## SITE ASSESSMENT REPORT

## State of Louisiana and the lberville Parish School Board $v$. BP America Production Company, et al. <br> $18^{\text {th }}$ Judicial District Court, Division "A", Docket No. 72605 Grand River and Sullivan Lake Oil and Gas Fields Section 16, Township 10 South, Range 11 East Plaquemine, Iberville Parish, Louisiana

March 31, 2016

Prepared for
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## Prepared by

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August Levert_BP Plan_002997

# SITE ASSESSMENT REPORT 

March 31, 2016

The law firms of Kean Miller, LLP, on behalf of BP America Production Company and BP Corporation North America, Inc., King, Krebs \& Jurgens, P.L.L.C., on behalf of W\&T Offshore, Inc.; and F. Barry Marionneaux, APLC, on behalf of Houston Oil \& Gas Company, Inc., have retained Stewart L. Stover, Jr., Principal Hydrogeologist, and Brent T. Pooler, Senior Hydrogeologist/Senior Risk Analyst, of HydroEnvironmental Technology, Inc. (HET) in Lafayette, Louisiana, in the above referenced litigation. Mr. Stover has twenty-nine (29) years of experience as a Hydrogeologist and has been an expert witness in litigation involved in, but not limited to, environmental site assessment, remediation, landfill assessment and design, hazardous waste, surface water impacts, and groundwater supplies. Currently, Mr. Stover conducts project oversight for HET in the states of Louisiana, Mississippi, Texas, Wyoming, and Colorado. Mr. Pooler has over nineteen (19) years of experience in conducting hydrogeologic investigations and implementation of soil and groundwater restoration plans. Additionally, Mr. Pooler has over seventeen (17) years of experience in conducting risk assessments in the states of Louisiana and Texas and has been qualified as an expert in the fields of geology, hydrogeology, remediation, and implementation of Statewide Order 29-B, RECAP, and risk assessments. Mr. Stover's and Mr. Pooler's résumés are contained in Appendix A.

All conclusions and expert apinions in this report are based upon information and data obtained to date. Research is currently ongoing, and new information may be obtained that may change opinions between the time of preparing this expert report and trial/deposition dates.

This report is based on field data collected and information received from the client, other parties associated with the client and other third parties during the period of December 20, 2013 to March 31, 2016. All conclusions and recommendations are based on available information cited herein, and should be reviewed within this context. Should conditions at the sites in question change, or additional information become available, especially with regard to prior site conditions, it may be necessary to modify these conclusions and recommendations accordingly in the future. The contents of this report are proprietary, and text, illustrations, and/or any other parts of this report may not be reproduced without the express written permission of HydroEnvironmental Technology, Inc.

Should you have any questions or need further information, please feel free to call.
Sincerely,
HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
Project \#4651.39


Brent T. Pooler, P.G. (LA\#274)
Senior Hydrogeologist,


Principal Hydrogeologist
BTP/SLS/eop


August Levert_BP Plan_003048

## APPENDIX C

## TABLES




| Soil Analytical Summary－ICON Investigation <br> State of Loussiana and the Iberville Parish School Board vs，BP Amerita Production Company，el al， Section 16，Township 10 South，Range 11 Eas <br> Iberville Parish，Louisiana HET Projecl No 465139 <br> Table 1 <br> Page 3 of 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| ${ }^{\text {maxms }}$ | ximb | $\frac{804}{80}$ | $\frac{10}{10}$ | $\frac{1 m}{41}$ | $\frac{11}{4}$ | $\stackrel{1}{4}$ | ${ }^{\text {cin }}$ | ai | Lil | 8 | 211 | ${ }^{24}$ | $\stackrel{m}{m}$ | $\stackrel{\square}{\square}$ | ${ }^{\text {ma }}$ | m | $\stackrel{\square}{\square}$ | $\stackrel{m}{4}$ | $\stackrel{4}{4}$ | m | ${ }^{23}$ | $\stackrel{m}{\square}$ | 3 x | ${ }^{108 x}$ | $\stackrel{m}{4}$ | ${ }^{40}$ | 30 | $\stackrel{\square}{4}$ | 20 | \％ 8 | 78 | $m$ | 132 | w | $\stackrel{m}{m}$ | $\underline{M}$ | 17 | $\cdots$ |
|  | armm | $\stackrel{5}{50 \times 1}$ | ${ }^{118}$ | ${ }^{43}$ | $\stackrel{4}{4}$ | $\stackrel{\square}{4}$ | ${ }^{3}$ | ${ }^{11}$ | $\stackrel{\text { \％}}{\text { \％}}$ | $\stackrel{4}{\text { rex }}$ | ${ }^{18}$ | ${ }_{\text {Im }}^{14}$ | $\stackrel{ }{4}$ | 4 | $\stackrel{1}{4}$ | $\stackrel{\sim}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{4}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{m}{m}$ | $\stackrel{\text { \％}}{\text { cia }}$ | $\stackrel{\square}{4}$ | ${ }^{\text {cix }}$ | \％ | $\cdots$ | ${ }^{29} 1$ | $1{ }^{1}$ | $\stackrel{4}{4}$ | $\frac{41}{x 0}$ | （1） | \％ 1 | 4 | $\stackrel{\square}{2}$ | $\stackrel{\text { c }}{ }$ | $\stackrel{\mu}{\mu}$ | m | （1） | $\stackrel{\square}{4}$ |
| 3 Bmat | wimis | 4 | ： 18 | ${ }_{\text {xit }}$ | $\stackrel{\sim}{4}$ | $\stackrel{4}{4}$ | 19 | ${ }^{16}$ | in | 14 | 21 | $1{ }^{14}$ | $\stackrel{1}{4}$ | $4{ }^{4}$ | 80 | ${ }^{25}$ | $\cdots$ | ${ }^{4}$ | $\cdots$ | $\stackrel{m}{4}$ | 23 | $\stackrel{\text { m }}{ }$ | 40 | ame | $\stackrel{ }{*}$ | 238 | 118 | 4 | 12 | cmen | Case | 4 | 23 | म5 | 38 | ¢ | $\square$ | $\stackrel{\sim}{4}$ |
| 13ा⿵冂人 | amm | 5 | ${ }^{4}$ | M | S | ma | 13 | ， | 15 | 30 | 31 | 388 | $\stackrel{m}{4}$ | ． | m | n | $\stackrel{\pi}{2}$ | $\stackrel{1}{4}$ | － | ${ }_{1}$ | 3 | $\underline{ }$ | \％m | ma | ${ }^{\text {M }}$ | ${ }_{\text {ck }}$ | ${ }^{3}$ | ${ }^{2}$ | \％ | 48 | \％ 7 | ${ }_{7}$ | w | 313 | m | m | 58 | M |
| 3atme | zims | ${ }_{\text {Let }}$ | ＊18 | m | $\stackrel{\sim}{\mu}$ | $\stackrel{1}{4}$ | 121 | 15 | 41 | $\because$ | 28 | 2.4 | $\stackrel{\square}{2}$ | $\pm 2$ | ${ }^{3 \times 1}$ | ${ }_{3}$ | s | $\stackrel{m}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{2}$ | $t$ | $\stackrel{ }{2}$ | 3 | 1520 | $\stackrel{1}{4}$ | 254 | 4 | $\stackrel{3}{4}$ | 4 | samm | 480 | 1838 | 22 | 8 8t | 41 | $\stackrel{\square}{18}$ | 4. | $\stackrel{\sim}{4}$ |
| zatas | \％onti | cosk | ${ }_{4}$ | M | $\pm$ | m | 13 | ${ }^{11}$ | 217 | 4 | in | ${ }^{260}$ | $\stackrel{\square}{4}$ | ${ }^{\text {ar }}$ | ${ }_{4}$ | ${ }_{\text {m }}$ | $\stackrel{m}{4}$ | $\stackrel{\text { s }}{ }$ | m | $\stackrel{\text { m }}{ }$ | n | m | ${ }^{\text {asm }}$ | ${ }^{\operatorname{mox}}$ | m | 23 | ${ }^{2} 1$ | M | \％2 | 34. | ． 12 m | $\cdots$ | \％ | ${ }_{\text {w }}$ | 10 | m | ar | $\cdots$ |
| з may | 2ims | ${ }^{2}$ | $4 \times$ | 43 | $\stackrel{ }{\mu}$ | m | 12 |  | ${ }^{38}$ | 5 | 37 | 4 | $\stackrel{1}{4}$ | ${ }_{3}$ | $\pm 10$ | ${ }^{\prime \prime}$ | $\cdots$ | $\stackrel{M}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{M}{\mu}$ | 43 | $\stackrel{\square}{2}$ | $\pm$ | 18 | $\stackrel{1}{4}$ | ${ }^{\circ} 8$ | ${ }^{(1)}$ | $\cdots$ | \％ | оata） | ${ }^{102000}$ | － | $\stackrel{3}{4}$ | 4 | $\square$ | 4 | ${ }^{3}$ | $\stackrel{ }{4}$ |
| 3 Bmas | anm | com | 1 | M | m | $\frac{1}{4}$ | On | ＂ | $\underline{18}$ | ${ }_{4} 8$ | ${ }_{\text {ze }}$ | ${ }^{\text {ik }}$ | $\stackrel{4}{4}$ | $\frac{41}{2!}$ | ${ }_{\text {m }}^{4}$ | ${ }_{4}^{14}$ | $\stackrel{\square}{\square}$ | $\frac{M}{\mu}$ | m | $\stackrel{\mu}{\mu}$ | $\stackrel{10}{*}$ | ${ }_{4}^{4}$ | ${ }_{\text {a }}^{\text {ans }}$ |  | $\frac{1}{4}$ | 238 | $\pm 3$ | $\stackrel{m}{m}$ | $\frac{\times 1}{122}$ | ${ }^{518}$ | ${ }^{1.1980}$ | $\stackrel{4}{40}$ | $\frac{182}{22}$ | \＃． | \％1 | 4 | ${ }^{\text {vi }}$ | $\stackrel{4}{4}$ |
| $\frac{10 y y y}{}$ | 200m | $\stackrel{\mathrm{c}}{5}$ | $\stackrel{\square}{\square}$ | 4 | ${ }_{4}$ | $\cdots$ | $\stackrel{4}{31}$ | ${ }^{1}$ | ， | ${ }^{\text {i4 }}$ | \％ir | $\stackrel{\text { \％a }}{18}$ | $\stackrel{ }{*}$ | \％ | 4 | $\stackrel{\square}{4}$ | $\stackrel{1}{4}$ | $\stackrel{\sim}{*}$ | $\stackrel{\square}{2}$ | $\stackrel{\square}{*}$ | ： | $\cdots$ | ${ }^{\text {max }}$ | （0me | $\stackrel{\square}{*}$ |  | ${ }_{\text {＊}}$ | $\stackrel{ }{*}$ | $\frac{18}{3 .}$ | ${ }^{21}$ | ${ }^{\text {com }}$ | $\cdots$ | ${ }^{31}$ | ${ }^{2}$ | $\cdots$ | \％ | $\stackrel{\text { ar }}{ }$ | $\cdots$ |
| 3mace | athis | ${ }^{\text {kT }}$ | 121 | 3. | $m$ | ！ | 13 | ${ }^{6}$ | 16 | ${ }_{4} 16$ | 313 | 38 | ＂ | xi | 140 | \％ | ＂ | M | $\stackrel{m}{ }$ | m | 31 | $\stackrel{3}{ }$ | m | sase | $\stackrel{ }{x}$ | 135 | 1 | $\stackrel{3}{4}$ | 4 | coxal | 2080 | ctso | 34 | \＃ | 117 | ci | 41 | 5 |
| z3．ant | 2－m | cma | m | ${ }^{4}$ | s | ${ }^{\sim}$ | 37 | $\bigcirc$ | $1=$ | 18 | चा | 37 | ＊ | ${ }_{6}$ | m | $\stackrel{m}{m}$ | $\stackrel{1}{4}$ | $\cdots$ | $\cdots$ | ${ }^{2}$ | 18 | $\stackrel{ }{-}$ | \％ | © | － | ． 23 | 3 | $\cdots$ | \％ | ． 91 | ．14 | $\cdots$ | ${ }_{0}$ | nt | － | $\cdots$ | 21 | ${ }_{4}$ |
| 3 zaspa | （emens | ${ }^{* 1}$ | $\cdots$ | 17 | m | m | 0se | 0 m | 200 | 124 | 17 | t7 | $\stackrel{14}{10}$ | ＊ | $\cdots$ | \％ | \％ | $\stackrel{M}{4}$ | m | $\stackrel{1}{4}$ | 4 | $\stackrel{M}{4}$ | $\ldots$ | 120 | m | \％\％ | $\underline{12}$ | m | 11 | 6000 | －2000 | 1530 | 31 | 67 | 4 | 4 | 4. | $\stackrel{\square}{4}$ |
| 180\％4 | 20w | $\ldots$ | $=$ | $\stackrel{ }{4}$ | F | ＝ | 37 | 2 | \％ | tim | \％ | 62 | $\stackrel{1}{4}$ | 78 | m | m | ${ }^{\text {a }}$ | $\stackrel{ }{*}$ | $\cdots$ | m | 4 | \％ | \％ | ＊ | \％ | ． 21 | 41 | $\cdots$ | 4 | 4 | －17 | $=$ |  | ar | $\underline{\square}$ | $\stackrel{ }{*}$ | 318 | ＊ |
| samate | somm | 18 | $\square$ | ${ }^{1}$ | $\cdots$ | 4 | $\stackrel{39}{19}$ | $\stackrel{M}{4}$ | $\cdots$ | 101 | $\stackrel{10}{10}$ | ${ }^{113}$ | $\stackrel{4}{4}$ | $\stackrel{M}{4}$ | 40 | 3 | $\stackrel{\square}{*}$ | $\stackrel{M}{\text { m }}$ | $\stackrel{\square}{4}$ | $\stackrel{4}{4}$ | 38 | $\stackrel{\sim}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{m}{3}$ | $\stackrel{M}{4}$ | 030 | ${ }_{4}$ | $\stackrel{4}{4}$ | ${ }^{102}$ | conv1 | ．088 | 4850 | 42 | 2 | $\because$ | ${ }^{14}$ | 31 | $\stackrel{m}{4}$ |
| \％anate | ¢zm | 18 c | $\stackrel{ }{*}$ | $\cdots$ | M | $\stackrel{\square}{ }$ | in | m | $\stackrel{3}{ }$ | $\stackrel{\sim}{2}$ | $\stackrel{ }{4}$ | $\stackrel{ }{2}$ | $\stackrel{ }{4}$ | $\stackrel{ }{4}$ | $\cdots$ | $m$ | $\stackrel{4}{4}$ | $\cdots$ | $\stackrel{M}{4}$ | $\stackrel{\square}{4}$ | $\square$ | $\stackrel{\sim}{2}$ | $\stackrel{ }{*}$ | $\cdots$ | $\cdots$ | $\cdots$ | ${ }^{1 \times}$ | $\stackrel{1}{4}$ | $m$ | $\cdots$ | $\stackrel{ }{*}$ | $\stackrel{ }{4}$ | $\stackrel{\sim}{*}$ | $\stackrel{4}{4}$ | － | m | 41 | $\stackrel{ }{3}$ |
| $\frac{\text { sanomij }}{\text { aname }}$ | ${ }_{\text {xima }}$ | ${ }^{\text {rem }}$ | m | M | － | m | 13 |  | m | ＊ | $\cdots$ | m |  |  | ${ }^{m}$ | \％ | ＊ | $\cdots$ | ＊ | \％ | － | ＝ | － | － | M | ＊ | m | $\cdots$ | m | m | $\pm$ | $\stackrel{ }{ }$ | ＊ | ${ }^{4}$ | m | ${ }^{\text {m }}$ | m | ${ }^{*}$ |
| Bincua | ＊omb | ${ }^{4}$ | 10 | ${ }^{4 \times}$ | $\cdots$ | $\stackrel{1}{4}$ | 14 | M | $\cdots$ | 14 | 24 | 31） | $\cdots$ | M | $2 \times 0$ | as | $\cdots$ | $\cdots$ | $\stackrel{m}{ }$ | $\stackrel{m}{ }$ | $\cdots$ | $\cdots$ | n | m | $\cdots$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{3}{4}$ | $\cdots$ | m | $\stackrel{ }{4}$ | 4 | $\stackrel{\sim}{*}$ | $\cdots$ | $\theta$ | 14 | $\times 3$ | $\cdots$ |
| maxe | am | 50 m | m | $\stackrel{\square}{4}$ | M | $\stackrel{ }{*}$ | in | $\stackrel{M}{4}$ | \％ | ＊ | ＝ | ${ }^{2}$ | $\stackrel{3}{4}$ | $\stackrel{3}{4}$ | $\stackrel{3}{3}$ | m | $\pm$ | ${ }^{\mu}$ | m | $\stackrel{\sim}{4}$ | $\underset{\sim}{4}$ | $\stackrel{ }{m}$ | $\stackrel{4}{4}$ | 3 | ＝ | $\stackrel{\sim}{4}$ | $\cdots$ | $\stackrel{4}{4}$ | m | m | $\stackrel{\square}{4}$ | \％ | $\stackrel{4}{4}$ | $\stackrel{3}{4}$ | $\stackrel{ }{4}$ | $\stackrel{3}{4}$ | 3 | $\cdots$ |
| 100 | ， | ${ }^{1}$ | ${ }^{10}$ | 12 | $\cdots$ | － | 14 | m | \％ | 13 | ． | $\cdots$ | $\cdots$ | m | 300 | ${ }^{1 \times}$ | m | $\stackrel{1}{4}$ | m | $\stackrel{1}{4}$ | m | ＂ | $\stackrel{ }{\sim}$ | m | m | m | ！ | m | ！ | m | $\stackrel{ }{\text { s }}$ | $\cdots$ | $\cdots$ | $\cdots$ | 33 | ＂ | a | $\pm$ |




