit. The landing place of Noak Another common tradition we seemt have de da = sive from the same doubtful authorit, is - that he boah this family tall creatures however delicate ugh inclosed with him in the ark - after vernaining whan Elevation three months at an altitude where every hour covered mountain peaks of Ararat. The Bible says the ark noted over or upon (33) traval. Au Ex= lley how Its ne ud - pression evidently intended to indicate the hight of enter In water above the plains, I not that the contents of the on-us ik were detained there there mouths & then sufted the upon a precipituous mountain covered with perpetthese = wal snow + ice . Yet upon the shought of this single 9 - the interpretation expression of doubtful interpretation uch the whole of the peopular theory of the landing place of 1 book vests. The first recorded movement of the hu= man family, or, more probably, a part of it, after the flows, suffer that they journeyed from the Easts to the land of Shiz non; Lesuing the indicate that after the ark had been becalmed or toucher bottom in the seventh mouth I has again floated over the table land of Central A= Lea , the & there wefter out the precons cargo - The how from which the dominant vaces of men have ver migrater. vol 3 pege 191. Suffoses the landing blace of the ark to be in I ram - ancient Presin This idea of the landing places the ark is not original withing the author. Sin Man I was

its cruel by liquid fixes beneath I he may were admit that erven distinct floods occurred before the ciration of A dam. Another that before the sun & moon a dually on Thown whom our globe the days mentioned in sacred to read were grological reas, but after that went H= we measured of single rotations of the south whomits afis. These are subordinate questions to him . But when an altruft is made to overture the plaint radius of scripture by human speculation - when any he Month ix made to show the whole human furily rugh vas configured to the oulley of the Euspian & the Toydon at the true of the Deluge + that the flow was really nothing more than a breaking into thise valley how of the waters of that seat of the Prairie Such he halts ne to may be told that there are now on the Earth paces of is cirutific ravings he looks reform as absurd as the monks con-is [His colea of floods & the flood] , a man suity engaged aired the disturbed strata of the Earth se a search of gold the Theory of floods is popular the tracking - the mits the disappearance of race after vace of unimals uch reations as the visult of ordinary cutaelypus before the f ecopion of the perfect ariual creation that altruded the to dural of man, notworthstunding the many objections but muy be assigned to it by the overlapping of fossils. to so construly finds what he believes to he sea marks love the bids of Exhunster vivers that he not only adopts to theory of frequent floweds in the chaotic trus won to Astam, but he looks even upon that of Aout 2 the visual of nutural cueses - the dry hand and the sice changing places. and the minacle to in consists in the preservation of Nouht those

The Monk is the personification of blind faith. With him and actions of the sath, the skyr, of the are in subordination to an ever active minaculous power. Not only the At-= might, but the bigin + the Quints are busily engage in working minacle. The numetable hows of notice are as unknown to him as the immutable laws of morality. In nature I in Trovidence he Rees only the Emprice of minecle workers. I kough he is the untipode of those foolish phylosophers, who worship the laws of nature, he peacheally reaches the summe vesult, us he renderes devine how = ors to a Bring, or beings different from that the system of his own Enacting. The theology of the monk has sociecums cribed the sphere of his intellectual research, that he has become the personification of conservation in its worse sense, a speciers of intellectual audomaton-the reproduces of antique absurdities & is as Much (the Evering of) office to the investigation of moral & physical laws, as he commonly is to

From varollection - It is us follows A. To steel the amount

## **George Fearing Hollis Papers**

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## MISCELLANEOUS - Geology in Mexican history, circa 1900



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