

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

OV
SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Energen Resources (Taurus Exploration) Telephone: (505) 326-6131

Address: 2198 Bloomfield Highway Farmington, NM 87401

Facility Or: McCroden B #2

Well Name

Location: Unit or Qtr/Qtr Sec I Sec 4 T 25N R 3W County Rio Arriba

Pit Type: Separator Dehydrator Other Production Unit

Land Type: BLM State Fee X Other

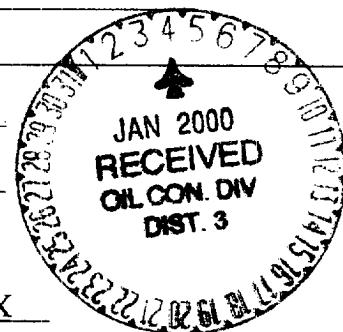
Pit Location: Pit dimensions: Length 25 ft width 25 ft depth 5 ft

(Attach diagram)

Reference: wellhead X other

Footage from reference: 55 ft

Direction from reference: 10 Degrees X East North X
West South



Depth to Ground Water: (vertical distance from contaminants to seasonal highwater elevation of ground water)	<u>>100 feet</u>	Less than 50 feet	(20 points)	
		50 ft to 99 feet	(10 points)	
	<u>X</u>	Greater than 100 feet	(0 points)	<u>0</u>

Wellhead Protection Area: (less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources).		Yes	(20 points)	
	<u>X</u>	No	(0 points)	<u>0</u>

Distance to Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches.)		Less than 200 feet	(20 points)	
		200 feet to 1000 feet	(10 points)	
	<u>X</u>	Greater than 1000 feet	(0 points)	<u>0</u>

P:\pits\PrrC@.WK3

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: 8/26/98 Date Completed: 2/11/99
Excavation X Approx. cubic yards 100
Landfarmed X Insitu Bioremediation _____
Other _____

Remediation Method: Onsite X Offsite _____
(Check all appropriate sections)

General Description of Remedial Action : On 8/27/98, the pit was excavated to a depth of 5 feet where bedrock was encountered. A soil sample was obtained from the center bottom of the pit at a depth of 5 feet utilizing U.S.E.P.A. protocol and evaluated for BTEX and GRO/DRO analysis. Excavated soils were landfarmed on site. On 2/11/99, the landfarm was tested and provided concentrations below NMOCD guidelines.

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit:

Closure Sampling:
(if multiple samples,
attach sample results

and diagram of sample
locations and depths)

Sample location Center Bottom

Sample depth 5 feet (Bedrock)

