3R - 266

# GENERAL CORRESPONDENCE

YEAR(S):

| ۰<br>•   |   | Bi  | 1 0/50%  |
|--|---|---|--|
| District I       State         P.O. Box 1980, Hobbs, NM       Energy, Minerals and         District II       P.O. Drawer DD, Artesia, NM 88211         District III       OIL CONSI         1000 Rio Brazos Rd, Aztec, NM 87410       P         Santa Fe | te of New Mexico<br>d Natural Resources Department<br>RECE<br>ERVATION DIVISION<br>.O. Box 2088<br>c, New Mexico 87504-2088 MAR 0 3 | IVED<br>3 1999                            | SUBMIT I COPY TO<br>APPROPRIATE<br>DISTRICT OFFICE<br>AND I COPY TO<br>SANTA FE OFFICE |
| PIT REMEDIAT   | ENVIRONMENT   |   | <u>DRT</u>   |
| Operator : <u>Keystone Energy</u>  |   | 35  | <u>.</u>   |
| Address: P.O. Box 962 Farmington, NM 87499   | ······································  | · · · · · · · · · · · · · · · · · · ·     |  |
| Facility Or: <u>Kirtland 18-1</u><br>Well Name   |   |   |  |
| Location: Unit or Qtr/Qtr Sec <u>A</u> Sec <u>32</u> T <u>29N</u>  | R 14W County San Juan   |   | a franciska<br>Maria I.M   |
| Pit Type: Separator Dehydrator   | Other Spill   |   | No Palat   |
| Land Type: BLM, State,   | FeeX, Other   |   |  |
| Pit Location:       Pit dimensions:       Length       25 ft         (Attach diagram)       Reference:       wellhead       X         Footage from reference:       60 ft         Direction from seference:       80                                     | , width <u>25 ft</u> , depth <u>12</u><br>other   | <u>ft</u>                                 |  |
|  | of West South   | <br>X                                     |  |
| Depth to Ground Water: <u>10 feet</u><br>(vertical distance from<br>contaminants to seasonal<br>highwater elevation of<br>ground water)  | X Less than 50 feet<br>50 ft to 99 feet<br>Greater than 100 feet  | (20 points)<br>(10 points)<br>( 0 points) | 20   |
| Wellhead Protection Area:  |   |   |  |
| (less than 200 feet from a private   | XYes  | (20 points)                               | 20   |
| domestic water source, or: less than<br>1000 feet from all other water sources).   | No  | ( 0 points)                               | 20   |
| Distance to Surface Water:<br>(Horizontal distance to perennial<br>lakes ponds rivers streams creeks   | X Less than 200 feet<br>200 feet to 1000 feet   | (20 points)<br>(10 points)                | 20   |
| irrigation canals and ditches.)  |   | ( o points)                               | 20   |
| P:\pits\PrrC@.WK3  | RANKING SCORE (TOTAL  | L POINTS):                                | 60   |

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| Date Remediation Started:   | <u>9/11/98</u>  |   | _ Date (                                      | Completed:   | 9/11/9                       | 3   |
|---|---|---|---|--|------------------------------|---|
|   | Excavation  | <u> </u>  |   | Approx. cubi                                       | c yards                      | 280   |
|   | Landfarmed  | <u>X</u>  |   | Insitu Bioren                                      | ediation                     |   |
|   | Other   |   |   | <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>       | _                            |   |
| Remediation Method:   | Onsite  | X   | Offsite_                                      |  |                              |   |
| (Check all appropriate  |   |   |   |  |                              | · · · · · · · · · · · · · · · · · · ·         |
| sections)   |   |   |   |  |                              |   |
| roundwater levels. Groundwater<br>egulatory guidelines, Excavate<br>ested and provided concentratio | er samples from each<br>al soils were transpo<br>ns below NMOCD | test hole were<br>rted to Keyston<br>and BLM guid | analyzed using<br>les Energys yar<br>e lines. | , the above protoc<br>d and land farmed            | ol. Results (<br>. On 2/11/9 | of cach sample are with<br>9 the landfarm was |
| Ground Water Encountered  | l: No   |   | Yes   | _X   | Dept                         | h10   |
| Final Pit: Sa<br>Nosure Sampling:<br>If multiple samples,<br>ttach sample results                   | mple location   | Center Bot  | tom   |  |                              |   |
| nd diagram of sample Sa<br>positions and depths)  | mple depth <u>12 f</u>  | èet   |   |  |                              |   |
| Sa  | nple date9/ ]   | 1/98  |   | <u> </u>   | Sample tir                   | ne <u>15:17</u>                               |
| Sa  | nple Results  |   |   |  |                              |   |
|   | Benzene(pp:   | m)  | ND  | _  |                              |   |
|   | Total BTEX  | (PPM)   | ND  |  |                              |   |
|   | Field Heads   | pace (ppm)  | 3   |  |                              |   |
|   |   |   |   |  |                              |   |
|   | ТРН   | <5.   | 0   |  |                              |   |
| Ground Water Sample: Yes  | TPHX  | < 5.<br>No  | 0<br>(if ye                                   | s, attach sample re                                | esults)                      |   |
| Ground Water Sample: Yes<br>HEREBY CERTIFY THAT T<br>DF MY KNOWLEDGE AND F                          | TPHX<br>HE INFORMATION<br>BELIEF.                               | < 5.<br>No<br>N ABOVE IS 7                        | 0 (if ye                                      | s, attach sample re<br>DMPLETED TO                 | esults)<br><br>THE BEST      |   |
| Ground Water Sample: Yes<br>HEREBY CERTIFY THAT T<br>DF MY KNOWLEDGE AND H<br>DATE 3/1/99           | TPH<br>X<br>HE INFORMATION<br>BELIEF.                           | < 5. No N ABOVE IS 7 PRINT                        | 0 (if ye<br>(if ye<br>FRUE AND CO<br>ED NAME] | s, attach sample ro<br>DMPLETED TO<br>Connie Bensc | sults)<br>THE BEST           |   |