VCA


Anen ientor



| Groundwater Analydical Summary - ICON Investigation <br> State of Loursiana and the lbecvilte Parish schoel Board va, BP Ahreriea Production Company et at Jecoon 16, Tuwnskip 10 Seven, Range 11 East <br> HETHie Parinh, Louisiana Hoject No, 4651 is <br> Table 2 Page 1 of 1 <br> Page 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (20mmen | an | semm | sing |  |  |  |  |  | arax |  |  |  | mextmentin |  |  | $\stackrel{\text { cme }}{ }$ | anm | asion | cmon | $\frac{10 \text { wemos }}{}$ | $\frac{m}{\text { moxs }}$ | $\frac{\text { turg }}{\text { cose }}$ |  | mak |  |  |  |  |  |  |  | Amenher |  | momm |  |
|  |  |  | $\cdots$ | $\cdots$ | ormm | $\cdots$ | ${ }^{\text {ma }}$ | ~om | sem | nomer | ${ }^{\text {cin }}$ | nim | arcer | ciel | 1mem |  |  |  |  |  |  |  |  | Haveral | Nowar | Mamer | \%mind | zom | nemer | ammem | sm | Namem |  |  |  |
|  |  |  | ${ }_{\text {mom }}$ | mes | Nx | men | ${ }_{\text {a max }}$ | ma | nrea | min | wers | mzz | mass | * wrse | wre | cros | ¢ов |  |  |  |  |  |  | moves | 790 | ¢0198 | ผ108 | \% | moses | ar10s | ¢1\% | 2785 | 3208 | bensen | grama |
|  |  |  | $\min$ | $\cdots$ | nsa | -mom | - | $x$ | moz | man | mat | $x$ | - | $x$ max | mor | 天 | mar | man | max | man | man | mon | mon | mot | mat | man | mor | man | mar | m92 | man | mon | mat | pen | scat |
| sratm | $\cdots$ | <sa | tim | $\stackrel{\square}{4}$ | $\stackrel{-}{-}$ | $\cdots$ | $\pm$ | \% 188 | ave | -250 | 5 | , 68 | 37 | in 27 | $\pm 3$ | ant | ${ }^{13}$ | - | in | \% 5 mm | ${ }_{\text {ax }}$ | ram | m | 3 m | -00000 | - $6 \times$ | $\sim$ | $\cdots$ | $m$ | 20 | 0002 | ve | - | 180 | 76 |
| Salotem | 64/15 | He | 96 | 17 | 574 | 44 | mo | -088 | 0.0857 | couso | <0aso | $\bigcirc \mathrm{cma}$ | $\square \times$ | 4 1.se | -0,14 |  | 13 | c.00050 | $s$ | . 0040 | ตs | 20.010 | ${ }^{198}$ | 2 | -0.0020 | 208 | . 9 mex | . 285 | 2 m | 368 | .0000 | 1070 | . 50 | 282 | 1.28 |
| sarmina | A875 | HET | $\stackrel{\text { N }}{ }$ | Na | m | Na | N | na | $\cdots$ | ma | na | in | na | $\mathrm{na}^{\text {a }}$ ma | ma | 0.0389 | ${ }^{14}$ | 200080 | 34 | -0040 | ${ }^{5}$ | ¢0010 | ${ }^{180}$ | 338 | 20.0020 | 23 | .0050 | .0010 | ${ }^{27}$ | 29 | .080em | m | $\mu$ | 4 | Na |
| Les(tases | cos | ${ }_{\text {can }}$ | 200 | Ma | 14 | ma | -2xe | \% | zik | \%008 | com | .00m | 13 | 12 $3 \times$ | $\stackrel{\square}{4}$ | c207 | \% | . 80008 | $1 \times 0$ | -009 | N2 | .007 | 38 | 4 | . 00000 | " | 14 | m |  | 10 | Ocs | ${ }_{0}$ | \% | 31 | $\cdots$ |
|  | satn | HE | 2350 | $5^{51}$ | $\stackrel{4}{ }$ | ${ }^{122}$ | 46100 | ¢025 | озя | 0038 | 0071 | 0031 | 1.65 | ${ }^{65}$ 169 | 2.4 | 0.0914 | 5 ses | -00050 | 1150 | -006 | 4 | co0so | 38 | $\stackrel{\square}{4}$ | -000020 | ${ }^{23}$ | 0273 | -0810 | 18100 | 148 | 634 | 12 | . 80 | ${ }^{21}$ | 10.7 |
| zesprame | 64/15 | HET | $\stackrel{1}{4}$ | ma | m | $\stackrel{ }{\sim}$ | s | m | M | M | Na | Na | $\mu$ | 4 NA | na | 0.089 | 574 | 200050 | 1130 | -0040 | 455 | -0080 | 210 | 4.11 | <0.0020 | 286 | 0772 | . 20010 | 1280 | ${ }_{151}$ | .000 | m | $\square$ | $\cdots$ | ma |
| 2samiay | vins | $\cdots$ | $0 \times 0$ | $\stackrel{\square}{4}$ | $\stackrel{m}{m}$ | $\stackrel{\square}{4}$ | $\pm \times \infty$ | a | . 0 coce | 2007 | , | . 0 as | \%eti | (in) 8 | $7{ }^{212}$ | \% 0 \% | 12 | 98000 | $\pm \times$ | .80n | m | atex | ki | ni | $\cdots$ | 114 | $\stackrel{\square}{4}$ | M | 3 m | 13 | \%m | ${ }^{31}$ | \% | IT | 138 |
| tasmin) | ${ }^{817175}$ | Her | 1 H 50 | ${ }^{351}$ | 30 | 304 | new | ${ }_{392}$ | $\times 0050$ | -00080 | co.050 | -0080 | 0.0 | 10 osss | -0,14 | 0.080 | 23 | -00050 | \% | -0040 | $3{ }^{32}$ | <0010 | 672 | ${ }^{29}$ | <00020 | 905 | 0.125 | .0010 | 2980 | 23 | 20000 | 150 | . 50 | $3{ }^{2}$ | 06e9 |
| zapmame | atur | Her | NA | Na | va | Na | va | na | Na | M | m | M | ${ }_{4}$ | 4 - | $\cdots$ | 0.04 | 27 | 8.00050 | 2210 | -0040 | 330 | c0010 | ${ }^{658}$ | 21.1 | $\times 000020$ | 14 | 018 | 4080 | \% | 3 | .0800 | $\stackrel{1}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | ra |
| 2encean | mm | com | $\times$ | $\cdots$ | $\stackrel{m}{ }$ | $\stackrel{M}{4}$ | 190 | on | .00ea | . 2081 | -0,0e | .000 | - 218 | 48108 | on | 5 | $3 \times$ | $\bigcirc 500$ | 플 | ${ }^{13}$ | 12 | $\stackrel{50}{ }$ | 17 | 14 | . 000082 | 34 | $\stackrel{4}{4}$ | ${ }^{\text {an }}$ | $\square$ | 29 | 0.6 | 16 | * | \% | 20. |
| ssincatm | 81775 | He | $2{ }^{2}$ | 8025 | wa | 209 | 1 100 | 068 | 20080 | \%0000 | 100850 | *0000 | . 210 | 10 arr | 014 | M | M | ${ }^{\text {ma }}$ | na | 4 | $\stackrel{m}{ }$ | M | ma | $\cdots$ | na | ${ }_{4}$ | ${ }_{\text {ma }}$ | $\stackrel{1}{4}$ | $\stackrel{M}{4}$ | $\stackrel{m}{ }$ | $\cdots$ | tr | - 50 | $\stackrel{0}{0 \times 2}$ | Pome |
| saumamen | vim | ${ }^{\text {con }}$ | $\stackrel{1}{4}$ | 14 | 4 | $\stackrel{4}{4}$ | ${ }^{\text {m }}$ | $\stackrel{m}{ }$ | ${ }^{\prime \prime}$ | m | 4 | 14 | ${ }^{\mu}$ | $\stackrel{\mu}{4}$ | $\stackrel{\sim}{4}$ | $\stackrel{3}{20}$ | \%19 | ${ }_{4008}$ | ${ }^{\text {m }}$ | ${ }^{\text {coen }}$ | 12 |  | $\stackrel{\text { ma }}{ }$ | - 6 | 82000 | 4 | $\stackrel{\square}{4}$ | ${ }_{4}$ | $\stackrel{4}{4}$ | 14 | $\bigcirc$ | $m$ | $\stackrel{1}{4}$ | $\stackrel{\mu}{4}$ | m |
| stivimee | 61775 | HET | ma | $\stackrel{\square}{4}$ | m | M | Na | "a | m | m | M | m | ka | $4{ }^{4}$ | $\stackrel{\text { ns }}{ }$ | 0.088 | 008 | 800080 | 20 | 20000 | $\cdots$ | $\stackrel{0070}{ }$ | ${ }^{238}$ | 0, 12 | . 600023 | 30 | -20ss | ${ }^{10019}$ | m | 18 | .0000 | 4 | $\cdots$ | $\stackrel{4}{4}$ | m |
| Lestimm | Lams |  | $\ldots$ | $\underline{m}$ | $\stackrel{M}{m}$ | $\stackrel{4}{\text { ln }}$ | \% | $\omega$ | .0880 | .000 | Totee | . 080 | . 614 | 414) 68 | \% 2 | 980\% | \% ${ }^{\text {a }}$ | . 00000 | 3 | -209 | 4 | .cem | 198 | 12 | . 0.0008 | 72 | \% | $\stackrel{3}{ }$ | \% | 1 | 00 m | $\stackrel{*}{0}$ | \% 10 | $0 \times 8$ | 100 |
| sestaxis) | e2315 | Het | $\cdots$ | < 825 | wa | 28 | 2200 | ${ }^{557}$ | 120058 | . 6 cose | .0000 | .0000 | 0.18 |  | 1814 | . 080 | \%ow | -00080 | \% | . 0040 | 127 | <0010 | ${ }^{107}$ | ${ }^{3}$ | .00020 | ${ }^{13}$ | .0000 | .0099 |  | 16 | .0000 | $m$ | * 3 |  | 3 mb |
| saspome | Ezal5 | HET | 4 | NA | $\stackrel{ }{ }$ | $\cdots$ | nm | na | Na | $m$ | M | Na | $\stackrel{1}{4}$ | $\cdots$ na | NA | 20000 | ${ }^{096}$ | -00050 | 23 | . 0040 | 28 | -0010 | 10 | 320 | $\times 0.00820$ | 172 | -0000 | 0010 | 180 | 167 | 00713 | $\stackrel{ }{\text { ma }}$ | $\stackrel{14}{4}$ | $\cdots$ | Na |
| 3xamm | 5xam | Kom | = | $\stackrel{3}{3}$ | $\cdots$ | $\stackrel{ }{4}$ | m | $\stackrel{1}{4}$ | cotm | \%209 | . 0208 | $\ldots$ | Ven | ${ }^{18}$ is | cn | $\pm$ | 4 | \% | \% | ${ }_{\text {an }}$ | \#i | -6m | mi | $2 \pi$ | ${ }^{-20085}$ | 36 | $\cdots$ | m | $\pi$ | is | 0 amp | $m$ | $\cdots$ | $00^{\circ}$ | 12 |
| zastion | 62815 | HE | 187 | 0.25 | wa | 173 | neo | 074 | 20.0050 | .00080 | cocsso | c0.050 | 0010 | $10{ }^{0.306}$ | ${ }^{2014}$ | 0.0185 | 018 | -00080 | ${ }^{20}$ | 2090 | ${ }^{13}$ | ${ }^{20910}$ | mi | 274 | <00020 | 4 | . 5000 | .0010 | 29 | 14 | ${ }^{20008}$ | $n$ m | * 50 | 102 | 14 |
| sestrome | 82815 | HET | $\cdots$ | na | $\cdots$ | 4 | $\cdots$ | Na | $\cdots$ | $\cdots$ | Na | na | is | $\cdots$ NA | Na | 0.0007 | 0128 | couso | 277 | -6000 | $\cdots$ | c0010 | 157 | 297 | -00020 | 551 | .0050 | .080 | 78 | (1) | .080 | NA | Na | na | Na |
|  | com | cor | W | $\stackrel{1}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | $m$ | -018 | ${ }^{2} 0000$ | .001 | . 0 asen | .000 | .an | ${ }^{4} \times$ | 08 | $\square$ | Oen | Osor | $\stackrel{*}{*}$ | -081 | ${ }_{\text {mi }}$ | . 020 | ${ }_{\text {ma }}$ | 20 | . 0 mem | .100 | im | M | m | ix | 0 cm | m | \% 6 | $1 \times$ | \% 0 \% |
| 20.trase | O2015 | He | $\omega$ | $\stackrel{025}{ }$ | WA | 172 | 120 | ${ }^{6} 22$ | ¢00680 | -0aso | -0.050 | r0.050 | (017 | 210. 031 | -014 | 0.2 | 000 | -00050 | ${ }^{188}$ | -0040 | 2.4 | ¢0010 | ${ }^{23}$ | 21 | <0.0020 | 24 | -2000 | .0590 | ans | $1 \times 2$ | 20060 | ${ }_{50}$ | . 50 | 17 | 0604 |
| saspme | crans | -et | $\stackrel{3}{ }$ | $\underline{\mathrm{ma}}$ | $\stackrel{m}{ }$ | $\stackrel{3}{4}$ | $\stackrel{ }{ }$ | $\stackrel{1}{4}$ | $\cdots$ | ta | 4 | m | 1 m | $\stackrel{\mu}{4}$ | $\stackrel{ }{ }$ | ais | 9 m | . 00008 | $2{ }^{20}$ | -0040 | 218 | .0010 | m | 22 | cotcoza | $2{ }^{26}$ | .0050 | .0010 | ${ }^{251}$ | ${ }_{1} 13$ | 20000 | m | $\pm$ | $\cdots$ | m |
| $\pm$ mamman | $\pm$ | wa | 28500 | ${ }^{13}$ | ${ }_{57}$ | $x 4$ | 4100 | 49 | 0394 | 0008 | 0671 | 2037 | $\cdots$ | $\cdots$ | 29 | 0.2 | 574 | 0007 | 2258 | 812 | 32 | 0008 | 672 | 2 O | ${ }^{-2} \mathrm{CaO} 2$ | " | $2{ }^{2}$ | 2000 | 1580 | ${ }_{15}$ | ояв | ${ }^{13} 8$ | - 50 | 1580 |  |
| nemen. | 102003 | $\stackrel{r}{ }$ | \% | w/ | wn | "* | 500 | $250^{\circ}$ | 0.05 | 10 | ${ }^{\circ}$ | 10 | 015 | 15 | 0.15 | 001 | 20 | 0005 | Na | 0 | $0^{\circ}$ | s013 | wn | $0^{6}{ }^{\text {5 }}$ | \%oes | Na | 200 | 2094 | NA | Na | $\cdots$ | $\stackrel{\sim}{*}$ | Na | Samat |  |
|  |  |  |  | win |  |  |  |  | Ex |  |  |  |  |  |  |  |  | ram |  |  |  |  |  | ${ }_{\text {Nam }}$ |  |  |  |  |  |  |  |  |  |  |  |
| momos | 0 mo | + | 4 | 4 | cacio | comen | cnen | S2est | cncte | Sinctis | cieces | exicer |  | muate |  | mam |  | meapme. | Amater | зо䒑ди) | nommam |  | crovereme | suraiom | mornmene | smmama | paummamer | Cnvome | \%ater | Tomer | Fuorns | momprex | nomm | memam | Frma |
| menm |  |  | \% | $\stackrel{4}{4}$ | M | "m | $\stackrel{\square}{4}$ | 4 | $\cdots$ | 4 | " | $\cdots$ |  | $\cdots$ |  | mac |  | mact | mux |  | anc |  | ame |  | me |  | mack | $21500$ | szpoc | $\underset{\text { ax }}{ }$ | ${ }^{3 \times 2}$ | mme | amb |  | mach |
| sat(4xz) | เ\%15 | Her | $\frac{00}{0084}$ | $\frac{20050}{}$ | -20050 | $\cdots$ | ${ }^{-720}$ | $\frac{20}{20}$ | ${ }^{-014}$ | $\frac{\operatorname{cox}}{x+1}$ | $\frac{\pi x}{001 x}$ | $\frac{\pi x}{23 \mathrm{sec}}$ |  | $\frac{\pi}{m}$ |  | $\frac{\pi}{4 x}$ |  | $\frac{20}{4}$ | $\frac{\max }{\mathrm{Na}}$ |  | ${ }_{\text {Na }}$ |  | $\frac{m a x}{N a}$ |  | $\cdots$ |  | $\cdots$ | $\frac{x x}{x}$ | $\frac{x}{x}$ | $\frac{\mathrm{vx}}{\mathrm{x}}$ | $\frac{v x}{x}$ | $\frac{\mathrm{mat}}{\mathrm{mat}}$ | $\frac{x}{x}$ | $\frac{m x}{x}$ | $\cdots$ |
| 3entim) | ${ }_{6} 6$ | Her | 0.055 | 019 | 0,20 | -0.4 | 484 | . 0.1 | 0.014 | . 614 | . 014 | \%24 |  | m |  | Na |  | $\mu$ | ${ }_{\text {ke }}$ |  | m |  | "a |  | / |  | $\cdots$ | $\stackrel{1}{4}$ | is | $\stackrel{3}{4}$ | $\cdots$ | $\stackrel{1}{4}$ | $\stackrel{1}{4}$ | $\cdots$ | $\cdots$ |
| 3xateray | amins | нer | -000 | coss | cosso | -0,4 | . 54 | -014 | -014 | ¢0,14 | $\stackrel{014}{ }$ | -0,14 |  | m |  | 1 |  | $\mu$ | Na |  | m |  | NA |  | m |  | 1 | $\stackrel{\mu}{4}$ | N | $\stackrel{4}{4}$ | m | $\stackrel{\square}{4}$ | $\stackrel{M}{4}$ | m | m |
| sertamen | atmi | at | $\bigcirc$ | . 18 | cor | - | $\stackrel{814}{ }$ | . 014 | 1.04 | $0 \cdot 1$ | $\stackrel{\square}{14}$ | \%19 |  | $\cdots$ |  | ${ }^{\prime \prime}$ |  | $\stackrel{ }{n}$ | $\cdots$ |  | $\cdots$ |  | $\stackrel{ }{ }$ |  | $\stackrel{4}{4}$ |  | m | $\mu$ | $\stackrel{ }{s}$ | $\cdots$ | $\stackrel{m}{ }$ | na | $\stackrel{m}{ }$ | $\stackrel{4}{4}$ | $\stackrel{\square}{4}$ |
| semaman | vans | net | . 013 | . 018 | . 179 | . 64 | . 54 | . 014 | . 64 | .016 | . 614 | . 241 |  | m |  | $\cdots$ |  | $\cdots$ | $\stackrel{m}{ }$ |  | na |  | $\stackrel{s}{ }$ |  | $\cdots$ |  | $\mu$ | $\stackrel{1}{4}$ | $\stackrel{M}{4}$ | $\stackrel{1}{4}$ | $\stackrel{\pi}{ }$ | $m$ | $\stackrel{ }{*}$ | m | $\pm$ |
| tastosm | \%at1 | ter | . 013 | . 615 | . 0.18 | . 04 | - 34 | .04 | . 2.4 | . 8.4 | . 04 | . 214 |  | 4 |  | $\cdots$ |  | $\stackrel{m}{ }$ | m |  | $\stackrel{4}{4}$ |  | $\cdots$ |  | $\mu$ |  | $\cdots$ | $\mu$ | \% | $\stackrel{\pi}{4}$ | NA | na | ma | na | Na |
| saxpato | \%ans | ${ }^{\text {at }}$ | -617 | ${ }^{2} 813$ | (07) | 13.4 | . 014 | -0,4 | .04 | :24.4 | - 04 | 2814 |  | M |  | ${ }^{14}$ |  | ${ }_{4}$ | M |  | M |  | 4 |  | 4 |  | $\cdots$ | $\stackrel{3}{4}$ | ma | M | 4 | Na | $\mu$ | $\cdots$ | m |
| 3 | me | am | ass | an | 910 | . 014 | 0 m | . 04 | . 94 | \% 1 \% | ¢, 14 | 038 |  | $\cdots$ |  | Na |  | $4 \times$ | $\cdots$ |  | ta |  | m |  | a |  | $\cdots$ | $\checkmark$ | N* | Na | $m$ | NA | N/A | Na | wa |
| Seas. | 102008 | Na | 32 | 015 | 015 | 0.15 | 015 | 0,5 | 015 | 015 | 73 | 0,15 |  | 00002 |  | 0007 |  | $\bigcirc$ | 0043 |  | 0078 |  | 80002 |  | 064 |  | 00025 | Oemer | Oors | \% | 024 | 0037 | 001 | 014 | 801 |