Sample date 8/27/98

Sample time 11:15

Sample Results

Benzene(ppm) ND

Total BTEX (PPM) 0.277

Field Headspace (ppm) 430

TPH <10

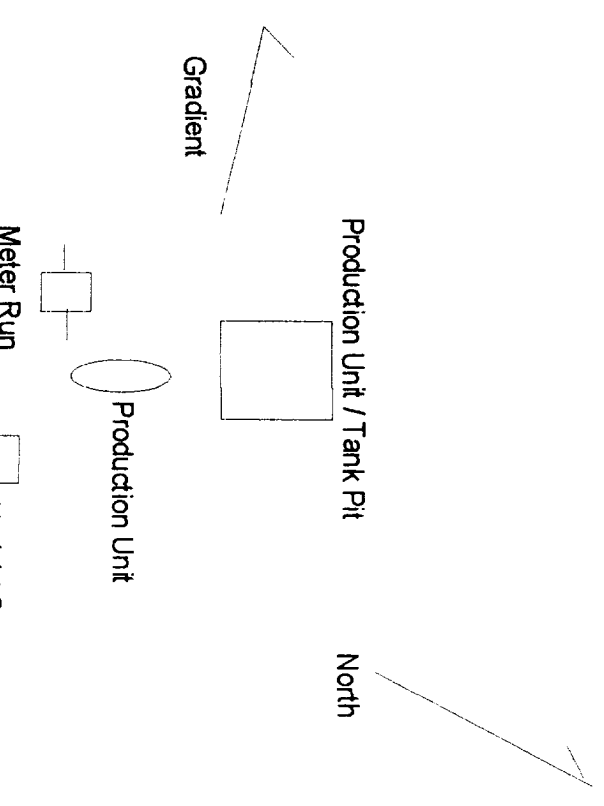
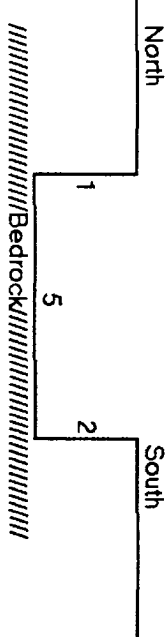
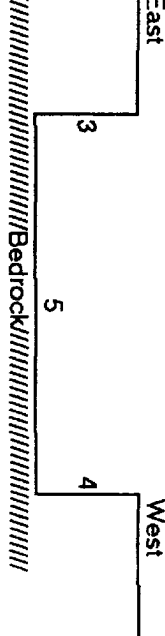
Ground Water Sample: Yes _____ No X (if yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETED TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE 12/22/99 PRINTED NAME Virgil Chavez

SIGNATURE Virgil Chavez and TITLE Environmental Specialist

Client : Taurus ExplorationDate Started : August 26, 1998 Date Completed : August 27, 1998

Location : <u>McCroden B # 2</u>		Overview of Location and Sampling :																																								
Quad : <u>H</u>	Section : <u>4</u>																																									
Range : <u>3 W</u>	Township: <u>25 N</u>																																									
Pit : Production Unit Reference : <u>55' N 10 E</u> from wellhead Initial Size : <u>15' x 15' x 2' deep</u> Final Size : <u>25' x 25' x 5' deep</u> Yds. Excavated : <u>100 cy</u>																																										
<table border="1"><thead><tr><th>Sample #</th><th>Location</th><th>OVM</th></tr></thead><tbody><tr><td>1</td><td>N. Wall @ 4'</td><td>109</td></tr><tr><td>2</td><td>S. Wall @ 4'</td><td>254</td></tr><tr><td>3</td><td>E. Wall @ 4'</td><td>68</td></tr><tr><td>4</td><td>W. Wall @ 4'</td><td>96</td></tr><tr><td>5</td><td>C. Bottom @ 5'</td><td>430</td></tr><tr><td>6</td><td></td><td></td></tr><tr><td>7</td><td></td><td></td></tr><tr><td>8</td><td></td><td></td></tr><tr><td>9</td><td></td><td></td></tr><tr><td>10</td><td></td><td></td></tr><tr><td>11</td><td></td><td></td></tr><tr><td>12</td><td></td><td></td></tr></tbody></table>		Sample #	Location	OVM	1	N. Wall @ 4'	109	2	S. Wall @ 4'	254	3	E. Wall @ 4'	68	4	W. Wall @ 4'	96	5	C. Bottom @ 5'	430	6			7			8			9			10			11			12				
Sample #	Location	OVM																																								
1	N. Wall @ 4'	109																																								
2	S. Wall @ 4'	254																																								
3	E. Wall @ 4'	68																																								
4	W. Wall @ 4'	96																																								
5	C. Bottom @ 5'	430																																								
6																																										
7																																										
8																																										
9																																										
10																																										
11																																										
12																																										
Depth to Groundwater: <u>>100'</u>																																										
Nearest Water Source: <u>>1000'</u>																																										
Nearest Surface Water: <u>>1000'</u>																																										
NMOC Ranking Score: <u>0</u>																																										
TPH Closure Standard: <u>5000</u>																																										
Comments : Top soil - 2' Soil is moist, brown, sandy/loam with heavy visible staining and a strong hydrocarbon odor. 2' - 5' Soil is moist, shale, with gray staining and a strong odor. 5' Bedrock - Solid sandstone Excavation limited on South wall due to separator. A sample from the center bottom @ 5' was sent to IML for GRO/DRO and BTEx analysis.																																										
Pit Profile : North to South :		Pit Profile : East to West :																																								
																																										

GASOLINE RANGE ORGANICS - GRO

Taurus Exploration U.S.A., Inc.