Client : Keystone Resources

Date Started : September 11, 1998 Date Completed : September 11, 1998.

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| Location : Kirtland 18-1               |             |               |           |                              |
|--|-------------|---------------|-----------|------------------------------|
| Quad : Section :                       |             |               |           |                              |
| Range : Township:                      |             | ł             |           |                              |
| Spiil                                  | Sample #    | Location      | MVO       |                              |
| Reference : 60 feet S 80 degrees E     |             | N. Wall @ 9'  | 9         | <b>11</b>                    |
| of wellhead                            | 2           | S. Wall @ 9'  | 4         |                              |
| Initial Size :                         | в           | E. Wall @ 9'  | თ         |                              |
| Final Size : 25' × 25' × 12' deep      | 4           | W. Wall @ 91  | 3         | (see attached diagram)       |
| Yds. Excavated : 280 cy                | 5           | C.Btm.@12'    | 3         |                              |
| Depth to Groundwater. <50'             | 9           |               |           |                              |
| Nearest Water Source: <1000'           | ~           |               |           |                              |
| Nearest Surface Water: <100'           | 8           |               |           |                              |
|  | 6           |               |           |                              |
| Ranking Score: 60                      | 10          |               |           |                              |
| TPH Closure Standard: 100              | 11          |               |           |                              |
|  | 12          |               |           |                              |
| Comments : Top soil - 12' Soil is mois | ist, brown, | light brown s | andy -    |                              |
|  | חמווובובו   |               | יט שומא   |                              |
| A sample from the center               | bottom at   | 112' and east | wall @ 9' |                              |
| sent to IML for GRO/DRO                | analysis.   |               |           |                              |
| Pit Profile : North to South :         |             |               |           | Pit Profile : East to West : |
| North                                  |             |               | South     | East                         |
|  |             |               |           |                              |
|  | •           |               |           |                              |
|  |             | 2             |           | 3 5                          |
|  |             |               |           |                              |

Environmental Specialist : \_ <u>FM</u>\_\_\_\_

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**Cimarron Oilfield Services** 

Page 1 of 1



|  | GASOLINE R   | ANGE ORG                 | ANICS - GRO   |  |
|--|--|--------------------------|---|--|
|  |  | KEYSTONE                 |   |  |
| Project ID:<br>Sample ID:<br>Lab ID:<br>Sample Matrix:<br>Condition: | Kirtland 18-1<br>Bottom @ 12'<br>0398G05350<br>Soil<br>Cool/Intact |                          | Report Date:<br>Date Sampled:<br>Date Received:<br>Date Analyzed: | 10/01/98<br>09/11/98<br>09/14/98<br>09/18/98 |
| TPH GAS-RANGE (  | MOD EPA 8015)  | RESULT                   | DETECT  | ON LIMIT                                     |
| Gasoline-Range Petr  | oleum Hydrocarbons   | <5.0                     | 5.0 n   | ng/kg  |
|  |  |                          |   |  |
|  | ND - Anaiyte   | not detected at the stat | ed detection limit.   |  |
| Reference:   |  |                          |   |  |
| Comments:  |  |                          |   |  |

Reported By:

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Inter Mountain Laboratories, Inc.

