1R - 348

REPORTS

DATE:

2001

1R0348

Presented to:

George O'Brien

PO Box 1717
Midland, Texas 79702

Bordages Well # 1

SW, SE Sec. 28, T19S, R38E of Lea Co. NM

Pit Remediation Report

From:

RHINO

Environmental Services, Inc

4007 Lovington Hwy.
Hobbs, New Mexico 88240

RHINO
Environmental Services, Inc.
P.O. Box 25547 • Albuquerque, New Mexico 87125
Phone (505) 247-4646 • Fax (505) 797-4874

March 15, 2001

George O'Brien
PO Box 1717
Midland, Texas 79702

Attn: Mr. O'Brien

RE: Bordages Well # 1 Pit Remediation Report

Dear Mr. O'Brien:

Rhino Environmental Services, Inc. (Rhino) would like to take this time to thank you for the opportunity to provide our professional services on the pit remediation/clean up that you have requested, for the Bordages Well # 1.

Please find in the following report the summary with finding and conclusions, on-site analysis, lab analysis, site map and job photos.

If you have any questions and/or need more data in regards to this project please call at any time.

Sincerely,

Allen Hodge, REM
Sr. Project Manager
Rhino Environmental Services, Inc.

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Summary/Overview

Summary/Overview

The Bordages Well # 1 pit site was remediated in accordance with the New Mexico Oil Conservation Divisions (NMOCD) guidelines for clean up of Unlined Surface Impoundments. It is our understanding that any potential contamination from the pit site was a result of activities associated with the production of oil and gas.

The potential contaminates of concern were mid to high-level concentrations of petroleum-based hydrocarbons and produced water that were lost due to overflows/tank cleaning, est. and absorbed by the surrounding near-surface soils.

The NMOCD regulates the remediation and disposal of non-domestic wastes resulting from the oil and gas industry. In addition, the NMOCD administers all Water Quality Act regulations pertaining to surface and ground water except sewage for the oil and gas industry. This authority includes the disposition of non-domestic, non-hazardous wastes at oilfield facilities.

The Bordages Well # 1 pit was located in the SW/SE of Sec. 28, T19S, R38E of Lea County New Mexico. The lands primary use is for pasture for cattle and the production of oil and gas.

The ground water depth data that was available for this section from the state engineers office showed the depth to ground water to be in the 45' range.

Pursuant to the NMOCD guidelines for clean up of Unlined Surface Impoundments, the clean up level for this spill will be at <100 ppm of TPH and ND for BTEX. The NMOCD has also asked for Chlorides, although there are no set standards it is a general rule to try and get back close to background levels.

Findings and Conclusions

1. The clean up operations were started in July of 2000. Rhino received verbal approval to proceed with clean up operations from Mrs. Donna Williams with the NMOCD based on our work plan dated May 8, 2000.

2. The old pit area was excavated to a depth of 27'. At this point, bottom samples were taken to confirm that the pit was within OCD guidelines for closure. The analysis showed that the TPH was at 110 ppm, BTEX was at ND and the chlorides were at 9,150 ppm. The lab analysis is under the OCD guidelines for closure. The landowner, McNeill Ranch was ok with all of the analysis except the chlorides. There requirements for the ranch are to get the chlorides back to background or less than 100 ppm.

3. Rhino mobilized back to the site to excavate additional chloride impacted material from the pit. The old pit was excavated from 27' down to a depth of 38'. At this point bottom samples were retaken and sent to a third party lab for analysis. The final lab analysis showed the THP at <10 ppm or ND the BTEX was ND and the chlorides were at 62 ppm. The lab analysis shows that all of the concerns of the OCD and the McNeill Ranch have been addressed

4. The old pit area was backfilled with clean caliche back to 3' from surface. The final top cover was clean topsoil; all of the backfill came from the McNeill Ranch.

5. This old pit cleaned up very well with vertical depth of impact only going 38" in depth and not reaching groundwater. All of the final lab analysis was well below the NMOCD guidelines for Unlined Surface Impoundments and below the ranch requirements for closure (see lab analysis for actual levels).

6. There was a total of 1,000cyds of impacted soils that were transported off site to Rhino's OCD land farm. This facility is an NMOCD approved and permitted site.

7. Due to the fact that this site was cleaned up to background levels, this site should pose very little environmental threat. There will be a final clean up once the well is plugged and abandoned. This will be to remove the impacted soils that were left under the tanks at the site.

8. The site was backfilled with clean backfill and dressed off back to grade. The site should also revegetate very well with upcoming spring rains.