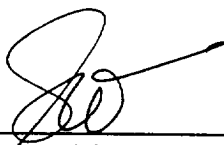
Project ID:	McCroden B#2 Sep. Pit	Report Date:	09/18/98
Sample ID:	C. Bottom @ 5'	Date Sampled:	08/27/98
Lab ID:	0398G04998	Date Received:	08/31/98
Sample Matrix:	Soil	Date Analyzed:	09/17/98
Condition:	Cool/Intact		


TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Gasoline-Range Petroleum Hydrocarbons	<5.0	5.0 mg/kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:


Reported By:


Reviewed By:

Diesel Range Organic - DRO

Taurus Exploration USA INC.

Project ID:	McCroden B#2 Sep. Pit	Report Date:	09/09/98
Sample ID:	Mc. B#2 C. Btm @ 5'	Date Sampled:	08/27/98
Lab ID:	0398G04998	Date Received:	08/28/98
Sample Matrix:	Soil	Date Analyzed:	09/04/98
Condition:	Cool/Intact		


TPH DIESEL-RANGE (MOD EPA 8015)	RESULT mg/Kg	DETECTION LIMIT
Diesel-Range Petroleum Hydrocarbons	<5.0	5.0 mg/kg
Total Extractable Petroleum Hydrocarbons	<5.0	5.0 mg/kg

Quality Control: Surrogate Percent Recovery Acceptance Limits

O-Terphenyl 93% 70-130%

Comments:

Reference: USEPA Manual SW-846, Methods, 3510,3550a, 8015Mod, Revision 2, 1996.
Hydrocarbons in Soil - 8015AZ, Revision 0, 1998.



Reported By:



Reviewed By:

VOLATILE AROMATIC HYDROCARBONS**Taurus Exploration U.S.A., Inc.**

Project ID: McCroden B#2 Sep. Pit
Sample ID: C. Bottom @ 5'
Lab ID: 0398G04998
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 09/18/98
Date Sampled: 08/27/98
Time Sampled: 11:15
Date Received: 08/31/98
Date Extracted: NA
Date Analyzed: 09/18/98

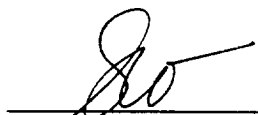
Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	10.0
Toluene	ND	50.0
Ethylbenzene	ND	50.0
m,p-Xylenes	277	50.0
o-Xylene	ND	50.0

ND - Analyte not detected at the stated detection limit.

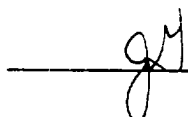
Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	N/A*	70%-130%

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

Comments: *Data not available.



Analyst



Review



CHAIN OF CUSTODY RECORD

Client/Project Name				Project Location		ANALYSES / PARAMETERS									
Sampler: (Signature)				Chain of Custody Tape No.		Remarks									
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers										
116 B#2 (Pipes) 7/27/98	11:15			Sec. 1	1	PAIS GRD/DIRD	PA20 BTEX								
<div style="text-align: center;">[Signature]</div>															
Relinquished by: (Signature)				Date	Time	Received by: (Signature)	Date	Time							
[Signature]				8/28/98	07:30	[Signature]	9/3/98	11:00							
Relinquished by: (Signature)				Date	Time	Received by: (Signature)	Date	Time							
[Signature]				8/31/98	8:05	[Signature]	9/3/98	8:05							
Relinquished by: (Signature)				Date	Time	Received by laboratory: (Signature)	Date	Time							
[Signature]						[Signature]	9/3/98	8:05							

Inter-Mountain Laboratories, Inc.