Reviewed By:

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2506 W. Main Street Farmington, New Mexico 87401 Inter<sup>1</sup>Mountain Laboratories, Inc.

2506 W. Main Street Farmington, New Mexico 87401

## **DIESEL RANGE ORGANICS - DRO**

#### **KEYSTONE**

| Project ID:    | Kirtland 18-1 | Report Date:   | 10/01/98 |
|----------------|---------------|----------------|----------|
| Sample ID:     | Bottom @ 12'  | Date Sampled:  | 09/11/98 |
| Lab ID:        | 0398G05350    | Date Received: | 09/14/98 |
| Sample Matrix: | Soil          | Date Analyzed: | 09/18/98 |
| Condition:     | , Cool/Intact |                |          |
|                | `             |                |          |
| C              |               |                |          |
|                |               |                |          |

ND - Analyte not detected at the stated detection limit.

**Reference:** 

Comments:

Reported By:

Reviewed By:

| interilliountain Laboratories, inc. | Inter | n n | lountain | Laboratories, Inc. |
|-------------------------------------|-------|-----|----------|--------------------|
|-------------------------------------|-------|-----|----------|--------------------|

2506 W. Main Street Farmington, New Mexico 87401

## **GASOLINE RANGE ORGANICS - GRO**

#### **KEYSTONE**

| Project ID:    | Kirtland 18-1 | Report Date:   | 10/01/98 |
|----------------|---------------|----------------|----------|
| Sample ID:     | E. Wall @ 9'  | Date Sampled:  | 09/11/98 |
| Lab ID:        | 0398G05351    | Date Received: | 09/14/98 |
| Sample Matrix: | Soil          | Date Analyzed: | 09/18/98 |
| Condition:     | Cool/Intact   |                |          |
|                | `             |                |          |
|                |               |                |          |

| TPH GAS-RANGE (MOD EPA 8015)          | RESUL | T DETECTION LI | MIT |
|---------------------------------------|-------|----------------|-----|
| Gasoline-Range Petroleum Hydrocarbons | <5.0  | 5.0 mg/kg      |     |

ND - Analyte not detected at the stated detection limit.

**Reference:** 

Reported By:

Reviewed By:

| Inter Mountair | ı La | boratori | es, l | nc. |
|----------------|------|----------|-------|-----|
|----------------|------|----------|-------|-----|

2506 W. Main Street Farmington, New Mexico 87401

# **DIESEL RANGE ORGANICS - DRO**

### **KEYSTONE**

| Project ID:    | Kirtland 18-1 | Report Date:   | 10/01/98 |
|----------------|---------------|----------------|----------|
| Sample ID:     | E. Wall @ 9'  | Date Sampled   | 09/11/98 |
| Lab ID:        | 0398G05351    | Date Received: | 00/14/09 |
| Sample Matrix: | Soil          | Date Applyzed  | 09/14/90 |
| Condition:     | Cool/Intent   | Date Analyzeo: | 09/18/98 |
| Condition.     | , Coommact    |                |          |
|                | <b>N</b>      |                |          |
|                |               |                |          |

ND - Analyte not detected at the stated detection limit.

**Reference:** 

Reported By:

Reviewed By:

| 1633 Terra Avenue<br>Sheridan, Wyoming 8280<br>Telephone (307) 672-894                    | Relinquished by:(Signature) | Retinquished by: (Signature) | Helinquished by: (Signature) |                 |   |                        |             |        |          |         |         |   |          |             |           | Charles A    | Buttom a 12 2  | Sample No./<br>Identification | Sampler (Signature)   | Client/Project Name       | Inter-Mourtain<br>Laboratories, Inc. |
|---|-----------------------------|------------------------------|------------------------------|-----------------|---|------------------------|-------------|--------|----------|---------|---------|---|----------|-------------|-----------|--------------|----------------|-------------------------------|-----------------------|---------------------------|--------------------------------------|
| Inte  |                             |                              |                              |                 |   |                        |             |        | (        |         | 4       | / |          |             |           | 4/11/48 1521 | 1/1/98 3.17 en | Date Time L                   | hall                  | No. and the second second |                                      |
| Br-Mountain Lab<br>2506 West Main S<br>718 Farmington, NM 8<br>8945 Telephone (505) 3     | Date                        | Date 9/14/9x                 | 9/1/9/0416                   | 3               |   |                        | /           |        |          |         |         |   |          |             |           |              | ()             | ab Number                     | Chain of Custody Tape | Project Location          | CHAIN OF C                           |
| Oratories, Inc.   | Time Received by            | Time Received by:            | IIME RECEIVED DYS            |                 |   |                        |             |        |          |         |         |   |          |             |           | Sail .       | 501/           | Matrix                        | No.                   | 1-8-1                     | SUSTODY REC                          |
| h Drive 11183 Sta<br>h Drive 11183 Sta<br>ntana 59718 College S<br>16) 586-8450 Telephone | aboratory: (Signature)      | (Signature)                  | - All A Manuel               |                 |   |                        |             |        |          |         |         |   |          |             | <br> <br> | X            |                |                               | ers                   | ANALYSE                   | ORD                                  |
| ate Hwy. 30<br>tation, TX 77845<br>\$ (409) 776-8945                                      | Da                          | Da                           |                              |                 | - | $\theta$ $- \pi \mu H$ | All to char | rc Gdo | app: 3)  | 1 Finde |         |   | ~//~ /~  | the the met | Colect -r | Frank 9      | 9-15-99        |                               | Remarks               | S / PARAMETERS            |                                      |
| 54132   | ate Time                    | ate Time                     | ate lime                     | -<br> <br> <br> |   | K Sul .                | a FIEN      | 0101   | A & weda | Caller  | : 15-98 |   | Chil- Ma | all of BIEL | aquoted   | N. Doneld    | @ 108 min      |                               |                       |                           | -<br>. •                             |