## 


NAn paia werns sithes



| Geotechnical Analytical Summary Table <br> State of Louisiana and the Iberville Parish School Board vs. BP America Production Company, et al. <br> Section 16, Township 10 South, Range 11 East <br> Iberville Parish, Louisiana <br> HET Project No. 4651.39 <br> Table 3 <br> Page 1 of 1 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample I.D. | Sample Depth (ft) | Description | Atterberg Limits |  |  | Water Content (\%) | Dry Density (pcf) | Organic Matter (\%) | Coefficient of Permeability ( $\mathrm{cm} / \mathrm{sec}$ ) |
|  |  |  | LL | PL | PI |  |  |  |  |
| DB1 | 26-28 | Gray clay (CH) with trace of organics | 84 | 23 | 61 | 49.4 | 74.1 | 10.6 | $4.0 \times 10^{-8}$ |
| DB1 | 46-48 | Gray clay (CH) with trace of organics | 104 | 31 | 73 | 46.4 | 55.8 | 11.3 | $5.4 \times 10^{-8}$ |
| DB1 | 56-58 | Gray clay (CH) with trace of organics | 84 | 32 | 52 | 41.0 | 75.5 | 10.2 | $1.4 \times 10^{-7}$ |

LL - Liquid Limit
PL - Plastic Limit
PI - Plasticity Index
pcf - Pound per Cubic Foot

## Monitor Well Construction and Sampling Data

State of Louisiana and the Iberville Parish School Board vs. BP America Production Company, et al. Section 16, Township 10 South, Range 11 East

Iberville Parish, Louisiana
HET Project No. 4651.39

Table 4
Page 1 of 1

| Monitoring Well <br> I. D. Number | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Well Type | Monitor | Monitor | Monitor | Monitor | Monitor | Monitor |
| Casing Material | PVC | PVC | PVC | PVC | PVC | PVC |
| Casing Diameter (Inches) | 1 | 1 | 1 | 1 | 1 | 1 |
| Development Method | Geo Pump | Geo Pump | Geo Pump | Geo Pump | Geo Pump | Geo Pump |
| Elevation of Natural Ground (Feet) | 6.72 | 5.35 | 5.04 | 2.25 | 2.09 | 2.12 |
| Top of Casing <br> Elevation (feet) | 9.93 | 8.64 | 8.02 | 4.90 | 5.13 | 5.32 |
| Stickup (feet) | 3.21 | 3.29 | 2.98 | 2.65 | 3.04 | 3.20 |
| Depth to Water (October 13, 2015) | 9.01 | 7.98 | 7.45 | 5.14 | 5.41 | 5.34 |
| Water Elevation (NGVD) (October 13, 2015) | 0.92 | 0.66 | 0.57 | -0.24 | -0.28 | -0.02 |
| Latitude | 30.19891273 | 30.19850537 | 30.19841434 | 30.19835578 | 30.19784176 | 30.19750482 |
| Longitude | -91.34288445 | -91.34330173 | -91.34322762 | -91.34269324 | -91.34268760 | -91.34306390 |
| Lat / Long Method | Survey | Survey | Survey | Survey | Survey | Survey |
| Date Completed | 9/30/15 | 9/30/15 | 9/30/15 | 10/1/15 | 10/1/15 | 10/1/15 |
| Well Depth (feet below TOC) | 27.20 | 23.41 | 24.00 | 18.58 | 17.83 | 20.17 |
| Well Depth (Feet below land surface) | 23.99 | 20.12 | 21.02 | 15.93 | 14.79 | 16.97 |
| Sampling Data: |  |  |  |  |  |  |
| Sample Date | 10/8/15 | 10/8/15 | 10/7/15 | 10/6/15 | 10/6/15 | 10/6/15 |
| Gallons Purged / Dry | 0.75/3x | 3.0 / 2 X | 0.75 / 7X | 0.5 / 7X | 5.0 / 1X | 5.5 / 0X |
| Sampling Frequency | Once | Once | Once | Once | Once | Once |
| Free Product Elevations | N/A | N/A | N/A | N/A | N/A | N/A |
| Comments | N/A | N/A | N/A | N/A | N/A | N/A |
| Field Parameter Data: |  |  |  |  |  |  |
| pH (Initial) - Standard Units | 6.40 | 5.68 | 5.37 | 5.61 | 5.78 | 6.00 |
| pH (Final) - Standard Units | 6.40 | 6.10 | 5.61 | 5.85 | 5.79 | 5.74 |
| Turbidity (Initial) - NTU | 65.5 | NA | 206 | N/A | 9.17 | NA |
| Turbidity (Final) - NTU | N/A | 393 | N/A | 35.2 | 0.73 | NA |
| ORP (Initial) | 129.2 | 108.6 | 7.9 | 32.1 | 22.2 | 13.60 |
| ORP (Final) | 89.0 | 37.2 | -32.8 | 22.8 | -44.5 | -54.30 |
| Temperature (Initial) - ${ }^{\circ} \mathrm{C}$ | 24.3 | 23.0 | 23.4 | 23.6 | 22.8 | 21.70 |
| Temperature (Final) - ${ }^{\circ} \mathrm{C}$ | 25.9 | 23.0 | 24.3 | 24.7 | 22.1 | 21.00 |
| Specific Conductance (Initial) - ms/cm | 7.61 | 68.5 | 70.9 | 12.58 | 29.55 | 30.16 |
| Specific Conductance (Final) - ms/cm | 7.57 | 69.2 | 71.4 | 13.59 | 29.22 | 30.39 |