☐ 1633 Terra Avenue
Sheridan, Wyoming 82801
Telephone (307) 672-8945

☐ 1701 Phillips Circle
Gillette, Wyoming 82718
Telephone (307) 682-8945

☒ 2506 West Main Street
Farmington, NM 87401
Telephone (505) 326-4737

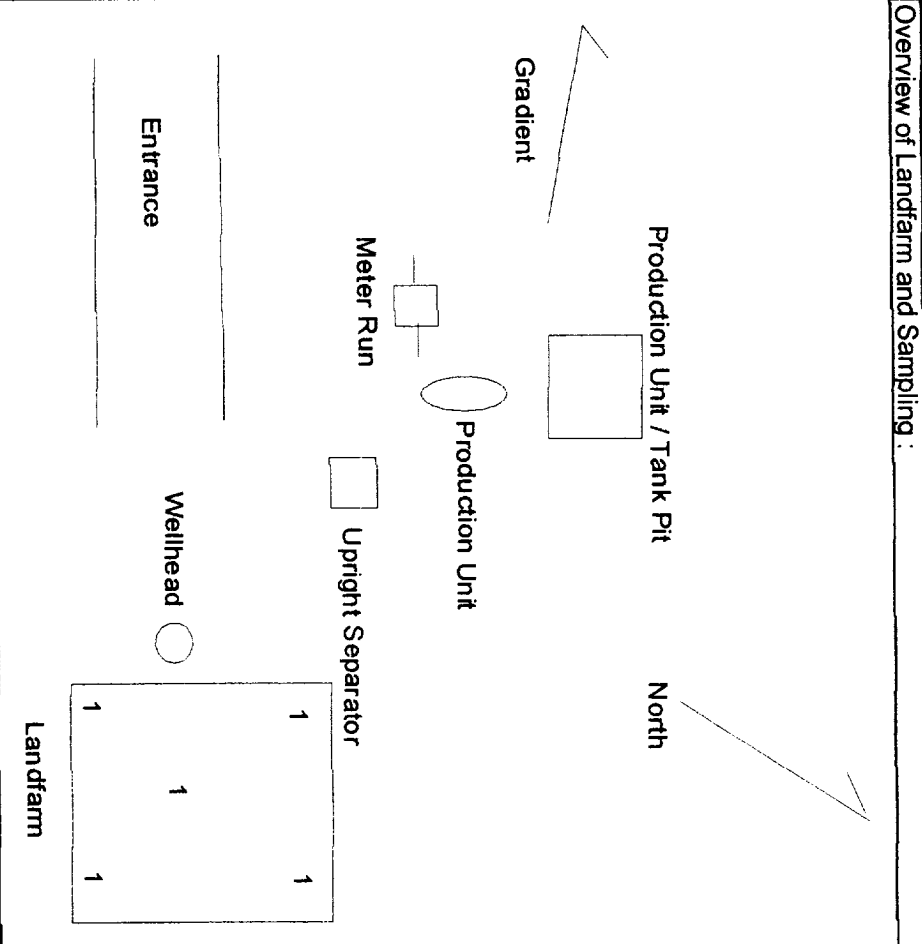
☐ 1160 Research Drive
Bozeman, Montana 59718
Telephone (406) 586-8450

☐ 11183 State Hwy. 30
College Station, TX 77845
Telephone (409) 776-8945

54124

Client : Taurus Exploration USA Inc.