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2506 W. Main Street Farmington, New Mexico B7401

## **VOLATILE AROMATIC HYDROCARBONS**

## Keystone

| Project ID:    | Kirtland 18-1   | Report Date:    | 09/21/98 |
|----------------|-----------------|-----------------|----------|
| Sample ID:     | South Test Hole | Date Sampled:   | 09/01/98 |
| Lab ID:        | 0398G05077      | Time Sampled:   | 1:52pm   |
| Sample Matrix: | Water           | Date Received:  | 09/03/98 |
| Condition:     | Cool/Intact     | Date Extracted: | NA       |
|                |                 | Date Analyzed:  | 09/17/98 |

| Target Analyte | Concentration (ppb) | Detection Limit (ppb) |
|----------------|---------------------|-----------------------|
| Benzene        | 0.2                 | 0.2                   |
| Toluene        | 3.0                 | 1.0                   |
| Ethylbenzene   | ND                  | 1.0                   |
| m,p-Xylenes    | ND                  | 1.0                   |
| o-Xylene       | NÐ                  | 1.0                   |

ND - Analyte not detected at the stated detection limit.

| Quality Control: | Surrogate              | Percent Recovery             | Acceptance Limits       |
|------------------|------------------------|------------------------------|-------------------------|
|                  | Bromofluorobenzene     | 92%                          | 70%-130%                |
| Reference:       | Method 5030, Purge and | Trap; Method 8021B, Aromatic | Volatile Organics; Test |

rence: Method 5030, Purge and Trap; Method 8021B, Aromatic Volatile Organics; Tes Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Revision 2, December , 1996.

Comments:

OPY

Review

Analyst/

# **VOLATILE AROMATIC HYDROCARBONS**

## Keystone

| Project ID:    |  |  |  |  |
|----------------|--|--|--|--|
| Sample ID:     |  |  |  |  |
| Lab ID:        |  |  |  |  |
| Sample Matrix: |  |  |  |  |
| Condition:     |  |  |  |  |

Kirtland 18-1 West Test Hole 0398G05075 Water Cool/Intact

| 09/21/98 |
|----------|
| 09/01/98 |
| 1:45pm   |
| 09/03/98 |
| NA       |
| 09/17/98 |
|          |

| Target Analyte | Concentration (ppb) | Detection Limit (ppb) |
|----------------|---------------------|-----------------------|
| Benzene        | ND                  | 0.2                   |
| Toluene        | 14.7                | 1.0                   |
| Ethylbenzene   | 2.7                 | 1.0                   |
| m,p-Xylenes    | 2.4                 | 1.0                   |
| o-Xylene       | ND                  | 1.0                   |

ND - Analyte not detected at the stated detection limit.

| Quality Control: | Surrogate   | Percent Recovery  | Acceptance Limits                             |  |
|------------------|---|---|---|--|
|                  | Bromofluorobenzene                                  | 78%   | 70%-130%                                      |  |
| Reference:       | Method 5030, Purge and<br>Methods for Evaluating So | Trap; Method 8021B, Aromatic \<br>olid Wastes, SW-846, United Sta | /olatile Organics; Test<br>ates Environmental |  |
|                  | Protection Agency, Revisi                           | ion 2, December , 1996.   |   |  |