9. Please refer to the rest of this report for the on-site analysis and final lab analysis for site closure.

On-Site Analysis

RHINO
Environmental Services, Inc.
P.O. Box 25547 • Albuquerque, New Mexico 87125
Phone (505) 247-4646 • Fax (505) 797-4874

SOIL ANALYSIS REPORT

Date: 8-10-00
Client: George O'Brien
Supervisor: Allen Hodge
Sample Matrix: Soil

Facility: Bordages Well # 1
Test Method: EPA 418.1
Order No. George O'Brien
Sample Received: Intact on site

	TPH		Depth	Location
SAMPLE NO. 1:	1,432	PPM	22'	Composite of pit bottom
SAMPLE NO. 2:	97	PPM	27'	Composite of pit bottom
SAMPLE NO. 3:	06	PPM	38'	Composite of pit bottom

	CL		Depth	Location
SAMPLE NO. 1:	12,200	PPM	22'	Composite of pit bottom
SAMPLE NO. 2:	8,900	PPM	27'	Composite of pit bottom
SAMPLE NO. 3:	75	PPM	38'	Composite of pit bottom

COMMENTS: These samples were taken to confirm that all of the concerns of the NMOCD and the McNeill Ranch had been addressed for site closure.

George O'Brien
Bordages Well # 1 Pit Clean up
RH00-AH37

Lab Analysis

Anachem, Inc.

Date: *15-Aug-00*

CLIENT:	Rhino Env. Services- Hobbs	**Client Sample ID:**	Comp Pit Bottom @ 27ft
Work Order:	0008026	**Location:**	McNiell Ranch, Lea Co, NM
Project:	RH00-AH37 O'Brien	**Collection Date:**	8/1/00
Lab ID:	0008026-01A	**Matrix:**	SOIL

Analyses	Result	Limit	Units	Date Analyzed
BTEX BY EPA 8021 - SOLID			**Prep Date:**	**Analyst:** AT
BatchID: R6716				
Benzene	ND	0.4	mg/Kg	8/2/00
Toluene	ND	0.5	mg/Kg	8/2/00
Ethylbenzene	ND	0.5	mg/Kg	8/2/00
Xylenes, Total	ND	0.5	mg/Kg	8/2/00
ION CHROMATOGRAPH SOLID (EPA 300.0)			**Prep Date:**	**Analyst:** SD
BatchID: R6884				
Chloride	9150	0.01	mg/Kg	8/14/00
TPH BY EPA 418.1 - SOLID			**Prep Date:** 8/3/00	**Analyst:** AT
BatchID: R6739				
Petroleum Hydrocarbons, TR	110	10	mg/Kg	8/3/00

Qualifiers: ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

Anachem, Inc.

Date: *15-Aug-00*

CLIENT: Rhino Env. Services- Hobbs
Work Order: 0008026
Project: RH00-AH37 O'Brien

QC SUMMARY REPORT

TPH by EPA 418.1 - Solid

BatchID: R6739 **Units:** mg/Kg **Analysis Date:** 8/3/00

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Petroleum Hydrocarbons, TR		224	230			2.6%	

Anachem, Inc.

Date: *15-Aug-00*

CLIENT: Rhino Env. Services- Hobbs
Work Order: 0008026
Project: RH00-AH37 O'Brien

QC SUMMARY REPORT

Ion Chromatograph Solid (EPA 300.0)

BatchID: R6884 **Units:** mg/Kg **Analysis Date:** 8/14/00

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Chloride	1.199	100.1%	100.1%	80%	120%	0.0%	15

Anachem, Inc.

Date: *15-Aug-00*

CLIENT: Rhino Env. Services- Hobbs
Work Order: 0008026
Project: RH00-AH37 O'Brien

QC SUMMARY REPORT

BTEX by EPA 8021 - Solid

BatchID: R6716 **Units:** mg/Kg **Analysis Date:** 8/2/00

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Benzene	100	94.7%	94.3%	60%	140%	0.4%	30
Toluene	100	95.4%	95.1%	60%	140%	0.3%	30
Ethylbenzene	100	91.7%	90.2%	60%	140%	1.6%	30
Xylenes, Total	300	99.3%	97.3%	60%	140%	2.0%	30

Purchase Order/Chain Of Custody

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Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

Report To: Allen Hodge	Bill To: (Buyer) Rhino
Company: Rhino Env. Services, Inc.	Purchase Order #:
Address: 4007 N. Lovington Hwy.	Address: P.O. Box 25547
City, State, Zip: Hobbs NM 88240	City, State, Zip: Albuquerque NM 87125
Phone: 505-392-4498 Fax: 505-392-9376	Phone: 800-762-0241 Fax: 505-797-4874

Project Name: RH00-AH37 O'Brien Quote #:

Project Location: McNiell Ranch City, State: Lea Co., NM

Date Due: ASAP Rush: 0% 25% 50% 100% Sampled By:

Lab#	Client Sample ID	Matrix	Date/Time	Sample Notes	Analysis: TPH 418.1	Btex 8020	CL
0008026-01	1. Comp Pit Bottom @ 27'	Soil	8-1-00	1300	X	X	X
	2.						
	3.						
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						

Relinquished By	Date	Time	Received By	Date	Time
[signature]	8/00	1600	[signature]	8/2/00	10:00

Sample Receipt Notes

Temperature Received on ice

Preserved Properly

COC Seals Intact

Method of Shipment Fed-Ex

In the event that Anachem determines that a sample is hazardous, the client agrees to:

Pay For Sample Disposal____

Accept Returned Sample ____

Submission # 0008026

010 REV 5/97

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

Anachem, Inc.

Date: *29-Jan-01*

CLIENT: Rhino Env. Services- Hobbs
Work Order: 0101292
Project: O Brine Pit

Analyses	Result	Limit	Units	Date Analyzed
Lab ID:	0101292-01A			
Client Sample ID:	Comp of Pit Bottom @ 38ft	**Collection Date:**	1/19/01	
Location:	McNeill Ranch, Hobbs, NM	**Matrix:**	SOIL	
0101292-01A	**BTEX BY EPA 8021 - SOLID**		**Prep Date:**	**Analyst:** AT
BatchID: R9279				
Benzene	ND	0.4	mg/Kg	1/23/01
Toluene	ND	0.5	mg/Kg	1/23/01
Ethylbenzene	ND	0.5	mg/Kg	1/23/01
Xylenes, Total	ND	0.5	mg/Kg	1/23/01
0101292-01A	**ION CHROMATOGRAPH SOLID (EPA 300.0)**		**Prep Date:**	**Analyst:** SD
BatchID: R9366				
Chloride	62	0.01	mg/Kg	1/23/01
0101292-01A	**TPH BY EPA 418.1 - SOLID**		**Prep Date:** 1/25/01	**Analyst:** AT
BatchID: R9352				
Petroleum Hydrocarbons, TR	ND	10	mg/Kg	1/25/01

Qualifiers: ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

Anachem, Inc.

Date: *29-Jan-01*

CLIENT: Rhino Env. Services- Hobbs
Work Order: 0101292
Project: O Brine Pit

QC SUMMARY REPORT

Ion Chromatograph Solid (EPA 300.0)

BatchID: R9366 **Units:** mg/Kg **Analysis Date:** 1/23/01

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Chloride	6	108.8%	109.4%	80%	120%	0.3%	15

Anachem, Inc.

Date: *29-Jan-01*

CLIENT: Rhino Env. Services- Hobbs
Work Order: 0101292
Project: O Brine Pit

QC SUMMARY REPORT

BTEX by EPA 8021 - Solid

BatchID: R9279 **Units:** mg/Kg **Analysis Date:** 1/23/01

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Benzene	100	93.8%	93.7%	70%	130%	0.1%	30
Toluene	100	98.4%	97.9%	70%	130%	0.5%	30
Ethylbenzene	100	98.2%	97.2%	70%	130%	1.0%	30
Xylenes, Total	300	96.7%	94.3%	70%	130%	2.4%	30

TPH by EPA 418.1 - Solid

BatchID: R9352 **Units:** mg/Kg **Analysis Date:** 1/25/01

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Petroleum Hydrocarbons, TR	43.2	75.5%	74.1%	60%	140%	1.9%	30

Purchase Order/Chain Of Custody

Page___of ___.

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

Report To: ALLEN Hodge	Bill To: (Buyer) Rhino Env. Svc. Inc
Company: RHINO ENVIRONMENTAL SER. INC	Purchase Order #: O'BRINE
Address: 4007 Lovington Hwy	Address: P.O. Box 57180
City, State, Zip: Hobbs, NM 88240	City, State, Zip: Albq. NM 87187-7180
Phone: 505 392-4498 Fax: 505 392-9376	Phone: 800-762-0241 Fax: 505 797-4874

Project Name: O'BRINE PIT Quote #:

Project Location: McNEILL RANCH City, State: Hobbs NM

Date Due: ASAP Rush: (0%) 25% 50% 100% Sampled By: Allen Hodge

Lab#	Client Sample ID	Matrix	Date/Time	Sample Notes	Analysis: TPH 418.1	BTEX	CL
0101292-01	1. Comp. of Pit Bottom @ 38'	Soil	11901/1630	Ice	X	X	X
	2.						
	3.						
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						

Relinquished By	Date	Time	Received By	Date	Time
[signature]	12201	1700	Lee Bonner	1/23/01	0945