| Soil Analytical Summary - HET Investigation <br> Slare of Louisiana and the lberville Parish School Board vs BP America Production Company, et al Section IE, Township 10 South, Range 11 Eas! <br> HETVille Parish, Louisiana <br> HET Project No, 465139 <br> Table 5 Page 2044 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sempa ion | sompe | Sempter | Sand |  |  |  |  |  |  |  |  |  |  |  |  |  | Hymorotreons |  |  |  | Usab |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | \%m | comb | sime | stomso | $E$ | E 0 | s, 8 | cemo | wrum | nen | solum | cec |  | surato | (tactiol |  |  | orsomum | Trame | Smine |  | Ther rowe | sLe | Tount |  | ${ }_{\text {chem }}^{\text {shermim }}$ | cour | averup | Sentum | Sher | Sout | ${ }_{\text {ract }}^{\substack{\text { rauc }}}$ | $\checkmark$ | $\mid$ | mostur |  |
|  |  |  | 3 | ${ }^{2} \mathrm{man}$ | mo | max | ${ }^{300}$ | m | 301 | 30 | 30 | 3 | 183 | 30 | 30 | км\% | trase | mase | mima | 30 | \%na | 17 | 20x | 30 | \% | 0 | Emaz | 137 | crso | Toth | Nsing | सात्व | cive | Nimo | 38 | 3 | Hem | vativ |
|  |  |  | mant | mot | mat | mokg | $\cdots$ | * | m/ | maca | max | meaz | mph | me94100 | mana | meaz | mok ${ }_{\text {g }}$ | $m_{2 \times 1}$ | $\max _{8}$ | * | $m_{2} \chi_{\theta}$ | mon | m\%kg | m\%* | mal | $\max _{0}$ | makg | mar | mok ${ }^{\text {a }}$ | mex。 | moxa | momo | mexa | moxd | $\times$ | * | $\checkmark$ | * |
| 200 | 350 | 5 | 4 | $\stackrel{\square}{4}$ | $\stackrel{ }{4}$ | $\cdots$ | 34 | ${ }^{\text {sa }}$ | $\stackrel{3}{ }$ | \# | ${ }^{3} 4$ | $4{ }^{4}$ | $\cdots$ | ${ }^{31}$ | $\stackrel{3}{4}$ | , 17 | $\stackrel{\square}{*}$ | $\stackrel{\square}{4}$ | $\stackrel{*}{*}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{M}{4}$ | $\cdots$ | $\cdots$ | $\cdots$ | - | $\stackrel{\square}{\square}$ | $\because$ | $\stackrel{ }{M}$ | $\cdots$ | $\stackrel{\square}{4}$ | ${ }^{\text {nt. }}$ | $\cdots$ | m. | $\stackrel{\square}{-}$ |
| ${ }_{\text {chase }}$ | \%ema | - 7 | $\stackrel{\square}{4}$ | \% | $\cdots$ | $\cdots$ | ${ }^{14}$ | \% | $\stackrel{1}{4}$ | $\stackrel{\square}{4}$ | $\because$ | $\stackrel{\square}{ }$ | $\stackrel{\square}{4}$ | $\cdots$ | 18 | ${ }_{21} 11$ | m | $\cdots$ | $\stackrel{-}{4}$ | $\stackrel{-}{-}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{3}{2}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{-}{4}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{4}{480}$ | $\stackrel{1}{4}$ | $=$ | $\cdots$ | $\cdots$ | ${ }^{\text {a }}$ | $\cdots$ |
| Urime | masa | 5 | $\stackrel{\text { H }}{\sim}$ | $\stackrel{\square}{\text { za }}$ | $\stackrel{1}{4}$ | $\cdots$ | n | $\cdots$ | $\stackrel{\square}{4}$ | $\stackrel{4}{4}$ | \% | \% | $\stackrel{\square}{\square}$ | $\stackrel{3}{4}$ | $\stackrel{11}{3}$ | $\frac{\mathrm{in}}{}$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{*}$ | $\stackrel{4}{4}$ | $\pm$ | $\cdots$ | $\cdots$ | ${ }_{3}^{24}$ | $\stackrel{3}{12}$ | $\stackrel{\square}{m}$ | \% | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{4}{14}$ | ${ }_{\text {max }}$ | 9ill | 4 | $\stackrel{3}{n+}$ | ${ }^{13}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{\text { c }}$ | $\stackrel{3}{3}$ | $\stackrel{ }{*}$ |
| Wher | \%sm | ca | $\stackrel{\square}{\square}$ | $\underline{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{m}{ }$ | $\stackrel{1}{4}$ | ar | 31 | $\pm$ | $\square$ | a | - | $\cdots$ | $\stackrel{4}{4}$ | $\cdots$ | m | m | 30 | $\pm$ | \% | $\stackrel{ }{*}$ | 3 | 2 | m | 4 | $\pm$ | $\stackrel{\square}{-}$ | $\cdots$ | a | \% | m | $\cdots$ | $\cdots$ | $m$ | $\cdots$ | $\pm$ | $\cdots$ |
| vase | max | $\leq$ | $\pm$ | ne | $\stackrel{m}{ }$ | " | ${ }^{\text {a }}$ | $\cdots$ | $\stackrel{\square}{4}$ | \% | $\stackrel{1}{2}$ | m | $\stackrel{\square}{4}$ | $\cdots$ | , | $\stackrel{3}{4}$ | , |  |  | ~ | $4 \times$ | " | 3 | $\pm$ | $\cdots$ | *30 | $\cdots$ | - | 43 | пй | $4=$ | 48 | $=$ | $\cdots$ | 4 | ${ }^{4}$ | $\stackrel{1}{4}$ | $\stackrel{ }{ }$ |
| \%mem | -man | an | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{m}{4}$ | $\stackrel{ }{*}$ | ${ }_{31}$ | $\cdots$ | ${ }_{\sim}^{\circ}$ | \% | $\stackrel{\square}{10}$ | $\ldots$ | $\stackrel{-}{\square}$ | $\stackrel{1}{*}$ | m | m | $\stackrel{\square}{m}$ | $\stackrel{m}{m}$ | $\cdots$ | $\stackrel{\square}{2}$ | $\cdots$ | $\stackrel{ }{4}$ | ${ }_{\text {a }}^{m}$ | 3 | $\stackrel{m}{m}$ | al | 4. | " | $\ldots$ | $\stackrel{\text { con }}{ }$ | 4 | \% | $\pm$ | $\stackrel{1}{4}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | \# | $\stackrel{\square}{4}$ |
| Wan | max | ${ }_{\text {c }}$ | $\stackrel{\square}{*}$ | " | $\stackrel{m}{\text { m }}$ | $\cdots$ | ${ }^{2}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{\text { a }}$ | $\stackrel{\square}{4}$ | $\cdots$ | ] | $\stackrel{\square}{2}$ | 4 | $\underline{ }$ | $\cdots$ | m | $\stackrel{\square}{4}$ | $\square$ | - | $\frac{2 m}{2 m}$ | m | ${ }^{27}$ | ${ }^{3}$ | $\cdots$ | 4 | 4 |  | $\ldots$ | \% | a | 4 | $\square$ |  | $\cdots$ | $\cdots$ | 4 | $\cdots$ |
| 3 ncosy | max | $\stackrel{0}{0}$ | $\stackrel{m}{10}$ | 9 | $\pm$ | $\cdots$ | $\stackrel{\square}{\square}$ | - | $\stackrel{\square}{4}$ | $\stackrel{m}{4}$ | $\stackrel{\square}{\square}$ | ${ }^{3}$ | $\stackrel{1}{4}$ | $\cdots$ | ${ }^{1}$ | ${ }^{30}$ | $\cdots$ | $\cdots$ | $\cdots$ | $=$ | ${ }^{1 / 2}$ | - | $\stackrel{n}{17}$ | $\stackrel{3}{17}$ | $\stackrel{m}{4}$ | $\mathrm{un}^{\text {un }}$ | $\stackrel{\square}{7}$ | $\stackrel{\square}{\square}$ | $\stackrel{14}{4}$ | uma | $\stackrel{4}{4}$ | $\stackrel{3}{4}$ | $\stackrel{1}{4}$ | $\stackrel{3}{1.1}$ | $\stackrel{.}{ }$ | $\stackrel{\square}{\square}$ | ${ }_{4}$ | $\stackrel{\square}{4}$ |
| ${ }^{\text {Ham }}$ | - ma | cos | $\stackrel{ }{*}$ | - | $\stackrel{ }{4}$ | - | $\stackrel{31}{4}$ | $\cdots$ | $\stackrel{\text { nir }}{ }$ | 4 | 1. | 0 | - | 4 | $\stackrel{+}{4}$ | $\stackrel{4}{4}$ | $\stackrel{3}{4}$ | $\cdots$ | - | - | in | $\cdots$ | ${ }^{3}$ | $\stackrel{\square}{2}$ | $\stackrel{m}{m}$ | ${ }_{43}{ }^{29}$ | ${ }_{4}$ | $\stackrel{\square}{4}$ | ${ }^{\prime \prime}$ | \% | $\cdots$ | - | 3 | $\stackrel{\text { m }}{\square}$ | m | $\stackrel{-}{10}$ | $\frac{1}{x}$ | $\stackrel{ }{4}$ |
| 3 | ${ }_{\text {maxas }}$ | $\stackrel{0}{0}$ | ${ }_{\text {at }}$ | $\stackrel{m}{\text { ma }}$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{\text { a }}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\stackrel{3}{4}$ | $\stackrel{3}{13}$ | \% | $\stackrel{\square}{4}$ | $\cdots$ | $\frac{11}{31}$ | ${ }^{14}$ | $\stackrel{\sim}{*}$ | $\stackrel{3}{4}$ | \% | $\cdots$ | $\stackrel{19}{4}$ | " | $\cdots$ | $\stackrel{1}{4}$ | $\stackrel{-}{4}$ | 4 | 4 | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{1}{4}$ | $\cdots$ | \% | \% | H: | $\stackrel{\square}{4}$ |
| Hame | 2an | ca | $\cdots$ | $\underline{=}$ | m | $\cdots$ | ${ }^{\text {II }}$ | $\cdots$ | $\stackrel{3}{4}$ | $:$ | $=$ | 6 | m | 18 | $\underline{ }$ | $\stackrel{ }{4}$ | $\stackrel{\square}{5}$ | $\stackrel{ }{2}$ | $\cdots$ | = | ${ }_{\text {\# }}$ | $\cdots$ | $\cdots$ | mis | m | 4 | 4. | $=$ | $\square$ | 45 | \% | m | $\Rightarrow$ | x | $\cdots$ | $\cdots$ | \# | $\stackrel{ }{4}$ |
| \#ma | 5am | Tr | $\pm$ | $\stackrel{ }{\prime \prime}$ | $m$ | $\cdots$ | 34 | - | $\omega$ | $\omega$ | 13 | 73 | - | 4 | $\stackrel{3}{4}$ | 31 | $\cdots$ | - | $\stackrel{4}{4}$ | $\square$ | $\cdots$ | m | $\stackrel{ }{*}$ | - | $\cdots$ | $\cdots$ | $\stackrel{ }{4}$ | $\stackrel{\sim}{4}$ | $\cdots$ | $\cdots$ | m | m | $\stackrel{\sim}{4}$ | $\stackrel{ }{*}$ | \# | $\square$ | $\pm 3$ | " |
| \%me | тam | $\cdots$ | $\because$ | 4 | $\cdots$ | $\stackrel{ }{*}$ | $\stackrel{4}{ }$ | 4 | ${ }^{3}$ | 4 | 12 | $\stackrel{7}{ }$ | $\stackrel{\sim}{4}$ | $2 \cdot$ | ${ }^{2}$ | is | $\stackrel{ }{*}$ | $\stackrel{ }{*}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{ }{\mu}$ | $\mu$ | ${ }^{\prime}$ | $\sim$ | $\stackrel{1}{4}$ | $\stackrel{4}{4}$ | $\sim$ | $\cdots$ | $\cdots$ | $\stackrel{ }{4}$ | $\cdots$ | $\cdots$ | ${ }^{2}$ | ${ }^{\text {in }}$ | 4. | $\cdots$ |
| mas | max | $4{ }^{4}$ | ¢ | 3 | $\stackrel{\square}{*}$ | $\cdots$ | 3 | 3 | $\stackrel{\square}{4}$ | 43 | $\because$ | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | , | ${ }^{\text {s* }}$ | $\cdots$ | 98 | 4 cs | $\stackrel{3}{ }$ | 9x | $\cdots$ | \% | מי | $\stackrel{\sim}{*}$ | .540 | $\stackrel{\square}{ }$ | $\cdots$ | ur | cam | $\stackrel{\square}{\text { a }}$ | $\because$ | \% | $\stackrel{\square}{0}$ | $\stackrel{r}{ }$ | t | ${ }^{12}$ | $\cdots$ |
| 438 | max | ${ }^{\text {max }}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{\square}$ | \# | $\stackrel{1}{\square}$ | ${ }^{3}$ | ${ }_{\text {m }}$ | $\cdots$ | $\pm 3$ | ${ }^{3}$ | - | $\ldots$ | $\stackrel{m}{4}$ | $\stackrel{\sim}{4}$ | $\stackrel{-}{\square}$ | 4 | $\pm$ | 5 | ${ }^{23}$ | $\stackrel{\square}{*}$ | ${ }_{\text {nim }}$ | $\stackrel{\square}{\text { m }}$ | $\cdots$ | 4318. | $\frac{\text { mit }}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | tanm | 9 O | $\stackrel{\mu}{4}$ | ${ }_{\text {m }}$ | ${ }^{\prime \prime}$ | $\cdots$ | $\stackrel{\square}{*}$ | ${ }_{\text {m. }}$ | $\stackrel{\square}{\square}$ |
| \%mer | mam | cr | $\stackrel{*}{*}$ | - | " | " | * | ai | $\stackrel{1}{4}$ | \% | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{1}{7}$ | $\stackrel{4}{4}$ | \% | $\stackrel{\text { \% }}{ }$ |  | a | $\stackrel{3}{4}$ | $\stackrel{4 x}{\text { a }}$ | $\cdots$ | ${ }^{19}$ | $\stackrel{1}{31}$ | $\stackrel{4}{4}$ | 4 | $\stackrel{\square}{14}$ | $\cdots$ | 4 | 71 | ${ }_{8}$ | $\cdots$ | $\stackrel{\square}{14}$ | \% | $\cdots$ | ${ }^{\prime}$ | $\stackrel{1}{12}$ | $\cdots$ |
| "189 |  |  | \% | (19x | $=$ | $\cdots$ | $\stackrel{1}{4}$ | $\cdots$ | $\cdots$ | ma | 3 | $=$ | 4 | $\cdots$ | д | ter | $\stackrel{\square}{\sim}$ | - | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | $\cdots$ | - | - | \% | - | $\cdots$ | $\cdots$ |  |  | - | - | $\ldots$. | ta | $\square$ |  |
| \%an | mam | con | - | - | m | $\stackrel{4}{4}$ | $\cdots$ | ${ }_{\text {an }}$ | " | ${ }_{4}$ | ${ }^{\text {ax }}$ | ${ }_{50}$ | - | $\square$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{*}$ | $\underline{\sim}$ | $\stackrel{4}{4}$ | $\cdots$ | $\stackrel{\square}{0}$ | m | $\cdots$ | $\cdots$ | $\stackrel{-}{-}$ | in | ${ }^{4}$ | $\cdots$ | $\stackrel{4}{4}$ | * | $\stackrel{\sim}{4}$ | $\stackrel{ }{2}$ | $\cdots$ | ${ }^{\text {s. }}$ | $\stackrel{\square}{4}$ | - | $\cdots$ | m |
| \%ave | таи | ${ }_{5}$ | m | $\cdots$ | " | $\ddot{\sim}$ | $\stackrel{n}{4}$ | = | $\stackrel{\text { an }}{\text { and }}$ | $\frac{\mathrm{min}}{21}$ | $\stackrel{10}{17}$ | $\stackrel{\text { 팔 }}{ }$ | $\cdots$ | $\cdots$ | $\frac{23}{M}$ | $\stackrel{18}{4}$ | $\stackrel{\square}{\square}$ | - | $\stackrel{\square}{*}$ | $\cdots$ | ${ }^{29}$ | $\cdots$ | $\stackrel{10}{9}$ | $\stackrel{3}{3}$ | $\stackrel{\square}{\square}$ | ${ }^{\text {a }}$ | $\stackrel{17}{72}$ | $\cdots$ | $\stackrel{17}{\square 7}$ | mav | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{4}$ | \# | $\stackrel{3}{3}$ | $\pm$ | $\frac{12 .}{4 .}$ | $\cdots$ |
| \%amer | $\pm$ | $\stackrel{\square}{4}$ | $\frac{\square}{\text { mi }}$ | $\ldots$ | $\stackrel{\square}{4}$ | $\stackrel{\mu}{\mu}$ | $\stackrel{1}{4}$ | $\stackrel{\sim}{4}$ | ${ }_{4}$ | $\frac{11}{31}$ | $\cdots$ | ${ }_{\text {a }}$ m | 3 | $\stackrel{\text { ar }}{\text { m }}$ | $\stackrel{m}{4}$ | $\stackrel{m}{4}$ | $\stackrel{\square}{*}$ | $\underline{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{\sim}{4}$ | $\stackrel{4}{4}$ | $\cdots$ | ${ }_{0}$ | 319 | - | \% | 4 | $\cdots$ | .1. | \%omm | ate | \% | ${ }^{\text {E, }}$ | - | e. | $\pm$ | \#1 | $\stackrel{m}{\square}$ |
| 38050 | "mas | $\cdots$ | = | wn | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | ${ }^{3}$ | $\stackrel{4}{4}$ | ${ }^{3}$ | ${ }^{3}$ | $\cdots$ | $\stackrel{\square}{4}$ | \% | $\because$ | $\cdots$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | * | $\sim$ | $\cdots$ | $\cdots$ | - | $\stackrel{5}{ }$ | 2 | $\cdots$ | 4 | \%mia | 4 | 478 | ${ }^{3}$ | $\stackrel{1}{4}$ | $\cdots$ | 19 | H2 | $\square$ |
| *20 | max | 4 | min | :17 | $\cdots$ | $\cdots$ | ${ }^{14}$ | 1 | ${ }^{\text {a }}$ | t/ | 13 | 3.2 | $\cdots$ | $\ldots$ | . | 19 | $\stackrel{\sim}{4}$ | - | $\cdots$ | - | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | \% | \% | ${ }^{\text {w }}$ | $\stackrel{ }{ }$ |
| ${ }_{\text {mas }}^{103}$ |  | $\stackrel{4}{\square}$ | $\stackrel{4}{4}$ | $\stackrel{\square}{10}$ | $\cdots$ | $\cdots$ | $\stackrel{\text { in }}{\text { in }}$ | $\cdots$ | $\stackrel{\square}{*}$ | . ${ }^{\text {m }}$ | $\stackrel{17}{8}$ | $\stackrel{\square}{*}$ | $\cdots$ | ${ }^{3}$ | $\stackrel{\square}{2}$ | 4 | $\stackrel{\square}{*}$ | $\cdots$ | $\stackrel{\square}{*}$ | $\cdots$ | $\cdots$ | $\stackrel{ }{*}$ | $\stackrel{\sim}{4}$ | $\stackrel{\sim}{*}$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{\sim}$ | $\cdots$ | $\stackrel{ }{*}$ | $\stackrel{ }{*}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{19}$ | \% | $\stackrel{3}{3}$ | $\stackrel{\square}{\square}$ |
| \%as | mina | Nt | $\cdots$ | = | $\cdots$ | $\cdots$ | $\sim$ | - | $\cdots$ | * | " | - | $\cdots$ | - | $\cdots$ | m | $\stackrel{ }{ }$ | 98 |  | 4 a | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{ }{4}$ | $\cdots$ | $\mathrm{m}^{\text {m }}$ | $\sim$ | \% | $\cdots$ | $\cdots$ | $\cdots$ | - | m | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | \% | m |
| mas | man | ${ }_{5}$ | $\pm$ | $\stackrel{ }{\sim}$ | = | $\cdots$ | ${ }^{10}$ | - | ${ }^{*}$ | 30 | $\stackrel{4}{4}$ | 3 | $\sim$ | m | $\stackrel{4}{4}$ | 4 | $\stackrel{3}{4}$ | - | $\underline{\sim}$ | $=$ | m | $\stackrel{\sim}{4}$ | $\stackrel{\sim}{*}$ | \% | ${ }^{14}$ | 3 | $\cdots$ | $\stackrel{\square}{2}$ | 40 | \% | $\stackrel{\square}{\square}$ | $\cdots$ | * | $\stackrel{7}{ }$ | $=$ | $\stackrel{\square}{\square}$ | $\pm$ | m |