**Comments:** 

Review

Analyst

## **VOLATILE AROMATIC HYDROCARBONS**

### **Keystone**

| Project ID:    |
|----------------|
| Sample ID:     |
| Lab ID:        |
| Sample Matrix: |
| Condition:     |

Kirtland 18-1 Mid Pit 0398G05076 Water Cool/Intact

Report Date:09/21/98Date Sampled:09/01/98Time Sampled:2:00pmDate Received:09/03/98Date Extracted:NADate Analyzed:09/17/98

| Target Analyte | Concentration (ppb) | Detection Limit (ppb) |
|----------------|---------------------|-----------------------|
| Benzene        | 0.3                 | 0.2                   |
| Toluene        | 1.8                 | 1.0                   |
| Ethylbenzene   | ND                  | 1.0                   |
| m,p-Xylenes    | 3                   | 1.0                   |
| o-Xylene       | 3.7                 | 1.0                   |

ND - Analyte not detected at the stated detection limit.

| Quality Control: | Surrogate  | Percent Recovery   | Acceptance Limits                             |  |
|------------------|--|--|---|--|
|                  | Bromofluorobenzene                                 | 77%  | 70%-130%                                      |  |
| Reference:       | Method 5030, Purge and<br>Methods for Evaluating S | Trap; Method 8021B, Aromatic<br>olid Wastes, SW-846, United St | Volatile Organics; Test<br>ates Environmental |  |

Protection Agency, Revision 2, December, 1996.

Analyst

Review

2506 W. Main Street Fermington, New Mexico 87401

# **QUALITY CONTROL / QUALITY ASSURANCE**

2506 W. Main Street Fermington, New Mexico 87401

## QUALITY CONTROL/QUALITY ASSURANCE VOLATILE AROMATIC HYDROCARBONS KNOWN ANALYSIS

Client: Project: Keystone Kirtland 18-1 Date Reported:09/18/98Date Analyzed:09/17/98

|              | Found<br>Result | Known<br>Result | Percent  | Acceptance |
|--------------|-----------------|-----------------|----------|------------|
| Parameter    | (ppb)           | (ppb)           | Recovery | Limits     |
| Benzene      | 21.2            | 20.0            | 106%     | 70 - 130%  |
| Toluene      | 21.6            | 20.0            | 108%     | 70 - 130%  |
| Ethylbenzene | 18.9            | 20.0            | 95%      | 70 - 130%  |
| m+p - Xylene | 42.0            | 40.0            | 105%     | 70 - 130%  |
| o - Xylene   | 21.7            | 20.0            | 108%     | 70 - 130%  |
|              |                 |                 |          |            |

| Quality Control: | Surrogate          | Percent Recovery | Acceptance Limits |
|------------------|--------------------|------------------|-------------------|
|                  | Bromofluorobenzene | <u>89%</u>       | <u>75-125%</u>    |

Reference:Method 5030, Purge and Trap; Method 8021B, Aromatic Volatile Organics;<br/>Test Methods for Evaluating Waste and Solid Wastes, USEPA,<br/>Revision 2, December, 1996.