Sample Receipt Notes

Temperature 5°

Preserved Properly

COC Seals Intact

Method of Shipment Fed Ex

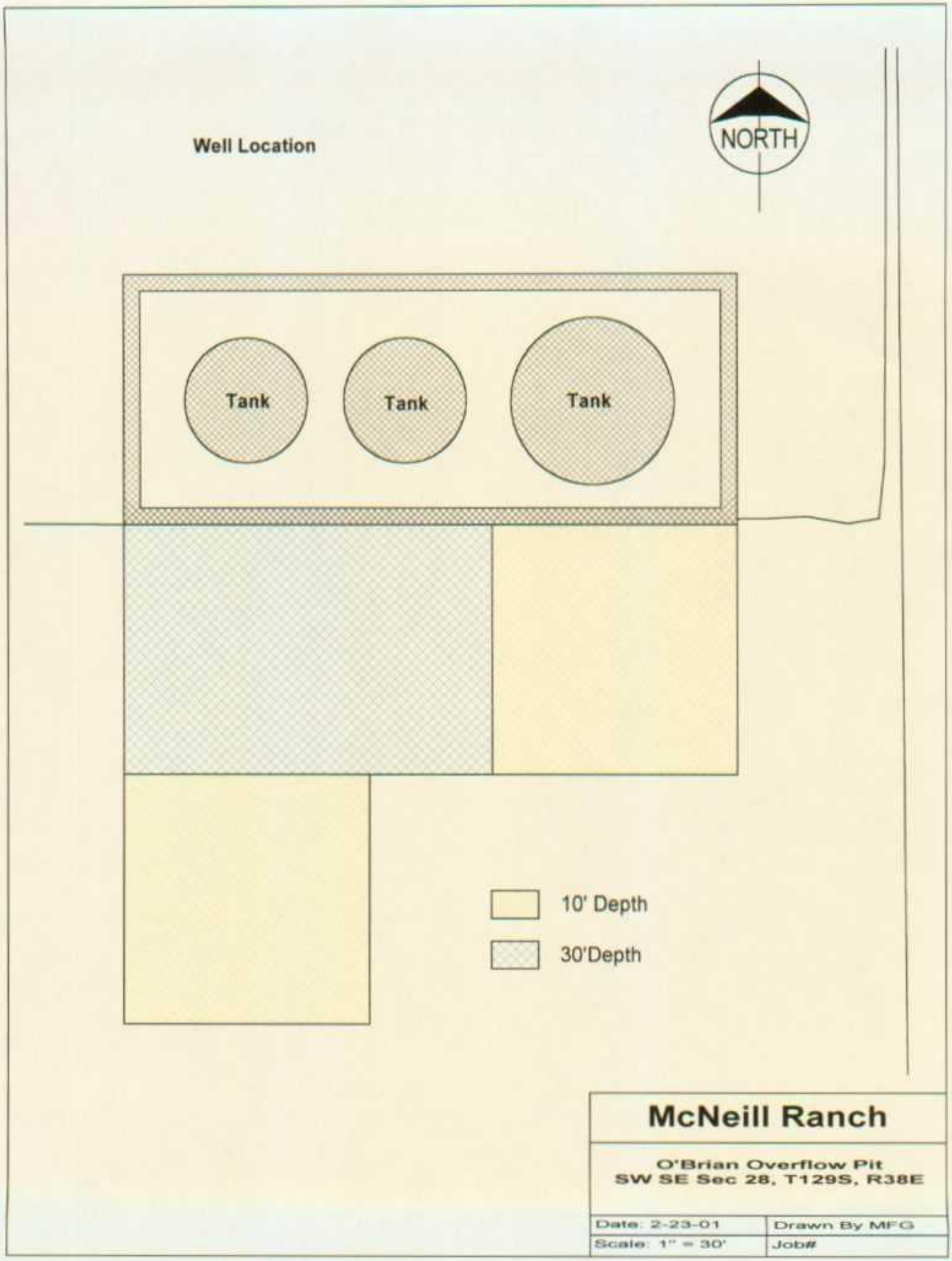
In the event that Anachem determines that a sample is hazardous, the client agrees to:
Pay For Sample Disposal____
Accept Returned Sample ____

Submission # 0101292

010 REV 5/97

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

Site Map



McNeill Ranch

O'Brian Overflow Pit
SW SE Sec 28, T129S, R38E

Date: 2-23-01	Drawn By MFG
Scale: 1" = 30'	Job#

Job/Site Photos

Beginning Site Photos

In Progress Site Photos

In Progress Site Photos

In Progress Site Photos

In Progress Site Photos

In Progress Site Photos

In Progress Site Photos

Final Site Photos