| $\cdots$ | ${ }^{\text {manay }}$ | $\stackrel{\sim}{c}$ | ${ }^{\text {ma }}$ |  | $\stackrel{\square}{=}$ | - | $\stackrel{\square}{2}$ | = | $\stackrel{\square}{3}$ | $\pm$ | ${ }_{4}$ | $\stackrel{\square}{\text { a }}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{\text { ar }}$ | $\stackrel{3}{4}$ | $\stackrel{m}{4}$ | $\stackrel{\sim}{4}$ | $\cdots$ | \# | $\stackrel{\square}{*}$ | $\stackrel{12}{4}$ | " | * | $\stackrel{3}{17}$ | $\stackrel{\square}{\text { m }}$ | $\stackrel{\text { in }}{\text { in }}$ | $\stackrel{0}{1}$ | $\cdots$ | $\stackrel{+1}{*}$ | ${ }^{\text {nexpr }}$ | $\stackrel{\text { am }}{4}$ | $\stackrel{\text { cas }}{4}$ | $\cdots$ | $\stackrel{\square}{\text { a }}$ | $\stackrel{\square}{*}$ | $\stackrel{10}{m}$ | \#. | $\stackrel{\square}{4}$ |
| $\cdots$ | mam | 5 | m | \#na | \% | $\cdots$ | 3 | $\cdots$ | $\cdots$ | $\cdots$ | a) | * | स11 | $\stackrel{\square}{4}$ | 1 | 11 | $\stackrel{ }{*}$ | = | $\stackrel{\square}{4}$ | $\cdots$ | 30 | $\stackrel{\sim}{4}$ | ${ }_{3}$ | $\cdots$ | $\cdots$ | 5 co | \%iin | $\cdots$ | 13 | \%emem |  | 380 | a) | 31 | \% | $\stackrel{1}{4}$ | 17 | $\stackrel{\square}{4}$ |
| 38034 | 1sa | con | $\cdots$ | $\sim$ | 플 | $\stackrel{\sim}{\sim}$ | \# | a) | ${ }^{\text {mi }}$ | 9 | ${ }_{3}$ | ${ }_{\text {ma }}$ | $\cdots$ | 12 | - | m | m | - | $\stackrel{\square}{2}$ | $\stackrel{-}{2}$ | \% | \% | 피 | 표 | " | $\square$ | $\stackrel{1}{4}$ | $\stackrel{\square}{4}$ | 19 | 43 | $\cdots$ | $\cdots$ | ${ }^{\text {m }}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\pm$ | - |
| ngater | \%asa | -n | ${ }^{34}$ | 4 | - | $\stackrel{\square}{4}$ | ${ }^{\text {at }}$. | $\cdots$ | $\cdots$ | a. | $\pm$ | n | m | $\cdots$ | 4 | 18 | $\stackrel{\sim}{4}$ | $\stackrel{\sim}{2}$ | $\cdots$ | $\because$ | $\stackrel{4}{4}$ | $\stackrel{ }{*}$ | ${ }^{3}$ | = | $\stackrel{m}{ }$ | 88 | 3 | $\cdots$ | \% | emm. | 13 | 48 | 2 | ai | \% | 7 | 4 | 4 |
| mase | some | cet | ... | \% | $\stackrel{\square}{*}$ | $\stackrel{\sim}{4}$ | ${ }^{\prime \prime}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\ldots$ | 1.4 | \% | $\cdots$ | m | $\stackrel{\square}{\square}$ | $\frac{10}{\mathrm{~m}}$ | $\stackrel{\square}{\text { m }}$ | $\cdots$ | $\stackrel{4}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | $\stackrel{\sim}{\text { m }}$ | $\stackrel{\sim}{2 m}$ | $\stackrel{m}{m}$ | - | * | $\stackrel{\square}{*}$ | 4 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | n | ${ }^{3}$ | $\because$ |
|  | 0 max | $\stackrel{\text { col }}{ }$ | $\stackrel{4}{4 .}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{\square}$ | $\stackrel{\sim}{\sim}$ | ${ }_{\text {c }}$ | ${ }^{\text {H }}$ | $\stackrel{14}{24}$ | $\ldots$ | 4 | $\cdots$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{\square}$ | $\frac{m}{2}$ | $\stackrel{\text { an }}{ }$ | m | $\stackrel{m}{m}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{2}$ | $\stackrel{\square}{4}$ | $\stackrel{m}{m}$ | $\stackrel{\text { IIr }}{\sim}$ | $\stackrel{3}{\sim}$ | $\stackrel{m}{m}$ | ${ }^{2}$ | $\stackrel{3}{2}$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\cdots$ | $\stackrel{.}{ }$ | $\stackrel{ }{\sim}$ | $\ldots$ | $\cdots$ | $\stackrel{\square}{1}$ | $\stackrel{\square}{1}$ | $\stackrel{\square}{8}$ |  |
| $\rightarrow$ - | 3 cam | $\cdots$ | $\div$ | 3 m | $\cdots$ | $\cdots$ | $\cdots$ | , | $\cdots$ | 4. | $4{ }^{\prime \prime}$ | wt | $\cdots$ | = | 12 | 0 | $\stackrel{ }{*}$ | $\square$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{-}$ | \% | $\cdots$ | "', | 13 | ${ }^{\text {m }}$ | 5 m | \% | $\stackrel{\square}{4}$ | : | \%mer | im | 480 | \#. | 4 | $\cdots$ | 14 | $\cdots$ | $\stackrel{ }{\square}$ |
| 4 | 5 \%am | $\cdots$ | HR | = | $\cdots$ | $\stackrel{\square}{4}$ | $\stackrel{4}{4}$ | $\cdots$ | $\stackrel{1}{4}$ | ${ }^{\text {ma }}$ | 4. | ${ }^{42}$ | $\stackrel{ }{4}$ | 9 | $\stackrel{\square}{4}$ | 12 | $\stackrel{\square}{2}$ | - | $\stackrel{\sim}{*}$ | - | 48 | $\stackrel{\sim}{*}$ | ${ }^{\text {ma }}$ | $\cdots$ | $\stackrel{ }{2}$ | - | $\cdots$ | $\cdots$ | 1 | , | 9u | $1{ }^{10}$ | $\stackrel{1}{4}$ | ${ }^{41}$ | 19 | $\stackrel{10}{ }$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{\square}$ |
| $\xrightarrow{\text { maxate }}$ | ${ }_{\text {mans }}$ | - | $\cdots$ | $\cdots$ | 30 | $\cdots$ | $\stackrel{n}{\text { ma }}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{1}$ | \# | $\cdots$ | $\stackrel{\square}{\text { ma }}$ | $\stackrel{\square}{*}$ | $\stackrel{3}{18}$ | $\stackrel{14}{13}$ | $\cdots$ | m | $\stackrel{\sim}{*}$ | $\cdots$ | $\frac{13}{19}$ | $\stackrel{\square}{3}$ | $\stackrel{3}{\square}$ | $\stackrel{3}{30}$ | $\cdots$ |  | $\stackrel{4}{*}$ | $\stackrel{\square}{\sim}$ | $\stackrel{\square}{14}$ | \%ane | ${ }^{\circ}+$ | 458 | $\underset{x}{31}$ | $\frac{4}{4}$ | $\stackrel{\square}{\text { ei }}$ | is | $\cdots$ | $\stackrel{\square}{\square}$ |
| minsie | 5xa | cm | $\stackrel{\sim}{\square}$ | $\stackrel{ }{\sim}$ | 15 | $\stackrel{\sim}{\sim}$ | $\pm$ | ${ }^{\text {m }}$ | "1 | $\stackrel{ }{*}$ | $\cdots$ | $\square$ | $\cdots$ | 3 | m | m | $\stackrel{m}{4}$ | $\stackrel{ }{\sim}$ | $\cdots$ | $\cdots$ | 19 | $\cdots$ | = | = | $\stackrel{1}{4}$ | *i | $\square$ | $\cdots$ | 4 | An | 5 | $\cdots$ | $\stackrel{1}{4}$ | $\cdots$ | $\cdots$ | $\underline{ }$ | \#. | $\stackrel{\square}{4}$ |
| meato | mas | ${ }_{5}$ | ${ }^{\text {tib }}$ | m | $\stackrel{\square}{4}$ | m | $\because$ | $\stackrel{\sim}{4}$ | $\cdots$ | =1 | מi | ${ }_{3}$ | $\cdots$ | $\cdots$ | 2 | 18 | $\cdots$ | - | $\cdots$ | $\cdots$ | $\cdots$ | 48 | 4 | 3 | " | cis | 14 | $\stackrel{\mu}{\mu}$ | : | cosm | \%m | 4 as | 4. | a | $\underline{4}$ | 13 | \#1 | $\cdots$ |
| - | -3001 | $\stackrel{\text { ct }}{ }$ | $\cdots$ | $\stackrel{\text { ı }}{ }$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{\text { If }}{\text { IT }}$ | $\cdots$ | 플 | m | $\stackrel{\text { ? }}{\text { in }}$ | i | $\stackrel{\sim}{4}$ | $\cdots$ | $\stackrel{\text { \% }}{-}$ | $\stackrel{1 m}{\text { m }}$ | $\stackrel{\square}{*}$ | $\cdots$ | $\stackrel{\sim}{4}$ | $\cdots$ | $\stackrel{4}{4}$ | $\stackrel{\square}{-}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{\text { min }}$ | " | - | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | - | $\cdots$ | - | \# | " | $\stackrel{\square}{4}$ | $\stackrel{\square}{\text { m }}$ | $\cdots$ |  |
| ${ }^{2680}$ | mas | $\stackrel{ }{5}$ | \# | = | $\cdots$ | $\cdots$ | : | 4 | $\pm$ | " | \% | 3 | $\cdots$ | $\cdots$ | 13 | 3 | $\cdots$ | m | $\square$ | $\underline{ }$ | $\stackrel{3}{4}$ | - | m | $\stackrel{ }{-}$ | m | $=$ | m | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | m | - | $\cdots$ | * | in | ${ }_{\text {ut }}$ | $\cdots$ |
| +mas | ${ }^{\text {saxal }}$ | $\cdots$ | E. | ${ }^{\text {an }}$ | $\cdots$ | $\cdots$ | 18 | $\cdots$ | ${ }_{3}$ | 43 | ${ }_{\text {II }}$ | 4 | $\cdots$ | ${ }^{17}$ | 1 | 38 | $\cdots$ | = | $\cdots$ | - | 34 | $\stackrel{m}{4}$ | n | ${ }^{\text {m }}$ | $\stackrel{\square}{\square}$ | ${ }^{\text {vas }}$ | $\stackrel{4}{4}$ | $\cdots$ | \% | sm | \%m | 48 | ${ }_{4}$ | ${ }^{2}$ | ${ }^{\circ}$ | 14 | ${ }^{3}$ |  |
| ${ }^{\text {atam }}$ | ${ }^{\text {maxam }}$ | 4 | $\stackrel{1}{11}$ | 208 | $\cdots$ | $\stackrel{\sim}{4}$ | $\stackrel{\text { a }}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{\prime}{4}$ | "11 | $\stackrel{4}{4}$ | 4 | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{3}$ | $\frac{318}{18}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{*}$ | $\cdots$ | ${ }_{7}^{48}$ | $\stackrel{\square}{*}$ | $\stackrel{3}{6}$ | $\cdots$ | $\stackrel{m}{4}$ |  | $\stackrel{.}{*}$ | $\stackrel{\square}{\square}$ | \% | ${ }_{\text {coin }}^{\text {cosin }}$ | $\stackrel{248}{681}$ | $\cdots$ | $\stackrel{4}{4}$ | $\stackrel{\prime}{n}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{19}$ | $\stackrel{4}{4}$ | $\stackrel{\square}{\square}$ |
| -mate | 5 can | $\ldots$ | = | - | $\square$ | $\cdots$ | . | + | $\underline{=}$ | 19 | \% | - | $\square$ | 1 m | $\cdots$ | m | $\stackrel{-}{2}$ | $\cdots$ | $\stackrel{\square}{2}$ | $\underline{M}$ | $\stackrel{\square}{0}$ | \% | 30 | ${ }^{2}$ | $\cdots$ | 4 | 3 | $\cdots$ | $\cdots$ | 81 | $\cdots$ | $\stackrel{ }{*}$ | $\stackrel{10}{ }$ | $\stackrel{\square}{\square}$ | - | $\cdots$ | $\square$ | $\square$ |
| mimam | \%ses | ar | zi | "- | m | $\stackrel{\sim}{4}$ | $\pm{ }^{\text {min }}$ | " | m | 13 | in | $\ldots$ | 4 | " | $\stackrel{\square}{1}$ | * | $\cdots$ | m | m | - | $\stackrel{ }{-}$ | $\cdots$ | $\cdots$ | $\stackrel{ }{-}$ | m | $\stackrel{ }{\square}$ | $\cdots$ | $\underline{\square}$ | m | $\cdots$ | $\cdots$ | m | m | $\stackrel{ }{\mu}$ | n | ${ }^{5}$ | m | $\stackrel{ }{4}$ |
| aman | - man | con | - | $\underline{4}$ | = | $\stackrel{\square}{*}$ | ${ }^{2}$ | \# | $\cdots$ | ${ }_{3}$ | ${ }^{\text {w }}$ | $\cdots$ | $\stackrel{\sim}{4}$ | m | * | - | - | \% | = | - | am | . | ${ }^{4}$ | cors | m | ar | 5 | $\stackrel{\sim}{4}$ | ${ }^{\text {a }}$ | * | $\stackrel{\square}{\text { a }}$ | - | 2 | $\underline{\square}$ | - | $\stackrel{ }{4}$ | $\pm$ | $\cdots$ |
| \%mase | \%ams | $\xrightarrow{\text { nt }}$ | ${ }_{\text {a }}^{3}$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{\square}$ | $\frac{104}{102}$ | $=$ | $\stackrel{\square}{4}$ | $\stackrel{\text { \% }}{\text { in }}$ | $\frac{19}{16}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | $\frac{31}{31}$ | ${ }_{17}^{117}$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{*}$ | " | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{13}$ | 18 | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{2}$ | $\stackrel{\text { cose }}{ }$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{\square}{\square}$ | $\stackrel{3}{4}$ | \% | ${ }^{\prime \prime}$ | $\frac{\nu}{4}$ | $\stackrel{\square}{\square}$ |
| mimuc | 15 | ca | $\underline{\square}$ | 4 | m | $\stackrel{\square}{4}$ | \% | $\square$ | $1{ }^{\text {m }}$ | 13 | 3 E | $\cdots$ | $\cdots$ | $\square$ | $\stackrel{\square}{4}$ | $m$ | $m$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{2}$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{1}{ }$ | $\cdots$ | m | 4 | $\stackrel{7}{10}$ | $\underline{\sim}$ | 7 | 31 | an | $\stackrel{\square}{\sim}$ | $\cdots$ | ${ }^{\circ}$ | - | $\cdots$ | 3 H | $\stackrel{\square}{*}$ |
| mima | \%ans | nt | " | ${ }_{\text {mi }}$ | $\stackrel{m}{ }$ | $\mu$ | ${ }^{29}$ | ${ }^{\circ}$ | $\stackrel{18}{ }$ | $\cdots$ | ${ }^{10}$ | ${ }^{\prime \prime}$ | 4 | 13 | 3 | ${ }^{17}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{\sim}$ | $\stackrel{\square}{*}$ | $\cdots$ | - | $\stackrel{\square}{4}$ | $\stackrel{-}{4}$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{*}$ | $\cdots$ | $\cdots$ | " | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | ${ }^{4}$ | ${ }^{3}$ | $\stackrel{\sim}{4}$ |
| \%etme | ${ }^{3}$ | "t | a. | $\stackrel{3}{4}$ | " | $\stackrel{\sim}{*}$ | 31. | \% | 3 | $\stackrel{12}{*}$ | $\frac{13}{12}$ | $\frac{31}{31}$ | $\stackrel{\square}{4}$ | $\cdots$ | ${ }_{2}$ | ${ }^{31}$ | $\cdots$ | $\cdots$ | " | - | \% | $\stackrel{ }{*}$ | $\stackrel{\square}{10}$ | $\cdots$ | $\stackrel{\square}{*}$ | $\stackrel{10}{ }$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{*}$ | $\cdots$ | \%ma | \% | $\stackrel{\square}{40}$ | $\cdots$ | $\cdots$ | $\because$ | ${ }_{\text {m }}$ | $\ldots$ | $\cdots$ |
|  | \%ab | cam | $=$ | $\square$ | W | $\cdots$ | im | ${ }^{4}$ | $\cdots$ | = | " | \% | $\cdots$ | 4 | $\sim$ | $\stackrel{ }{4}$ | $\cdots$ | $\stackrel{\sim}{4}$ | $\underline{\square}$ | $\underline{-}$ | in | m | 19 | a | $\square$ | 4 | Iii | $\stackrel{\square}{*}$ | 4 | 43 | 4 F | $\cdots$ | $=$ | $\ldots$ | $\cdots$ | $=$ | $\pm$ | $\underline{\square}$ |
| cuan | mase | cr | $\stackrel{\square}{4}$ | za | $\cdots$ | * | $\stackrel{\square}{ }$ | \% | $\stackrel{\square}{4}$ | , | $\stackrel{\square}{1}$ | $\cdots$ | " | $\cdots$ | $\square$ | $\cdots$ | " | " | $\stackrel{\square}{\square}$ | - | m | $\stackrel{m}{ }$ | ${ }^{3}$ | $\stackrel{\square}{\text { a }}$ | $\stackrel{\square}{*}$ | $\pm$ | * | $\stackrel{\square}{-}$ | $\cdots$ | ¢85a | $\pm 3$ | 12 ar | < | \#1 | " | ${ }^{13}$ | \% | $\cdots$ |
| $\underline{m i n}$ | \%sam | ${ }_{\text {cos }}$ | $\cdots$ | $\underline{\sim}$ | $\stackrel{u r}{\sim}$ | $\stackrel{\square}{4}$ | $\stackrel{ }{*}$ | $\stackrel{\square}{\square}$ | ar | ${ }_{31}{ }^{3}$ | ${ }_{3}$ | $\cdots$ | $\stackrel{\square}{\sim}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{\square}$ | $\stackrel{3}{314}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\stackrel{m}{m}$ | $\cdots$ | $\frac{3}{20}$ | $\cdots$ | \% | 3 | $\stackrel{\mu}{\sim}$ | $\frac{41}{48}$ | \% | $\stackrel{\square}{4}$ | \% | \%omm | ${ }^{8}$ | ${ }_{4}$ | $\stackrel{1}{3}$ | $\pm$ | \# | $\stackrel{4}{4}$ | $\frac{10}{42}$ | $\underline{\square}$ |
| 0.000 | min | ${ }^{c}$ | - | " | \% | M | \% | m | 9 | $\stackrel{1}{10}$ | \% | at | - | m | ${ }^{2}$ | - | a | \% | $\stackrel{1}{4}$ | - | \% | m | m | $\stackrel{1}{4}$ | $\bar{m}$ | 4 | 4 | $\underline{\sim}$ | \% | " | \% | $\cdots$ | ${ }^{2+}$ | 32 | ${ }^{\circ}$ | m | $1{ }^{12}$ | $\stackrel{ }{*}$ |
|  | mas | $\cdots$ | * | 48 | $\cdots$ | $\stackrel{3}{*}$ | $\pm$ | $=$ | $\cdots$ | $\stackrel{\square}{4}$ | 4 | 3 | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | 18 | $\cdots$ | $\cdots$ | $\stackrel{ }{m}$ | " | 2 | - | 16 | m | $\cdots$ | 3 | \% | - | 10 | usm | ${ }^{\text {xin }}$ | 4 xa | \# | $\square$ | $\stackrel{3}{ }$ | ${ }^{18}$ | \#\% | $\cdots$ |
| \%oast | mase | $\stackrel{ }{0}$ | $\stackrel{\square}{4}$ | $\pm$ | $\stackrel{1}{2}$ | " | ${ }_{\text {In }}$ | " | $\frac{\square}{2}$ | $\cdots$ | $\stackrel{3}{10}$ | $\stackrel{17}{17}$ | $\stackrel{\square}{4}$ | \% | $\stackrel{\square}{4}$ | $\stackrel{10}{4}$ | $\cdots$ | $\cdots$ | $\stackrel{ }{*}$ | $\cdots$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{m}{4}$ | $\stackrel{m}{ }$ | $\stackrel{m}{ }$ | $\stackrel{\mu}{4}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{m}{4}$ | $\cdots$ | $\stackrel{\square}{\sim}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{1}{4}$ | $\stackrel{13}{2}$ | ${ }^{\text {a }}$ | $\stackrel{\square}{4}$ |
| \%uaso | - | com | $\cdots$ | m | = | $\stackrel{4}{4}$ | $\underline{\pi}$ | $\stackrel{\square}{ }$ | z | \% | = | \% | - | $3 \times$ | $\cdots$ | $\cdots$ | m | $\stackrel{\sim}{4}$ | $\stackrel{\text { m }}{ }$ | m | $\stackrel{ }{ }$ | $\cdots$ | $\stackrel{\text { u }}{ }$ | $\cdots$ | 1 | A | $\stackrel{1}{ }$ | m | , | 48 | $\cdots$ | $\stackrel{ }{\prime}$ | 픈 | $\stackrel{\square}{\square}$ | $\cdots$ | $\cdots$ | \#\% | $\cdots$ |