Analys

Reviewed by\_

|                                    |                 |             |                              | Ň   |             |                      |     |   |   |                                       |           |   |       |        |   |     |   | ae           | ۰.                                    | ae           | +                                     | ae           | 1  | \        | 10  |
|------------------------------------|-----------------|-------------|------------------------------|---|-------------|----------------------|-----|---|---|---------------------------------------|-----------|---|-------|--------|---|-----|---|--------------|---------------------------------------|--------------|---------------------------------------|--------------|--|----------|---|
|                                    |                 |             |                              | (; , x<br>- x<br>- x  |             |                      |     |   |   |                                       | -<br>     |   | 1 × 1 | 4 1 11 |   |     |   | ц<br>Ц       |                                       | e<br>F       |                                       | T            | - 3 <del>-</del>                         | }        | 54129   |
|                                    | ß               | marks       |                              | et a said   | ~ ~         |                      |     |   |   |                                       |           |   |       |        |   |     |   | Da           | · · · · · · · · · · · · · · · · · · · | Dai          | _                                     | Da           | C . /                                    | >        |   |
|                                    | PARAMETEI       | Rer         |                              | 1-1-1-1   |             |                      |     |   |   | · · · · · · · · · · · · · · · · · · · |           |   | 2.    |        |   |     |   | /            |                                       |              |                                       |              |  |          | Hwy. 30<br>3n, TX 77845<br>39) 776-8945               |
|                                    | NALYSES /       |             |                              |   |             |                      |     |   |   |                                       |           |   |       |        |   | 5   | / |              |                                       | )            |                                       | ature)       | (  |          | Telephone (4)   |
| Ω                                  | A               | X           | <i><b><del>7</del></b>19</i> | 7   | 1           | ١                    |     |   |   |                                       |           |   |       |        |   | -'/ |   | ture)        | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | ture)        |                                       | ory: (Sign   | e la |          | s<br>59718<br>-8450                                   |
| COR                                |                 | 013         | No. of<br>Natio              | </td <td><u>ا</u>ړ</td> <td>fi</td> <td></td> <td></td> <td></td> <td>· · · · ·</td> <td></td> <td></td> <td> </td> <td></td> <td>/</td> <td></td> <td></td> <td>y: (Signat</td> <td>11.</td> <td>y: (Signa</td> <td></td> <td>y laborate</td> <td>127</td> <td></td> <td>arch Drive<br/>Montana :<br/>(406) 586</td> | <u>ا</u> ړ  | fi                   |     |   |   | · · · · ·                             |           |   |       |        | / |     |   | y: (Signat   | 11.                                   | y: (Signa    |                                       | y laborate   | 127                                      |          | arch Drive<br>Montana :<br>(406) 586                  |
| DY RE(                             |                 |             |                              |   |             |                      |     |   |   |                                       |           |   |       | /      |   |     |   | Received b   |                                       | Received t   |                                       | Received t   |  | es, Inc. | 1160 Rese<br>Bozeman, I<br>Telephone                  |
| JSTO                               | 3<br>  \<br>  \ | Ö           | Matrix                       | イモナ   |             |                      |     |   |   |                                       |           |   |       |        |   |     |   | Time         | 7.56                                  | Time         | いたい                                   | Time         |  | ratori   | eet<br>401<br>5-4737                                  |
| OF CI                              | t Location      | tody Tape N |                              | 11-11   |             |                      |     |   |   |                                       |           |   | i -   |        |   |     |   | Date         | 24/2/0                                | Date         |                                       | Date         |  | in Labo  | Vest Main Str<br>gton, NM 87<br>one (505) 32(         |
| HAIN                               | Projec          | in of Cus   | mber                         |   |             |                      |     |   |   |                                       |           | / |       |        |   |     |   |              |                                       |              |                                       |              |  | ounta    | Z<br>2506 V<br>Telepho                                |
| Ċ                                  |                 | Cha         | Lab Nu                       |   |             |                      |     |   |   |                                       | <br> <br> |   |       |        |   |     | 1 |              |                                       |              |                                       |              |  | Inter-M  | cle<br>g 82718<br>682-8945                            |
|                                    |                 | 0           | Time                         | 15 67   | 1-2/22      | {<br> <br> <br> <br> |     |   |   |                                       |           |   |       |        |   |     |   |              | (;<br>()                              |              |                                       |              |  |          | Phillips Cir<br>te, Wyomin<br>hone (307)              |
|                                    |                 | )           | Date                         | 71,100  | + 1, 1.20   | 2/1/4                |     |   | / | ;                                     |           |   |       |        |   |     |   | 7            |                                       |              |                                       |              |  |          | 1701<br>5 Telep                                       |
| <b>e</b> .                         | ime<br>t, , //r | ure)        | lo./<br>tion                 | Hate-   | 7           | -1/10                |     |   | / |                                       |           |   |       |        |   |     |   | Signature)   | - Mark                                | Signature)   | · · · · · · · · · · · · · · · · · · · | Signature)   |  |          | venue<br>/oming 8280<br>07) 672-894                   |
| Inter-Mourtain<br>aboratories, Inc | Project Ni      | ler: (Signa | Sample N<br>Identificat      | 3 1055  | ··· ··· ··· | 4 75-1               |     | / |   |                                       |           |   |       |        |   |     |   | uished by: ( |                                       | dished by: ( | i i lui                               | uished by: ( |  |          | <b>G</b><br>633 Terra A<br>heridan, W)<br>slephone (3 |
| -                                  | Client          | Samp        |                              | 1 2   | 121         |                      | , / |   |   |                                       |           |   |       |        |   |     |   | reling       |                                       | Relinq       | · · · ·                               | Reling       |  |          | U = 0 F   |

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Client : Keystone Energy

Date Started : 9/1198 Date Completed : 9/11/98.