Date Started : August 26, 1998 Date Completed : February 11, 1999

Location : <u>McCroden B # 2</u>			<div style="border: 1px solid black; padding: 5px;"> Overview of Landfarm and Sampling : </div>																																									
Quad : <u>H</u> Section : <u>4</u>																																												
Township: <u>25 N</u> Range: <u>3 W</u>																																												
Pit : <u>Production Unit</u> Reference <u>50' S 80 E</u> from wellhead. Size: <u>70' x 70' x .5'</u> Yds : <u>100</u> <u>1</u> <u>5 - Point Composites</u>																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Sample #</th> <th style="width: 25%;">Location</th> <th style="width: 10%;">OVM</th> </tr> </thead> <tbody> <tr><td>1</td><td>Comp 1</td><td>0.8</td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td></tr> </tbody> </table>			Sample #	Location	OVM	1	Comp 1	0.8	2			3			4			5			6			7			8			9			10			11			12			 <p>The diagram illustrates the layout of the landfarm and sampling locations. It includes a North arrow pointing towards the top right. Key features labeled include: 'Production Unit / Tank Pit' (a rectangle), 'Production Unit' (a circle), 'Meter Run' (a small square), 'Upright Separator' (a square), 'Wellhead' (a circle), and 'Entrance' (a line). A 'Gradient' arrow points towards the top left. A rectangular area labeled 'Landfarm' contains several points marked with the number '1'. The 'Production Unit' is connected to the 'Upright Separator' by a line.</p>		
Sample #	Location	OVM																																										
1	Comp 1	0.8																																										
2																																												
3																																												
4																																												
5																																												
6																																												
7																																												
8																																												
9																																												
10																																												
11																																												
12																																												
Comments : <u>Soil is moist, pale brown, sandy/loam, with minor staining and no hydrocarbon odor.</u>																																												
<u>A sample from composite # 1 was sent to IML for GRO/DRO analysis.</u>																																												
Environmental Specialist : <u>JE</u>																																												



Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Client: Energen Resources
Project: McCroden B2
Sample ID: Landfarm Comp 1
Lab ID: 0399W00906
Matrix: Soil
Condition: Cool/Intact

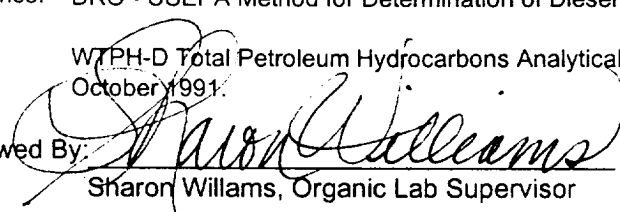
Date Reported: 02/23/99
Date Sampled: 02/11/99
Date Received: 02/12/99
Date Analyzed: 02/17/99

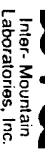
Parameter	Analytical Result	PQL	Units
DRO- METHOD 8015			
Diesel Range Organics	<5	5	mg/Kg
Diesel Range Organics as Diesel	<5	5	mg/Kg
Quality Control - Surrogate Recovery		%	QC Limits
o-Terphenyl(SUR-8015)		72	70 - 130
GRO - METHOD 8015			
Gasoline Range Organics	<5	5	mg/Kg
Gasoline Range Organics as Gasoline	<5	5	mg/Kg
Quality Control - Surrogate Recovery		%	QC Limits
a,a,a-Trifluorotoluene(SUR-8015)		112	70 - 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 Williams, Organic Lab Supervisor



CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location			ANALYSES / PARAMETERS		
Sampler: (Signature)			Chain of Custody Tape No.			Remarks		
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	Remarks		
16633 Terra Avenue	2-12-99	17:00		SAC	1	600 / 1000		
Sheridan, Wyoming 82801								
Telephone (307) 672-8945								
1701 Phillips Circle								
Gillette, Wyoming 82718								
Telephone (307) 682-8945								
2506 West Main Street								
Farmington, NM 87401								
Telephone (505) 326-4737								
1160 Research Drive								
Bozeman, Montana 59718								
Telephone (406) 586-8450								
11183 State Hwy. 30								
College Station, TX 77845								
Telephone (409) 776-8945								