August Levert_BP Plan_003069

| Soll Analytical Summary - HET Investigation <br> State of Louisiana and the Iberville Parish School Board vs, EP America Production Company, et al Section 16, Township 10 South, Range 11 East HET Project No 4651.39 Table 5 Page 3014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Smper | Som | -m | a |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | yma |  |  |  |  |  |  |  |  |  |  |  |  |  | catsurnumara |  |  |  |
|  |  |  | N4 | - | ans | $\square$ | $*$ | $\infty$ | 4. | thm | Sommem | - | Sxes | ${ }^{\text {cec }}$ | Anatay | \% ${ }^{\text {mam }}$ |  |  |  | 006ame | tament | Smen | ream |  | ses | comim |  | chonem | ${ }_{\text {cour }}^{\text {coud }}$ | -amumb | Suomum | Tout | Sroanim |  | surnen |  | ${ }_{\text {maxum }}$ | comen |
|  |  |  | 30 | ${ }^{\text {man }}$ | 1012 | \%at | ${ }^{38}$ | 30 | 30 | 30 | ${ }^{20}$ | $3{ }^{3}$ | m m | 3 m | 30 | ¢и\%m | \%imat | mma | 3x+ma | 310 | 2008 | 03 |  | 38 | 13 T | - | Emice | 0 | Eina | yoth | cima | सra | sime | (1) | 30 | 3 m | ए200 | wam |
|  |  |  | -m | a | * | moxp | $\cdots$ | * | wn | $\cdots$ | mand | mon | $x$ | - $9 \times 0$ | man | max | moxa | mox $_{0}$ | mekn | * | mox $^{1}$ | mor | mox | max ${ }^{\text {a }}$ | mor | moxs | moxg | mot | maxa | mokg | mak | mpx ${ }_{0}$ | mpxa | mpxa | * | ${ }^{*}$ | $\times$ | $\times$ |
| $\underline{\square 1759}$ | mana | NT | $\square$ | $=$ | $\cdots$ | $\stackrel{-}{4}$ | $\pm$ | ${ }^{\circ}$ | 13 | \% | * | $\cdots$ | $\stackrel{-}{\square}$ | $\stackrel{\square}{-}$ | $\square$ | 2. | $\cdots$ | - | $\stackrel{ }{\square}$ | - | $\cdots$ |  | ${ }^{\prime}$ | $\cdots$ | $\cdots$ | $\stackrel{ }{M}$ | ${ }^{\text {m }}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\sim$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{19}$ | a | $\cdots$ |
| ${ }^{3008}$ | sama | net | $\frac{\square 1}{31}$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | ${ }^{20}$ | 13 | $\cdots$ | ${ }^{238}$ | 13 | ${ }^{3}$ | $\stackrel{\square}{4}$ | $\square$ | 2 | 20 | $\stackrel{m}{4}$ | $\stackrel{4}{*}$ | $\cdots$ | $\stackrel{M}{M}$ | $\cdots$ | $\cdots$ | $\stackrel{4}{4}$ | $\stackrel{3}{*}$ | $\stackrel{\sim}{m}$ | m | $\stackrel{4}{4}$ | $\stackrel{M}{M}$ | $\stackrel{4}{4}$ | $\cdots$ | ${ }_{3}^{14}$ | " | ${ }^{M}$ | $\stackrel{\square}{4}$ | ${ }^{\text {a }}$ | in | 20 | $\cdots$ |
| $\xrightarrow{\text { cumas }}$ | 5mad | Har | $\frac{31}{4}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{\text { gr }}$ | $\stackrel{\square}{4}$ | $\frac{13}{3 m}$ | $\stackrel{\square}{17}$ | $\stackrel{1}{4}$ | $\frac{74}{4}$ | $\stackrel{\square}{13}$ | $\frac{31}{41}$ | $\stackrel{\square}{*}$ | 4 | $\stackrel{3}{4}$ | $\stackrel{2}{2}$ | $\stackrel{M}{m}$ | $\stackrel{M}{4}$ | $\stackrel{\mu}{\text { u }}$ | $\stackrel{M}{m}$ | $\stackrel{45}{* 5}$ | $\stackrel{\mu}{\mu}$ | $\stackrel{14}{4}$ | \# | $\stackrel{m}{m}$ | is | $\frac{43}{30}$ | $\stackrel{\square}{4}$ | $\frac{\mathrm{m}}{\mathrm{mp}}$ | $\stackrel{\text { tama }}{41}$ | $\frac{40}{8}$ | $\stackrel{18}{\square}$ | $\stackrel{3}{\text { a }}$ | ${ }_{\text {al }}^{\text {al }}$ | $\stackrel{18}{4}$ | $\stackrel{3}{m}$ | $\frac{\square}{40}$ | $\cdots$ |
| tione | $\cdots$ | - | 10 | 483 | $\pm$ | $\underline{\square}$ | ${ }^{\text {a }}$ | $\cdots$ | $\cdots$ | 143 | \% | $\pm$ | $\pm$ | $\stackrel{\square}{4}$ | $\stackrel{1}{12}$ | 4 | $\stackrel{M}{4}$ | m | " | M | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | - | $=$ | $\cdots$ | - | $\cdots$ | $\stackrel{ }{M}$ | $\cdots$ | $=$ | - | $\cdots$ | $\cdots$ | in | $\cdots$ | $\stackrel{\square}{4}$ |
| \%izat | mand | $\stackrel{0}{4}$ | ${ }^{\prime \prime}$ | " | $\cdots$ | $\stackrel{ }{-}$ | in | $\stackrel{*}{4}$ | $\cdots$ | 2 | $\cdots$ | $\ldots$ | $\stackrel{ }{m}$ | $\stackrel{\square}{4}$ | $\stackrel{3}{2}$ | 4 | $\stackrel{ }{ }$ | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | ${ }^{1}$ | $\cdots$ | $\stackrel{4}{ }$ | a | $\cdots$ | 3 | ${ }^{\text {a }}$ | - | a | , cose | -3* | ame | 31 | $\cdots$ | ${ }^{\text {x }}$ | , | 3 | $\cdots$ |
| \%inat | - | mox | m | $\stackrel{\square}{4}$ | " | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | 3 | ${ }^{\prime \prime}$ | $\underline{4}$ | $\stackrel{ }{4}$ | 3 | $\stackrel{\sim}{4}$ | - | $\stackrel{\sim}{*}$ | $\sim$ | $\stackrel{-}{-}$ | $\stackrel{m}{m}$ | 1.8 | $\stackrel{\square}{*}$ | 3 | \% | $\cdots$ | 4 | ${ }^{4}$ | $\pm$ | 4 | $4 \pi$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | 30 | $=$ |
| tumbe | \%san | $\pi$ | ${ }^{18}$ | ${ }^{47}$ | ${ }_{17}$ | $=$ | $\stackrel{1}{ }$ | $\cdots$ | $\sim$ | 4 | $\stackrel{\square}{4}$ | " | $\cdots$ | $\cdots$ | $\square$ | tan | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | ${ }^{19}$ | $\cdots$ | \% | $\stackrel{7}{4}$ | $\cdots$ | sin | $\stackrel{4}{4}$ | $\sim$ | $\stackrel{\square}{4}$ | ния | =* | 4 cm | at | " | ${ }^{3}$ | m | \% | $\cdots$ |
| masta | masel | ar | in | \% | m | $\cdots$ | u | $\stackrel{\square}{\square}$ | $\sim$ | \% | 3 m | $\bigcirc$ | $\cdots$ | $\cdots$ | $\ddot{\square}$ | $\cdots$ | m | m | $\stackrel{\square}{4}$ | $\stackrel{m}{ }$ | $\stackrel{\square}{-}$ | , | M | ${ }^{4}$ | $\cdots$ | $\cdots$ | $\cdots$ | " | m | $\stackrel{ }{\sim}$ | $\cdots$ | $\sim$ | - | $\cdots$ | $\cdots$ | - | ${ }^{2}$ | " |
|  | (1) | cal | $\underline{\sim}$ | \# | $\cdots$ | $=$ | 16 | " | 17 | im | If1 | 31 | $\underline{\square}$ | \% | $\mu$ | \% | $\mu$ | m | $\cdots$ | $\stackrel{m}{m}$ | tir | $\stackrel{\sim}{4}$ | in | = | $\cdots$ | as | " | $=$ | w | - | * | $\cdots$ | In: | $\cdots$ | $\cdots$ | - | 3 | $\cdots$ |
| x+ias | 1 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - | m | $\stackrel{-}{\square}$ | ${ }^{\sim}$ | $\stackrel{ }{\sim}$ | $\cdots$ | $\stackrel{ }{\sim}$ | $\cdots$ | m | $\cdots$ | m | $\stackrel{ }{M}$ | $\cdots$ | 1 m | $\cdots$ | \% | ${ }^{24}$ | $\stackrel{\square}{\square}$ | 1\% | m | $\cdots$ | " | $\stackrel{ }{4}$ | m | $\cdots$ | 1* | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 。 | $\cdots$ |
| neman | , | a | $\underline{\square}$ | - | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | 1 | 4 | in | $\cdots$ | \% | : | $\stackrel{\square}{4}$ | ${ }^{4}$ | $\stackrel{m}{\sim}$ | $\stackrel{\square}{4}$ | $\stackrel{\mu}{\mu}$ | $\stackrel{3}{4}$ | $\cdots$ | ${ }_{\sim}^{*}$ | is | $\stackrel{4}{4}$ | ${ }^{\text {min }}$ | \% | $\stackrel{\mu}{4}$ | sm | 2 | $\cdots$ | 3. | $\pm$ | $\pm$ | $\stackrel{\square}{*}$ | ${ }^{\text {am }}$ | * | $\stackrel{ }{4}$ | $\cdots$ | 4 | m |
| xexat | ng | 4 | $\stackrel{4}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{\sim}$ | $\stackrel{\square}{\square}$ | $\stackrel{ }{*}$ | $\stackrel{ }{ }$ | $\cdots$ | m | $\stackrel{m}{ }$ | $\cdots$ | $\stackrel{\sim}{4}$ | $\sim$ | m | $\stackrel{\square}{4}$ | $\stackrel{\mu}{\mu}$ | $\stackrel{\sim}{\square}$ | $\cdots$ | $\stackrel{m}{ }$ | $\stackrel{ }{*}$ | $\stackrel{m}{ }$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{\sim}{4}$ | $\stackrel{\sim}{4}$ | $\stackrel{\square}{2}$ | $\cdots$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{4}$ | - | $\stackrel{\square}{*}$ | $\cdots$ | $\square$ | ${ }^{\text {a }}$ | $\cdots$ |
| $\frac{\text { Keat }}{\text { ceat }}$ | - | ${ }_{0}$ | $\frac{\mathrm{m}}{4}$ | $\stackrel{ }{\square}$ | $\stackrel{\square}{4 x}$ | $\cdots$ | $\stackrel{4}{4}$ | $\stackrel{3}{4}$ | $\stackrel{1}{4}$ | " | \% | $\frac{31}{4}$ | $\stackrel{\square}{\square}$ | $\frac{\mathrm{m}}{\mathrm{m}}$ | $\stackrel{4}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\mu}{m}$ | " | $\stackrel{\text { m }}{ }$ | $\stackrel{15}{4}$ | $\stackrel{n}{7}$ | $\stackrel{\square}{\square}$ | ${ }_{\text {max }}$ | $\underline{\square}$ | $\stackrel{ }{4}$ | can | $\stackrel{n}{m}$ | $\stackrel{\square}{4}$ | $\frac{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{10}{4}$ | $\stackrel{\sim}{4}$ | $\stackrel{\text { m }}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\text { m }}{ }$ | $\cdots$ | $\frac{31}{41}$ | $\cdots$ |
| Ketar | - | zax | $\underline{m}$ | $\underline{\square}$ | - | $\stackrel{\square}{4}$ | in | \% k | $3{ }^{3}$ | \% | ax | (10.1 | m | 4 | $\stackrel{ }{*}$ | $\underline{\square}$ | - | min |  | 4 | $\square$ | = | ca | "im | \% | 3 m | 3 | $\stackrel{1}{4}$ | 3 | $\square$ | 4 | m | 2 | $\cdots$ | $\underline{\square}$ | \% | \% | " |
| Catis | usam | $\square$ | m | $\underline{ }$ | * | $\stackrel{\square}{4}$ | $\stackrel{\sim}{4}$ | $\cdots$ | $\cdots$ | m | $\cdots$ | $\cdots$ | - | $\sim$ | $\cdots$ | $\cdots$ | m | $\cdots$ | $\cdots$ | $\cdots$ | $\sim$ | $\cdots$ | ${ }^{m}$ | $\cdots$ | 4 | $\stackrel{ }{4}$ | $\cdots$ | $=$ | $=$ | $\sim$ | $\cdots$ | - | $\sim$ | - | - | $\cdots$ | 33 | $\because$ |
| $x^{\text {xamay }}$ | - | ${ }_{5}$ | m | $\cdots$ | * | $\stackrel{-}{-}$ | $\cdots$ | 13 | im | $\cdots$ | 4 | $\cdots$ | $\stackrel{\square}{4}$ | 4 | $\stackrel{r}{2}$ | \% | $\underline{\mu}$ | = | \% | m | $\underline{\square}$ | $\stackrel{\square}{4}$ | mi | $\pm$ | $\cdots$ | 4 m | ${ }^{2}$ | $\stackrel{\square}{4}$ | 4 | 4 | $\stackrel{4}{4}$ | $\stackrel{\square}{4}$ | ${ }^{17}$ | ${ }_{4}$ | $\stackrel{m}{m}$ | $\stackrel{\square}{4}$ | \% | $\cdots$ |
| mama | vas | $\cdots$ | $\cdots$ | - | $\cdots$ | $\cdots$ | $\cdots$ | - | $\cdots$ | $\stackrel{\sim}{\mu}$ | m | $\cdots$ | $\stackrel{\square}{ }$ | $\cdots$ | \% | " | m | m | $\cdots$ | m | $\sim$ | $\cdots$ | ${ }^{\text {a }}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{ }$ | $\sim$ | $\sim$ | $\cdots$ | $\cdots$ | $\cdots$ | - | 6. |  |
| $\triangle$ | $\underline{1}$ | $2 \times$ | $\stackrel{m}{4}$ | - | $\cdots$ | $\cdots$ | $\stackrel{.}{4}$ | $\cdots$ | \% | $\cdots$ | 4 | ${ }^{31}$ | - | $\stackrel{\square}{\text { m }}$ | m | $\cdots$ | $\stackrel{\square}{\square}$ | = | ${ }^{\text {max }}$ | $\stackrel{m}{4}$ | 3 | $\stackrel{\square}{4}$ | $m$ | = | $\cdots$ | - | ${ }_{*}$ | - | $\xrightarrow{\text { min }}$ | $\stackrel{4}{4}$ | $\stackrel{4}{4}$ | $\stackrel{\square}{*}$ | ${ }^{\text {x }}$ | $\stackrel{\text { m }}{ }$ | $\stackrel{-}{\square}$ | m | $\cdots$ | $\cdots$ |
| *utar | $1 \times$ | ${ }^{4}$ | $\cdots$ | - | $\cdots$ | $\stackrel{\square}{4}$ | $\cdots$ | - | $\cdots$ | $\stackrel{\sim}{4}$ | $\sim$ | " | $\stackrel{\square}{\square}$ | $\stackrel{\sim}{4}$ | $\stackrel{ }{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{M}{4}$ | $\cdots$ | $\stackrel{M}{4}$ | $\stackrel{m}{ }$ | $\stackrel{*}{*}$ | $\pm$ | $\stackrel{\square}{-}$ | $\stackrel{\square}{4}$ | $\stackrel{ }{ }$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{1}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | " | $\square$ | $\square$ | - |
| nemac | ${ }^{\text {max }}$ | cor | $\stackrel{\square}{4}$ | $\cdots$ | mr | $\stackrel{\square}{4}$ | $\stackrel{4}{4}$ | 3 | ${ }^{15}$ |  | - | \% | $\stackrel{\square}{4}$ | $\stackrel{m}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\mu}{4}$ | $\stackrel{m}{m}$ | $\frac{31}{4}$ | $\stackrel{m}{\sim}$ | m | $\cdots$ | m | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | + | ${ }_{\text {Hz }}$ | $\cdots$ | $\stackrel{125}{4}$ | $4{ }^{4}$ | $\cdots$ | $\stackrel{\square}{\sim}$ | 3 | $\frac{m}{m}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\frac{34}{41}$ | $\cdots$ |
| cinsy | \% | ${ }_{c}$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\cdots$ | $\stackrel{ }{*}$ | ${ }_{\text {\% }}$ | $\pm$ | 3 | \% | $\stackrel{\square}{4}$ | \% | $\stackrel{\text { a }}{\sim}$ | $\square$ | $\stackrel{\sim}{4}$ | $\stackrel{\sim}{4}$ | - | \% | $\stackrel{10}{102}$ | $\cdots$ | ${ }_{\text {an }}$ | \% | $\stackrel{\square}{\text { cin }}$ | $\cdots$ | $\stackrel{\square}{*}$ | \%im | m | $\cdots$ | \% | $\pm$ | \% | * | air | " | = | $\underline{\square}$ | ${ }_{\text {ar }}$ | " |
| Kenat | nata | $\stackrel{\square}{4}$ | $\stackrel{ }{4}$ | $\stackrel{ }{\square}$ | $\because$ | - | $\sim$ | $\cdots$ | - | $\stackrel{\square}{\square}$ | $\stackrel{\square}{4}$ | $\stackrel{ }{*}$ | $\stackrel{ }{-1}$ | $\cdots$ | $\pm$ | $\cdots$ | - | - | $\cdots$ | $\stackrel{\square}{\sim}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{\square}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{*}$ | $\cdots$ | $\cdots$ | $\cdots$ | - | $\cdots$ | " | $\stackrel{\sim}{\sim}$ | a | $\stackrel{\square}{-}$ |
| netar | $\cdots$ | ex | m | \% | 0 | $\stackrel{\square}{2}$ | . | 4 | ${ }^{2}$ | 14 | $\stackrel{\square}{\square}$ | \#iz | - | $\stackrel{3}{4}$ | $\underline{m}$ | a | $\stackrel{ }{4}$ | un | = | $\cdots$ | $\underline{\square}$ | m | $\cdots$ | $\underline{=}$ | $\stackrel{\sim}{4}$ | \% | - | $\stackrel{\square}{4}$ | = | $\stackrel{1}{4}$ | 47 | $\stackrel{+}{*}$ | $\cdots$ | \# | m | - | $\stackrel{\square}{ }$ | $\cdots$ |
| nema | nema | $\stackrel{\square}{*}$ | m | - | * | - | $\cdots$ | - | $\cdots$ | - | - | $\sim$ | = | $\cdots$ | - | $\cdots$ | - | - | $\sim$ | $\cdots$ | $\sim$ | " | $\cdots$ |  | $\stackrel{\sim}{4}$ | $\stackrel{\sim}{4}$ |  |  | - |  |  | $\sim$ | $\cdots$ |  |  |  |  | " |
| \%ame | 1am | cor | $\stackrel{m}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\sim}{\square}$ | m | ${ }_{\text {L }}$ | $\stackrel{\square}{\square}$ | $\ldots$ | 4 | $\cdots$ | $\cdots$ | $\stackrel{ }{4}$ | $\pm$ | $\stackrel{\sim}{*}$ | $\stackrel{+}{4}$ | $\mu$ | $\cdots$ | $\stackrel{m}{2}$ | $\cdots$ | 3 | m | am | \% 1 m | $\stackrel{ }{4}$ | sen | 31 | $\stackrel{\square}{4}$ | 48 | 410 | $\cdots$ | $\cdots$ | $\stackrel{\square}{0}$ | w | m | $\pm$ | 0 | $\stackrel{\square}{4}$ |
| cos | 0 mont | н® | ${ }^{1}$ | m | $\cdots$ | M | ${ }^{\text {IIP }}$ | * | * | $\cdots$ | 50s | 4 | $\cdots$ | $2{ }^{2}$ | $\because$ | $\stackrel{4}{4}$ | - | $\stackrel{ }{*}$ | $\sim$ | $\cdots$ | $2 n$ | " | $\cdots$ | 1200 | $\cdots$ | 2ese | ${ }^{\prime \prime}$ | $\cdots$ | $\cdots$ | $\bigcirc 0802$ | 450 | $4{ }^{3} 0$ | * | $\stackrel{ }{ }{ }^{\prime}$ | m. | - | ass | 4 |
| \% | reant | нer | 30 | " | $\stackrel{ }{*}$ | $\cdots$ | 14 | u' | $\cdots$ | ${ }^{12}$ | 1 | ${ }^{17}$ | $\stackrel{ }{ }$ | 3 | $\because$ | ${ }^{2}$ | m | $\cdots$ | $\cdots$ | 103 | 10 | m | $\stackrel{4}{4}$ | zeno | $\cdots$ | 4\%8 | ¢s. | $\cdots$ | ${ }^{\text {a }}$ | torse | 4 som | 1230 | $\cdots$ | $\stackrel{\square}{ }$ | ${ }^{\text {a }}$ | $\pm$ | * | $\cdots$ |
| $\cdots$ | $\cdots$ | $=$ | $\mathrm{m}^{\mathrm{m}}$ | ${ }^{(1)}$ | m | $\cdots$ | $\cdots$ | $\omega$ | m | \% | $\cdots$ | 4 | 4 | $\pm$ | $\because$ | : | w | nem | uma | $\cdots$ | $\cdots$ | $\stackrel{m}{m}$ | ${ }^{\text {um }}$ | \% | 14 | 3 | wa | $\cdots$ | $\stackrel{3}{ }$ | ${ }^{14}$ | ${ }^{\text {m }}$ | $\cdots$ | 4 | \#. | $\stackrel{\square}{4}$ | $\stackrel{4}{4}$ | ${ }^{\text {an }}$ | $\cdots$ |
| $\underline{\sim}$ | m | $\cdots$ | - | Na | ma | * | , | $\stackrel{2}{2}$ | $\cdots$ | - | na | na | \% | $\cdots$ | wn | Na | N4 | na | - | . | $\cdots$ | $\cdots$ | ma | 2 200 | m | $\stackrel{ }{*}$ | soc | * | so | $\cdots$ | $\cdots$ | 20 | - | so | = | $\cdots$ | - | - |
| , 比. | m | m | - | Na | sax' | $\cdots$ | $\cdots$ | " | ** | "a | n* | ma | $1400^{\circ}$ | v* | - | sam | $\cdots$ | $\because$ | $\infty$ | " | " | $\cdots$ | 30 | $\sim$ | * | $\pm$ | $1 \times$ | , | ${ }^{100}$ | \# | " | 4 | - | 200 | $\cdots$ | ** | ma | $\cdots$ |