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| Location:     Kirtland 18.1     Landtarm       Quad:     A     Section:     32       Quad:     A     Section:     32       Renge:     14W     Township:     29N       Reterace:     14W     Township:     29N       Reterace:     12     ND       Reterace:     14W     Township:     29N       Reterace:     14W     Township:     29N       Reterace:     2     ND       Initial Size:     70 x 140'     4       Timal Size:     70 x 140'     5       Torstower States     2100'     6       Rearest Water Surface Water     21000'     12       Rearest Experimental Stream:     5000     12       Rearest Experimental Stream:     5 assert to 1ML for GR/DRO     analysis.  |   | -                               |               |           | Overview of Location and Sampling : |
|---|---|---------------------------------|---------------|-----------|-------------------------------------|
| Quad:     A     Section:     32       Range:     14W     Township:     29N       Reternce:     14W     Township:     29N       Reternce:     1     1     ND       Reternce:     2     2     ND       Reternce:     2     2     ND       Reternce:     2     1     ND       Reternce:     1     0     ND       Reternce:     0     1     ND <tr< th=""><th>ocation : Kirtland 18-1 Landfan</th><th>E</th><th></th><th></th><th></th></tr<>  | ocation : Kirtland 18-1 Landfan                               | E                               |               |           |                                     |
| Range :     14W     Township:     29N       Reference ::     2     0       Reference ::     2     1     0       Reference ::     2     1     0       Initial Size ::     7 × 140     0     0       Final Size ::     3     0     0       Final Size ::     -100     6     0       Depth to Groundwater:     -1000     7     0       Nearest Stander 363     -1000     9     0       Nearest Stander 363     -1000     9     0       Nearest Stander 363     -1000     7     0       Nearest Stander 363     -1000     9     0       Comments :     Soil most.     -1000     9       FPI Closure Standard:     -5000     11     0       Comments :     Soil most.     0     13       Comments :     Soil most.     -1000     analysis.       A sample # 2 was sent to IML for GRO/ORO     analysis.     Pit Profile : Korth to South :   | uad : A Section :   | 32                              |               |           | see attached diagram                |
| Reference :       Sample #       Location       OVM         Initial Size :       70'x 140'       2       2       ND         Initial Size :       70'x 140'       2       2       ND         Final Size :       70'x 140'       3       3       ND         Yrds. Exervated 363       5       70'x 140'       4       10'x 140'         Vrds. Exervated 363       >100'       6       10'x 140'       10'x 140'         Vrds. Exervated 363       >100'       7       10'x 140'       10'x 140'         Vrds. Exervated 363       >100'       7       10'x 140'       10'x 140'         Nearest Vater Surface Water:       >100'       7       10'x 140'       10'x 140'         Nearest Ephemeral Stream:       >100''       9       10'x 140'       10'x 140'         Nearest Ephemeral Stream:       >100''       12'x 10'       10'x 140'       10'x 140'         FPH Closure Strandard :       500'       12'x 10'x 10'x 10'x 10'x 10'x 10'x 10'x 10   | ange : 14W Township:  | 29N                             |               |           |                                     |
| Initial Size :<br>Final Size : 70'x 140'<br>Yrds. Exevated 363<br>Depth to Groundwater:<br>Nearest Surface Water:<br>Nearest Surface Water:<br>Profile : North to South :<br>Pit Profile : North to South :<br>Pit Pit Profile : North :<br>Pit Pit Pit Pit Pit Pit Pit Pit Pit Pit   | teference :   | Sample #                        | Location<br>1 | MVO       |                                     |
| Final Size:       70 × 140'       4       4         Yrds.       Excavated 363       5       6         Prefit to Groundwater:       >1000'       7       6         Nearest Surface Water:       >1000'       9       0         Nearest Surface Water:       >1000'       9       0         Nearest Surface Water:       >1000'       9       0         Nearest Surface Water:       >000'       10       0         PEPO Ranking Score:       0       12       0         TPH Closure Standard:       5000       11       0         Comments:       Soil moist. no staining and no odor       analysis.         A sample # 2 was sent to IML for GRO/DRO       analysis.       Pit Profile : East to West :  | nitial Size :   | Nω                              | 3 8           |           |                                     |
| Depth to Groundwater:       >100°       6       0         Nearest Water Source:       >1000°       7       0         Nearest Surface Water:       >1000°       8       0         Nearest Ephemeral Stream:       >1000°       8       0         Nearest Ephemeral Stream:       >1000°       1       0         Nearest Ephemeral Stream:       >1000°       1       0         Nearest Ephemeral Stream:       12       0       12         TPH Closure Standard:       5000       12       0         TPH Closure Standard:       5000       12       0         Comments:       Soil moist. no staining and no odor       A sample # 2 was sent to IML for GR0/DRO       analysis.         Pit Profile : North to South :   | inal Size: 70' x 140'<br>rds. Excavated  363                  | 5 P                             |               |           |                                     |
| Nearest Water Source:       >1300'       7       9         Nearest Surface Water:       >1000'       8       9         Nearest Surface Water:       >1000'       8       9         Nearest Surface Water:       >1000'       8       9         Nearest Surface Water:       >1000'       10       10         Nearest Surface Water:       0       10       10         Nearest Surface Water:       0       10       10         Percental Stream:       5000       11       10         TPH Closure Standard:       5000       12       10         Comments : Soil moist. no staining and no odor       A sample # 2 was sent to IML for GRO/DRO       analysis.         Pit Profile : North to South :       Pit Profile : North to South :       Pit Profile : East to West :   | Pepth to Groundwater: >100'                                   | و                               |               |           | 1 1                                 |
| Nearest Ephemeral Stream: <u>&gt;1000</u> <u>9</u> Nearest Ephemeral Stream: <u>&gt;1000</u> <u>10</u> EPO Ranking Score:<br>EPO Ranking Score: <u>5000 11</u> <u>Norther Standard</u> : <u>5000 12</u> <u>Solon 12</u> | learest Water Source: >1000<br>learest Surface Water: >1000   | ~ 8                             |               |           |                                     |
| EPO Ranking Score:       0       10       10         TPH Closure Standard:       5000       11       12         Comments :       Soil moist. no staining and no odor       12       12         Comments :       Soil moist. no staining and no odor       A sample # 2 was sent to IML for GRO/DRO       analysis.         Pit Profile : North to South :       Pit Profile : East to West :       Pit Profile : East to West :   | learest Ephemeral Stream: >1000'                              | 6                               |               |           |                                     |
| TPH Closure Standard:       5000       11       12         Comments :       Soil moist. no staining and no odor       12       analysis.         Comments :       Soil moist. no staining and no odor       analysis.         A sample # 2 was sent to IML for GRO/DRO       analysis.         Pit Profile : North to South :       Pit Profile : East to West :  | PO Ranking Score: 0   | 10                              |               |           |                                     |
| Comments : Soil moist, no staining and no odor<br>A sample # 2 was sent to IML for GRO/DRO analysis.<br>Pit Profile : North to South :<br>Pit Profile : North to South :  | PH Closure Standard: 5000                                     | 11                              |               |           |                                     |
| Comments : Soil moist. no staining and no odor<br>A sample # 2 was sent to IML for GRO/DRO analysis.<br>Pit Profile : North to South :<br>Pit Profile : East to West :  |   | 12                              |               |           |                                     |
| Pit Profile : North to South : Pit Profile : East to West :   | comments : Soil moist, no staining a A sample # 2 was sent to | and no odor<br>b IML for GRO/DF | õ             | analysis. |                                     |
| Pit Profile : North to South :  |   |                                 |               |           |                                     |
|   | oit Profile : North to South :                                |                                 |               |           | Pit Profile : East to West :        |