| Soll Analytical Summary - HET Investigation <br> State of Louisiana and the Ibervilie Pariabs Schoot Boardiva. BP America Profuction Company et al Section 15. Townshp to South Range 11 East HET ProjectNo 4C51,29 $\underset{\substack{\text { Trebe } \\ \text { Pare } \\ \text { Tot } \\ \hline 14}}{ }$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smpend | Dano | smome | Some | Totem | Smman | rome | \|cea |  |  |  | $\underset{\substack{\text { crocen } \\ \text { arontran }}}{ }$ |  |  |  |  |  | 2-Wechymaphriaier (Totivisply |  |  |  |  |  |  |  |  |  | Tronsmin | framem, | momorues |  |  |  |
|  |  |  | $3{ }^{\text {maxa }}$ | कल | रहल | TEEA |  |  |  |  |  |  |  |  |  |  | $\cdots$ | Cixe | $\square_{\text {ane }}$ | $\square$ | ${ }^{\text {Wink }}$ |  |  |  | $\underline{\max }$ | ame |  | Sma | ama | Eme | ame | कान |
|  |  |  | man | - ${ }^{0}$ | mekn | -3x | - $0_{0}$ | -3* | mexp | mpxa | apxa | maxa | ma | -9x\% | maxa |  | nuaber | araine | proverat | noxemer | maxam | -oxamer | -matiox | mexarmar | maxg/man | max $x_{8} / 4 x$ | andiont | maxamel | mpoxy mal | $\operatorname{maghe}_{0} \mathrm{man}$ | $\operatorname{maxk}_{8}$ max | axamat |
| nimo | $\pm$ | ner | * | tan | 4 | 10 | \# | ${ }^{135}$ |  | $\cdots$ | ${ }^{10}$ | , | 3 | um | yan | * |  | \%nam | anume | $\cdots \mathrm{na=ad}$ |  | anicemes | -xame |  |  | $\cdots$ | assicem | -masat | $\cdots$ nisamin | ximme | Hunme | 4.45100838 |
| nem |  | m | im | ces | $\stackrel{\square}{\square}$ | 4 | ${ }^{\text {a }}$ | ${ }_{\mu}$ | $\cdots$ | $\stackrel{ }{4}$ | ${ }^{\mathrm{m}}$ | $\sim$ | \% | $\stackrel{\square}{2}$ | = | $\pm$ | 2 | $\stackrel{ }{*}$ | $\stackrel{ }{ }$ | $\cdots$ | $=$ | - | - | $\cdots$ | $\cdots$ | $\cdots$ | $=$ | $=$ | $\stackrel{ }{2}$ | m | - | $\cdots$ |
| -am | mars | $\pi$ | $\pm$ | \%3I | $\cdots$ | $\cdots$ | "' | $1{ }^{12}$ | ${ }^{151}$ | $\stackrel{ }{m}$ | $\cdots$ | $\cdots$ | $\cdots$ | m | $\stackrel{ }{ }$ | $\cdots$ | \%emm | Name | \%min | 1 | -1, meanc | - | \% | -104, | coastiocem | $\square_{\text {amisma }}$ | Foast, 20385 | वазиzum | mi/4xet | เми\% |  | reassomera |
| mato | 983 | ca | का | 47 | 3 | $\pm$ | \% | $\cdots$ | $\sim$ | m | $=$ | $\cdots$ | $\stackrel{\sim}{4}$ | $\stackrel{\square}{2}$ | $\sim$ | $=$ | $=$ | $\cdots$ | $\sim$ | - | $\stackrel{\sim}{4}$ | $\sim$ | $\sim$ | 4 | $\cdots$ | $\cdots$ | \% | $\sim$ | \% | 4 | 4 | 2 |
|  | mans | 4 | $\square$ | $\cdots$ | " | m | $\stackrel{ }{4}$ | $\cdots$ | N | \# | 488 | \% | 8.8 | $\cdots$ | $\cdots$ | m | 3 | , | , \%er. | \%eme | , | , | + | ) | S200 | cter | coun | , sme | ¢3m | 14 | , | ¢094 |
| Bsem | mams | нer | <0027 | 1 | .000 | 812 | 21. | ${ }^{2 r}$ | ${ }^{2}$ | 280 | ${ }^{23}$ | cso | 4. | tar | $\cdots$ | $\cdots$ | catast | (2080 80800 | Fozeosome | ${ }^{\text {omamen }}$ | imin | 1980.40n. | (cases/808 | C2000.asaxa |  |  | \%280, 80004 | ,0880600022 | - | (1atsome |  | czeosene |
| Niec | चد | ${ }^{\mathrm{xam}}$ | vim | $\square$ | 43 x | sm | = | $\stackrel{\square}{4}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | m | $\stackrel{\square}{\square}$ | $\cdots$ | $\stackrel{ }{2}$ | m | $\cdots$ | $\cdots$ | $\stackrel{\square}{-}$ | - | - | $\stackrel{N}{4}$ | 4 | $\cdots$ | $\stackrel{ }{4}$ | - | $\cdots$ | $\stackrel{\sim}{\sim}$ |  | ${ }^{m}$ |
| Smat | mas | ner | m* | $\cdots$ | $\stackrel{\text { Na }}{ }$ | $\stackrel{1}{*}$ | M | N | $\stackrel{\text { NA }}{ }$ | 250 | 48 | 480 | 80 | 2aa | 38 |  | am | $\square$ | s.29 | ¢ 180 | $4{ }^{17}$ | 4 tm | coter | ater | coter | cion | 419 | cater | 410 | 43 | \%19 | 919 |
| $\xrightarrow{3}$ | $\cdots$ | ${ }_{\text {nct }}$ | $\cdots$ | $\cdots$ | $\cdots$ | m | $\cdots$ | $\stackrel{4}{4}$ | $\cdots$ | \% | 4 | $\ldots$ | \%80 | 8 | $\frac{12 m}{81}$ | $\frac{\mathrm{ml}}{4}$ | \% | Cive | . 24 | ${ }_{\text {com }}$ | $\frac{.27}{* *}$ | cts | .2n | ant | \% 24 | $\frac{7 n}{407}$ | - 4.4 | $\stackrel{\text { ran }}{\text { coitr }}$ | - 4 4in | (an) | air | ar |
| $\ldots$ | mant | ${ }_{\text {ar }}$ | $\stackrel{\square}{\sim}$ | $\stackrel{\square}{-}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{m}$ | $\stackrel{\square}{\sim}$ | $\stackrel{-}{4}$ | - | ar | at | ai | 8 | ${ }^{280}$ | \% | ar | , | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - | $\stackrel{1}{4}$ | $\stackrel{\square}{2}$ | , | ${ }^{\text {a }}$ | $\stackrel{1}{2}$ | ${ }^{\prime \prime}$ | 4 | , |  |
| ximo | 2ma | $\stackrel{\square}{0}$ | imam | tom | $\cdots$ | $\stackrel{\square}{4}$ | * | m | b: | 400 | as | in | st | as | e | ¢ | culum |  | \%timisxa\| | प[1] |  | -amiosay |  | T2190, 50001 | -3140 ceme | , | - | \%0,14, 0 exa | Otisatmex | 3013 | \%axamen | गुप |
| \%an | man | cal | w | $\square$ | 5 | 1. | - | - | $=$ | = | $\underline{M}$ | $=$ | $\cdots$ | $\stackrel{\square}{2}$ | $\stackrel{ }{\mu}$ | $\cdots$ | m | - | 4 m | 4 | yor | $\stackrel{ }{4}$ | \%mir | $\underline{\square}$ | 2 | $\cdots$ | $\cdots$ | ${ }_{\sim}$ | - | m | $\underline{m}$ | $=$ |
| men | cosins | HET | tsen | 1318 | 4 | an | 12 | 48 | ${ }^{21}$ | $\stackrel{\square}{4}$ | 4 | \# | 9 | 48 | \# | 4 | cinmo |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| \% | maxas | - | $\cdots$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{*}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\frac{8}{\text { st }}$ | (s) | \% | $\frac{18}{4 x}$ | at | ai | ${ }_{4}^{4}$ | 4 tm | aim | \% 9 \% | 4 | 4 | \% | 5 | atim | \%oin | 4 mm | 4 | cism | \%im | 5 m | atim | sim |
|  | $5{ }^{5039}$ | $\triangle$ | $\cdots$ | $\stackrel{\sim}{*}$ | $\cdots$ | $\cdots$ | $\sim$ | $\sim$ | $\cdots$ | ब1 | sis | 4 | as | at | si | 4 m | 4 m | 47 | sex |  | s* | sim | $\pm 3$ | 418 | 4 tm | sum | a | som | Hom | sax | \%\% | ain |
| , mis | way | 4 | $\stackrel{ }{*}$ | - | $\stackrel{ }{*}$ | $\stackrel{-}{-}$ | $\stackrel{\square}{*}$ | $\cdots$ | $\cdots$ | ตร | ${ }^{3}$ | 9 | 4 | as | ¢ | ${ }^{4}$ | sim | 4 | sum | 4 | 4 | $4{ }^{4}$ | $4 \cdots$ | ¢ | 4.4 | sw | +4. | sit | am | - | \%\% | $\cdots$ |
| Eemes | $\cdots$ | $\xrightarrow{-27}$ | $\because$ | $\cdots$ | $\cdots$ | $\cdots$ | 91 | 3 se | 88 | air | at | as | ${ }_{4 i}$ | ${ }_{\text {at }}$ | ${ }^{17}$ | ${ }^{42}$ | $\stackrel{ }{*}$ | $\stackrel{ }{*}$ | $\cdots$ | $\stackrel{ }{*}$ | $\mu$ | $\stackrel{\square}{4}$ | $\cdots$ | $\stackrel{\square}{4}$ | " | $\cdots$ | $\stackrel{m}{M}$ | $\stackrel{M}{4}$ | - | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ |
| ${ }_{\text {cmas }}$ | $\cdots$ | - | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\cdots$ | $\pm$ | 4 | ${ }_{4}$ | 88 | $\stackrel{3}{4}$ | \% | $\stackrel{\text { a }}{\text { un }}$ | $\frac{14}{\text { sin }}$ | $\stackrel{\square}{4}$ | $\stackrel{4}{4}$ | $\stackrel{3}{4}$ | \% | $\stackrel{\square}{\text { atem }}$ | , | $\stackrel{\square}{4}$ | \% | \%ew | $\cdots$ | \% | $\cdots$ | \% |  | \% | \% | \% | \% | $\stackrel{\square}{0 \%}$ |
| $\cdots$ | \%omin | $\checkmark$ | $\cdots$ | " | $\cdots$ | $=$ | si | 3 m | st | at | :3t | 3 | ! | ${ }^{4}$ | $\cdots$ | ${ }^{\prime \prime}$ | \%e | $4{ }^{\circ}$ | *as | Hew | \%ew | (ta | \%** | 4 | \%* | \% | , | \% | \%omt | , | am | "w |
| xams | \%em | " | $\cdots$ | - | m | $\cdots$ | 38 | act | st | ¢ | sst | 43 | si | stist | ct | as | $\cdots$ | $\stackrel{ }{*}$ | m | $\cdots$ | $\cdots$ | $\cdots$ | $\square$ | $\cdots$ | $\stackrel{\square}{4}$ | - | $\stackrel{4}{4}$ | " | " | \% | $\stackrel{ }{4}$ | $\cdots$ |
| \%mat |  | - | - | - | - | $\cdots$ | 3 | ut | $\pm$ | as. | Sis | 38 | ar | ss. | 8 | sat | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{\sim}{4}$ | $\cdots$ | - | $\stackrel{\square}{2}$ | $\stackrel{1}{1 / 2}$ | - | - | $\cdots$ | $\stackrel{ }{4}$ | $\cdots$ | ! | $\cdots$ | $\stackrel{\sim}{4}$ |
| ketes | $\cdots$ | $\cdots$ | * | $\cdots$ | " | $\stackrel{\square}{4}$ | $s{ }^{\text {se }}$ | sac | sa | $\cdots$ | St | F. | 31 | $\cdots$ | ${ }^{\text {p }}$ | 59 | 13 | 4 | .ast | 4 | .ame | , | ramb | , 13 | , | 435 | , | cis | 45 | , 123 | $\stackrel{14}{ }$ | 48 |
| Stabat | \%um | $\pi$ | $\stackrel{\square}{*}$ | $\cdots$ | $\cdots$ | $\stackrel{\square}{4}$ | 4 | $\frac{n}{42}$ | $\stackrel{\square}{\text { gr }}$ | ${ }^{\text {m }}$ | $\stackrel{10}{4}$ | $\frac{8}{4}$ | ${ }^{\text {m }}$ | $\stackrel{1}{4}$ | $\stackrel{10}{\square 9}$ | ${ }^{\text {ma }}$ | $\stackrel{1}{3}$ | \% | ${ }^{\text {cow }}$ | $\stackrel{\text { cour }}{ }$ | $\stackrel{\square}{4}$ | $\stackrel{3}{*}$ | $\stackrel{\square}{\square}$ | , | $\cdots$ | $\stackrel{\text { * }}{ }$ | . | $\cdots$ | $\stackrel{\text { cour }}{ }$ | $\cdots$ | $\stackrel{10}{ }$ | $\stackrel{\square}{\square}$ |
| $\xrightarrow{*}$ | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | \% | $\stackrel{\square}{1.4}$ | $\cdots$ | $\cdots$ | 4 | $\stackrel{\square}{\square}$ | ${ }_{\text {a }}$ | ${ }^{\prime \prime}$ | \% | nam | m | mor |  | $\stackrel{4}{40}$ | utazar | 40 | 4 | 4 n | 4 | \% | 4 | $4 \square$ | 4 | , | $\cdots$ | ${ }^{\text {ma }}$ | an | 14 | $\stackrel{\square}{10}$ | ain |
| Num. | Wasat | wn | [ | $\pi$ | " | $\square$ | zzom | $\pm$ | « | 220 | 10 | $7 \%$ | 180 | ${ }_{150}$ | +m | m | титаия | 20 | " | ${ }^{20}$ | 08 | $0 \times$ | 082 | $\because$ | $\sim$ | $\pm$ | ${ }^{20}$ | 20 | 0 \% |  | 2100 | 20 |

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Na Ne: Araper



| Groundwater Analytieal Summary－HET Investgation```Stale of Louisiana and the Iberville Parish School Board vs. BP America Production Company, et al Socton 15, Township to South, Range II East Berville Pariah, Louitiana HET Project/No. 4E51,33 Table 6 Paret of 1``` |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | sempre | sammy |  |  |  |  |  | 97xa |  |  |  | Matramem |  |  | 1 moats |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Amenty |  | Redum |  |
|  |  |  | Covern | \％omo | cim | $\%$ | ${ }^{\text {dps }}$ | samaver | Buamo | 为 | Towner | $x$ |  | whem |  | aravic | sovum | um loimem | cusum | ctmemm | ton | tomo | Mromb｜ | mongeneso | menur | naman | sumum | swer | sadum | stroum | $z_{\text {ne }}$ | Name | 20mas | Ratem 20 | Teskm 2 za |
|  |  |  | asea | $\cdots$ | Na | mose | 2000 | mose | \％ | smes | ＊ | mana | misc | arsc | sass | 30 | 000 | － | eros | ana | artas | ase | avos | spes | тпп¢ | shes | $\cdots$ |  | suos | ano | 402 | 2380 | 2308 | epa meso | sxame |
|  |  |  | mom | mor | ma | mix | mom | mat | mon | mot | mat | mar | mol | $\max ^{2}$ | mot | man | mot | ${ }^{\text {a }}$ m | mon | mat | not | mer | mor | mor | mar | mon | mol | max | mon | ror | mor | mot | mot | pen | pen |
|  | 1085 | Her | 1480 | ${ }_{48}$ | ${ }^{2}$ | ＊${ }^{\prime \prime}$ | sto | 52 | －00050 | coocso | rosso | ＊00650 | 0，971 | －0．4 | 0.10 | $\cdots$ | ma | 4 m | N2 | $\cdots$ | kn | $\cdots$ | $\cdots$ | as | $\cdots$ | na | na | va | N＊ | na | na | 530 | －50 | 148 | 174 |
| urimane | 10845 | HeT | $\stackrel{ }{4}$ | $\stackrel{ }{4}$ | Na | Na | $\stackrel{ }{4}$ | \％ | $\cdots$ | $\cdots$ | ${ }^{\text {se }}$ | ${ }^{\mathrm{Na}}$ | na | Na | Na | －0010 | ${ }^{197}$ | － 0.0050 | ${ }^{75}$ | －0040 | 24.2 | －0010 | 0275 | 53 | －000020 | 23 | －0050 | －0010 | 312 | in | ．0000 | $\stackrel{3}{ }$ | $\stackrel{ }{4}$ | m | NA |
| 4xameso | － | Nom | min | 4 | $\underline{\sim}$ | N | 4 | $1{ }^{2}$ | 4＊＊ | ＋ | 2m | ＜ | ${ }^{\text {a }}$ | 313 | 48 | Q | is | 4 sin | $\cdots$ | ser | 3 | ee | ar | an | Toma | 4 | 4 | $\cdots$ | \＃1 | 5 | 5000 | 118 | ＊ | 34 | in |
| masatam | 10815 | HET | 2008 | 416 | 58 | 6.17 | ＋400 | $\stackrel{25}{ }$ | ${ }_{0} 0^{2}$ | am | 0000 | 0.39 | 13. | ${ }^{28}$ | 227 | 0.192 | 4 | － 20050 | 350 | －0．40 | 525 | －0010 | － 259 | 300 | 8080020 | 452 | 0.159 | \％006 | 13780 | 180 | －0080 | 2 | －50 | ${ }^{31}$ | $\cdots$ |
| umame | 120875 | HET | Na | m | N／A | нa | NA | m | ${ }^{\prime \prime}$ | NA | $\stackrel{ }{*}$ | m | $\cdots$ | Na | $\cdots$ | or | 378 | 78 －00050 | 1400 | －0040 | 80.9 | ＊0．0．10 | －at | 33 | －080020 | 813 | 0.168 | －0010 | ${ }^{14850}$ | 102 | ＊0080 | $\stackrel{4}{4}$ | $\stackrel{3}{ }$ | m＊ | ma |
| msutam | 1ons | cear | ＋mex | M | 4 | $\stackrel{4}{4}$ | $\pm$ | $\cdots$ | \％ex | \％ 214 | cot | 0 m | \％ | 2 n | 20 | 200 | 4 | $\cdots$ seca | 100 | Sa | $4 \times$ | －ser | ${ }^{21}$ | 13 | $\stackrel{\sim}{5008}$ | 4 | $\cdots$ | $\stackrel{\sim}{4}$ |  | $\cdots$ | 284 | $\cdots$ | ＊＊0． | 4 | $\pm$ |
| masores | 110 m S | He | 28500 | m | $\infty$ | ${ }^{698}$ | 50008 | $\cdots$ | 20ma | 800850 | 20058 | －00050 | 2 m | 029 | 089 | $m$ | sa | $4{ }^{\text {n }}$ | $\stackrel{3}{4}$ | N＾ | Na | NA | m | $\stackrel{\text { sa }}{ }$ | N幺 | NA | NA | na | NA | ＊ | NA | 310 | ． 50 | 147 | 13.3 |
| nuarme | $10 \mathrm{~m} / 5$ | HE | Na | Na | N／A | na | m | in | Na | Na | va | m | $\stackrel{ }{*}$ | Na | va | $0{ }^{13}$ | 215 | 5 －00050 | 2170 | coxa | 107 | －0070 | $0{ }^{628}$ | ${ }^{12}$ | 20c0020 | $\cdot 10$ | 0.19 | －0010 | 14550 | \％ | ．0860 | $\stackrel{ }{*}$ | $\cdots$ | $n$ | $\stackrel{3}{ }$ |
| sxatimen | 100m | cos | ＊mos | 4 | $\stackrel{4}{4}$ | m | veou | $\cdots$ | 2 smin | 5 | asi | －ses | $\stackrel{\square}{1}$ | 80 | an | 200 | \＃ | 38 | 2x | 8817 | \％ | seal | $\stackrel{\text { az }}{ }$ | ＂ | samz | \％ | $\stackrel{14}{4}$ | ${ }_{4}$ | $\underline{10 x}$ | $\cdots$ | ${ }_{802}$ | $\underline{\pi}$ | \％ 180 | 1 | 4 |
| matam | 110 It 5 | Her | 398 | nv | 10 | ${ }^{125}$ | 1030 | 208 | －00050 | 20.085 | －00550 | －0056 | 0.49 | cos | 4010 | m | $m$ | 4 na | m | na | ma | NA | ne | M | NA | Na | Ns | NA | NA | ＊＊ | NA | 32 | ． 50 | 186 | 19 |
| umamas | $120 \pi 75$ | Het | $\cdots$ | $\cdots$ | N／ | na | $\stackrel{ }{n}$ | $\stackrel{ }{4}$ | na | ma | Na | M | $\cdots$ | $\cdots$ | $\cdots$ | 0.0232 | $\pm 3$ | 3 － $\operatorname{siosec}$ | n | ＜0040 | 34.0 | －0000 | － 34 | 43 | －0ccoso | 42 | cosso | －0010 | 1280 | 3 | ＊0880 | $\stackrel{\square}{4}$ | $\stackrel{\square}{4}$ | $\stackrel{ }{s}$ | \％ |
| vmapem | 四ns | E0\％ | ans | $\stackrel{4}{4}$ | $\cdots$ | $\stackrel{\sim}{\mu}$ | nim | $\approx$ | 4＊＊ | －380 | ata | － | 23 | 291 | Stir | 2 AB | $2 \pi$ | n $\frac{\sin }{}$ | $\pm$ | 68 | ${ }^{\text {m．}}$ | 4 sa | 38 | is | $\bigcirc$ | $\pm$ | 4 | 14 | \％ex | 24 | 26 | $\pm$ | 0 | 3 cr | 22 |
| maxram | 120815 | HeT | ${ }_{\text {mx }}$ | 208 | 324 | 282 | 1000 | ${ }_{18}$ | 200050 | 200650 | －0050 | 20050 | 0988 | con | 0010 | 20000 | ${ }^{99}$ | ${ }^{30} 5$ | \％os | 40.000 | 102 | 20010 | ${ }^{685}$ | ${ }^{12}$ | －000020 | 598 | cosso | －0010 | 3500 | व： | －0060 | 48 | －50 | 426 | 4.89 |
| wasrome | 10ase 5 | HeT | na | nom | wa | NA | NA | NA | NA | NA | $\cdots$ | $\cdots$ | $\stackrel{ }{\text { ma }}$ | m | $\cdots$ | 80010 | 54 | 54.80 .0050 | 2010 | －040 | 101 | 20040 | －${ }^{\text {as }}$ | ＂ 3 | －0 ccozo | 583 | cosso | －0010 | 2350 | 21 | －0080 | $\stackrel{ }{\square}$ | $\square$ | ${ }_{4}$ | $\stackrel{m}{ }$ |
| mascein | Somer | ors | $\pm$ | $\stackrel{4}{4}$ | $\stackrel{14}{4}$ | m | $\pm 100$ | ${ }^{1 \times}$ | $4{ }^{\text {cosen}}$ | $4 \times$ | 4901 |  | ${ }^{3 \pi}$ | 31 | si1 | 201 | $\stackrel{\square}{4}$ | － 1000 | me | 4008 | \＃ | －6m | $\ldots$ | $\stackrel{\square}{13}$ | 0．000 | So | ${ }^{1 \times}$ | $\stackrel{\text { m }}{ }$ | xan | 17 | כen | $\pm$ | งes | \％${ }^{\text {a }}$ | 10 |
| meabsm） |  | HET | 10000 | 37 | 315 | 277 | 2900 | 134 | －00050 | coasso | 20050 | 48055 | 023 | －0．4 | 4210 | 0.0110 | tas | － 0.0050 | 2058 | 8040 | \＃ | －0000 | －$\quad 0$ | 12 | －08cazo | 592 | cosso | －0010 | $2 \times$ | me | －0800 | $\infty$ | 450 | ＊ | 6.61 |
| Uns frumion | conis | HET | na | nas | NA | sa | N＊ | sa | Na | na | NA | NA | na | m | ns： | 80010 | 12 | 128 |  | 8040 | 14 | －0．000 | －${ }^{72}$ | 11. | －0coeos | 580 | ．0050 | －0010 | 3280 | 238 | －0060 | Ma | Na | NA | NA |
| mextmin |  | corn | \％ 10 | $\stackrel{\text { in }}{ }$ | $\stackrel{4}{4}$ | m | mm |  | $\sec 8$ | 80\％ | － 0 ase | 5 | $\pm 13$ | $\bigcirc$ | sur | 480 | $\cdots$ | $3{ }^{308}$ | 3 mo | 30 | 14 | －2901 |  | 1 |  | 4 | 4 | $\stackrel{\square}{4}$ | 30 | ${ }^{3} \mathrm{x}$ | P090 | $\pm$ | ＋40 | ${ }^{4}$ | $\bigcirc$ |
| umsan | Cens | het | 10380 | ${ }^{314}$ | ${ }^{328}$ | ${ }^{28}$ | 19780 | 152 | －00050 | coosso | －00050 | －00580 | 0233 | －014 | 40.10 | －0010 | 108 | ． 2.00050 | 2040 | 80.040 | 14 | ． 0010 | － 80 | $12 \pm$ | －0．0020 | 57 | c．0．50 | －0010 | 3270 | 218 | ． 0800 | 44 | －50 | 375 | 6.17 |
| unero Framem | 10815 | H日 | $\cdots$ | na | Na | Na | nes | ${ }^{3}$ | $\stackrel{ }{*}$ | $\cdots$ | $\cdots$ | $\cdots$ | na | n＊ | na | ＜090 | $1{ }^{12}$ | 12.80050 | 2080 | －0040 | 15 | －0010 | －${ }^{\text {e90 }}$ | ${ }^{127}$ | －000022 | ${ }^{878}$ | －0050 | －0010 | 3320 | 21 | －080 | $\cdots$ | ${ }^{\mathrm{Na}}$ | na | $\cdots$ |
| 4avmem． | ${ }^{\text {ma }}$ | Na | 39700 | ${ }^{2} 20$ | ${ }_{328}$ | as | 32600 | ${ }_{188}$ | sent | 0135 | 0005 | 0.357 | 151 | $2 \pi$ | 292 | 0132 | $\because$ | 3 － 2001 | ${ }^{22 \times}$ | 2017 | 15 | 4010 | ${ }^{728}$ | 13 | 800022 | $8{ }^{8}$ | 2198 | 20010 | 15500 | 180 | oces | Hi9 | $\times 100$ | 4 | 4 |
|  | 108000 | va | $280^{\circ}$ | N／A | Na | N／A | $500^{\prime}$ | $250^{\circ}$ | oxas | 07 | ， | 4 | 015 | 015 | 015 | 001 | 2 | 20085 | Na | 01 | $0{ }^{3}$ | 0015 | N＊ | $0.6{ }^{\text { }}$ | 0002 | ma | 005 | 0013 | va | MA | 11 | wa | w ${ }^{\text {A }}$ | Scomn | an |
| nemeremerum |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wefl hrephy | － | sers |  | ven |  | \％n |  |  |  |  |  |  |  |  | Acentesmen |  | Asmatawere |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | cas | cemb | cacm | cracm | cimel | Size | cment |  | giters | chem |  |  | Cnmore | 2umb |  |  | Fubancomer | Fuorme | 边 | Naphatume | manamorer | Arame |  |  |
|  |  |  | m | $\cdots$ | $\cdots$ | m | $\stackrel{4}{4}$ | $\cdots$ | $\cdots$ | $\cdots$ | $m$ | $\cdots$ | 5800 |  |  |  | \％720 |  |  |  |  |  |  |  |  | s700 |  | 0200 | mpoo |  | 4700 |  | zroo |  | зтио |  | 8270 | 4770 | 8300 | 3720 | \％220 | \％z80 | 5200 | ¢500 |
|  |  |  | mor | mph | mon | mor | max | mox | mpr | mor | mon | mar | mor |  | mon |  | mox |  | mr | mor |  | mor |  | mpa |  | mor |  | man | mg | mpa | men | mar | mor | man | man |
| man（ease | 100215 | HET | 4 |  | － 04 | －894 | ． 614 | \％ 04 | 104 | －0，4 | ． 014 | ass | ns |  | M |  | $\cdots$ |  | m | 4 |  | 4 |  | $\cdots$ |  | Na |  | $\stackrel{ }{\square}$ | $\stackrel{ }{ }$ | m＊ | $\cdots$ | $\square$ | me | $s$ | m |
| 2n： 2 mssan | 10815 | HET | 0683 | 0500 | 0351 |  | －614 | $\cdots$ | ． 24 | －04 | 1814 | －0， 14 | －unn |  | ， 50007 |  | 400079 |  | ． 200310 | $\times 000019$ |  | 2000619 |  | s．00019 |  | －0000 19 |  | ＜000019 | －000019 | ${ }^{2020019}$ | 000032 | ＜0000 | Sasy | ocooz | －00090 |
|  | 10775 | Her | ＜015 | 1813 | ． 604 | －6\％ | ． 614 | －04 | －0， | －0te | －04 | ． 814 | ．000020 |  | ＋000020 |  | －00020 |  | －000220 | ．00020 |  | －080820 |  | －200020 |  | －00020 |  | ＋000020 | －000020 | c000020 | ＊50020 | －000020 | ．00020 | －00080 | －000020 |
| 2matavens | 10775 | Her | ${ }^{2} 015$ | ${ }^{2} 015$ | ． 015 | 2004 | \％810 | －0， | －0\％ | ${ }^{2} 019$ | 184 | －204 | Na |  | Na |  | Na |  | Ma | Na |  | $\cdots$ |  | Na |  | $\mu$ |  | in | ke | Nk | \％ | Na | va | Na | NA |
|  | zams | HET | －015 | 2015 | 4015 | －013 | －81） | ．018 | ． 819 | $\times 013$ | －013 | －013 | $\cdots$ |  | Na |  | ＊ |  | m | ＊＊ |  | ${ }^{*}$ |  | $\stackrel{ }{*}$ |  | $\stackrel{ }{4}$ |  | $\cdots$ | m | $\cdots$ | $\cdots$ | m | m | $\cdots$ | $\cdots$ |
| Mrs（12－7） | 1tasia | Her | 1215 | －613 | －015 | 1013 | －013 | ． 019 | ．010 | 1213 | ．00 | $\cdots$ | $\cdots$ |  | $\cdots$ |  | $\stackrel{ }{ }$ |  | m | $\cdots$ |  | $\cdots$ |  | $4 \times$ |  | ＊＊ |  | m | m | \％ | $\cdots$ | mas | ra | m | $\cdots$ |
| mwsfo | want | HET | －015 | 2015 | 0.15 | ． 813 | － 017 | ． 012 | 203 | $<013$ | ${ }^{2013}$ | －013 | Na |  | Na |  | $\stackrel{ }{*}$ |  | na | $\stackrel{ }{*}$ |  | $\cdots$ |  | ＊ |  | M |  | ${ }^{\text {Na }}$ | m | Na | $\stackrel{ }{4}$ | Na | N＊ | Na | NA |
| matmman | Na | Na | 0683 | 0.5 | 2.36 | $3 \times$ | － 0 | 4 | －014 | 10.4 | 10.4 | 0.195 | 20872 |  | c0002 |  | －0080） |  | 80002 | 180002 |  | 40002 |  | －0002 |  | ．00002 |  | 80008 | 40002 | 80002 | Occos3 | 80002 | 2007 | 00002 | 40608 |
| Rever | 1020005 | Na | 32 | 015 | 619 | 315 | $0 \cdot 3$ |  | 015 | 015 | 73 | 015 | 000082 |  | 0087 |  | ot |  | oca 3 | S007\％ |  | 30002 |  | 00093 |  | 0008 |  | 00016 | 0002 | ${ }_{6} 15$ | 0024 | 00337 | 001 | 0.18 | 0018 |

Recin giarta