**Cimarron Oilfield Services** 

Page 1 of 1



## Inter-Mountain Laboratories, Inc.

| e (505) 326-4737 Fax<br>Client: | (505) 325-4182<br>Keystone |
|---------------------------------|----------------------------|
| Project:                        | Kirtland 18-1 Landfarm     |
| Sample ID:                      | Kirtland 18-1              |
| Lab ID:                         | 0399W00888                 |
| Matrix:                         | Soil                       |
| Condition:                      | Cool/Intact                |

2506 West Main Street, Farmington, NM 87401

 Date Reported:
 02/23/99

 Date Sampled:
 02/11/99

 Date Received:
 02/11/99

Date Analyzed: 02/17/99

|  | Analytical |           |       |
|--|------------|-----------|-------|
| Parameter                                  | Result     | PQL       | Units |
| Diesel Range Organics                      | <5         | 5         | mg/Kg |
| Diesel Range Organics as Diesel            | <5         | 5         | mg/Kg |
| Quality Control - Surrogate Recovery       | %          | QC LI     | mits  |
| o-Terphenyl(SUR-8015)<br>GRO - METHOD 8015 | 77         | 70 - 7    | 130   |
| Gasoline Range Organics                    | <5         | 5         | mg/Kg |
| Gasoline Range Organics as Gasoline        | <5         | 5         | mg/Kg |
| Quality Control - Surrogate Recovery       | %          | QC Limits |       |
| a,a,a-Trifluorotoluene(SUR-8015)           | 105        | 70 - 1    | 130   |

Reference: DRO - USEPA Method for Determination of Diesel Range Organics. Revision 2, February 1992.

WTPH-D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3,

October /1991. Reviewed/By: Sharon Willams, Organic Lab Supervisor