3R - 105

2005 AGWMR

JAN 2006

XTO ENERGY INC.

ANNUAL GROUNDWATER REMEDIATION REPORT

2005

BERGIN GC #1E
(F) SECTION 21, T29N, R11W, NMPM
SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
MR. GLENN VON GONTEN
NEW MEXICO OIL CONSERVATION DIVISION

JANUARY 2006

PREPARED BY:
BLAGG ENGINEERING, INC.

Consulting Petroleum / Reclamation Services
P.O. Box 87
Bloomfield, New Mexico 87413

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XTO ENERGY INC.
Bergin GC # 1E - Separator Pit
SE/4 NW/4 Sec. 21, T29N, R11W

Pit Closure Dates: **11/16/93 – 1/3/94**

Monitor Well Installation Dates: **MW 1, 2 & 3 – 4/22/96**
MW 4 - 11/27/97
MW 3R - 6/5/98 (Replacement for MW 3)
MW 2R - 6/10/03 (Replacement for MW 2)

Monitor Well Sampling Dates: **6/5/96, 9/11/96, 12/27/96, 3/19/97, 6/23/97, 12/18/97, 6/12/98, 1/25/99, 5/13/99, 8/25/99, 6/30/00, 5/17/01, 9/24/01, 11/28/01, 2/19/02, 6/27/03, 8/25/03, 11/14/03, 3/25/04**

Historical Information:

- November 1993 to January 1994 – An earthen separator pit was closed at this site by Amoco Production Company (Figure 1). Remediation included excavating approximately 1520 cubic yards of hydrocarbon impacted soil to beneath groundwater (found at approximately 10 – 12 feet below ground surface). Impacted soils were transported to the Amoco permitted waste management facility.
- April 1996 - Groundwater monitor wells were installed to evaluate impacts to groundwater.
- January 1998 - XTO Energy Inc. (XTO) acquires the Bergin GC #1E from Amoco Production Company.
- January 1998 to March 2004 – Continued Quarterly/Annual sampling to confirm closure.

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells (MW) following US EPA: SW-846 protocol. Samples were collected using new disposable bailers and placed in laboratory supplied containers and stored in a cooler on ice. The samples were delivered to an accredited environmental laboratory according to chain-of-custody procedures. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) per US EPA Method 8021B and general water chemistry per US EPA Method 600/4-79-020. Analytical results are summarized on Tables 1 - 3. Waste generated (groundwater) during monitor well sampling and development was placed in the produced water separator tank located on the well site.

Water Quality and Gradient Information:

Groundwater elevation data consistently indicates the water gradient trends in a southern direction (Figures 2 – 7).

Groundwater monitor wells were installed and sampled to evaluate impacts to groundwater. Groundwater monitor well MW 1 is located up-gradient of the source area and exhibited no detectable levels of BTEX constituents. Trace levels of residual BTEX was detected in MW 2 (MW 2R) and MW 3 and elevated chloride levels were observed between 1999 and 2002 in monitor well MW 2R. Monitor well MW 4 is directly down-gradient from the original pit area and laboratory analysis show no detectable levels of BTEX.

Summary and Recommendations:

XTO requests closure of this groundwater site according to the NMOCD approved Groundwater Management Plan. Analytical data from monitor well sampling indicates that water quality standards have been achieved in the source area and down-gradient wells. Permanent closure of this site is recommended. Following NMOCD approval for closure, all site monitor wells will be abandoned by placing a cement/bentonite grout mix in the well and cutting the casing to below surface grade.

TABLE 1

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

REVISED DATE: August 25, 1999
FILENAME: (BE-3Q-99.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. umhos	pH	PRODUCT (in)	BTEX EPA METHOD 8020 (PPB) Benzene	Toluene	Ethyl Benzene	Total Xylene
05-Jun-96	MW #1	11.65	15.00	2990	2400	7.0		ND	ND	ND	ND
13-May-99		12.73		2850	5700	7.0		NA	NA	NA	NA
05-Jun-96	MW #2	12.28	15.00	1230	1800	6.5		9.92	7.85	19.6	89.2
11-Sep-96		10.03			1600	6.9		5.86	7.57	11.8	24.6
27-Dec-96		10.30			5900	6.8		1.42	1.33	1.89	8.99
19-Mar-97		12.11			4600	7.2		2.54	ND	ND	ND
13-May-99		13.55		3485	6980	7.1		NA	NA	NA	NA
05-Jun-96	MW #3	13.24	15.00	1080	1700	6.7		**11.8**	23.1	12	137.9
11-Sep-96		11.00			1600	7.2		**36.4**	11.7	135	529
23-Jun-97		14.21			NA	NA		**0.5**	0.8	1.2	3.9
17-Sep-97		12.02			2000	6.9		**ND**	ND	52	305.6
18-Dec-97		11.41			1900	7.2		**42.6**	4	107	**632**
12-Jun-98		14.01	20.00		1900	7.1		**ND**	ND	ND	**0.8**
25-Jan-99		11.10			1700	7.2		**ND**	0.7	26.7	**219.9**
13-May-99		13.84		2134	4300	7.3		**2.2**	11.1	0.6	**12.2**
25-Aug-99		12.30			1900	7.1		**8.6**	2.3	4.5	**24.8**
18-Dec-97	MW #4	11.31	17.53		2100	7.0		ND	ND	ND	ND
13-May-99		14.28		2450	4900	7.4		NA	NA	NA	NA
25-Aug-99		12.74			1900	7.3		3.1	2.2	ND	1.7
					NMWQCC GROUNDWATER STANDARDS			10	750	750	620

NOTES :
1) **RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS .**
2) **RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS EXCEEDED .**
3) **NA - INDICATES NOT APPLICABLE .**

TABLE 2
GENERAL WATER QUALITY
XTO ENERGY INC. (CTOC)
BERGIN GC # 1E
INITIAL SAMPLE DATE : MAY 13, 1999

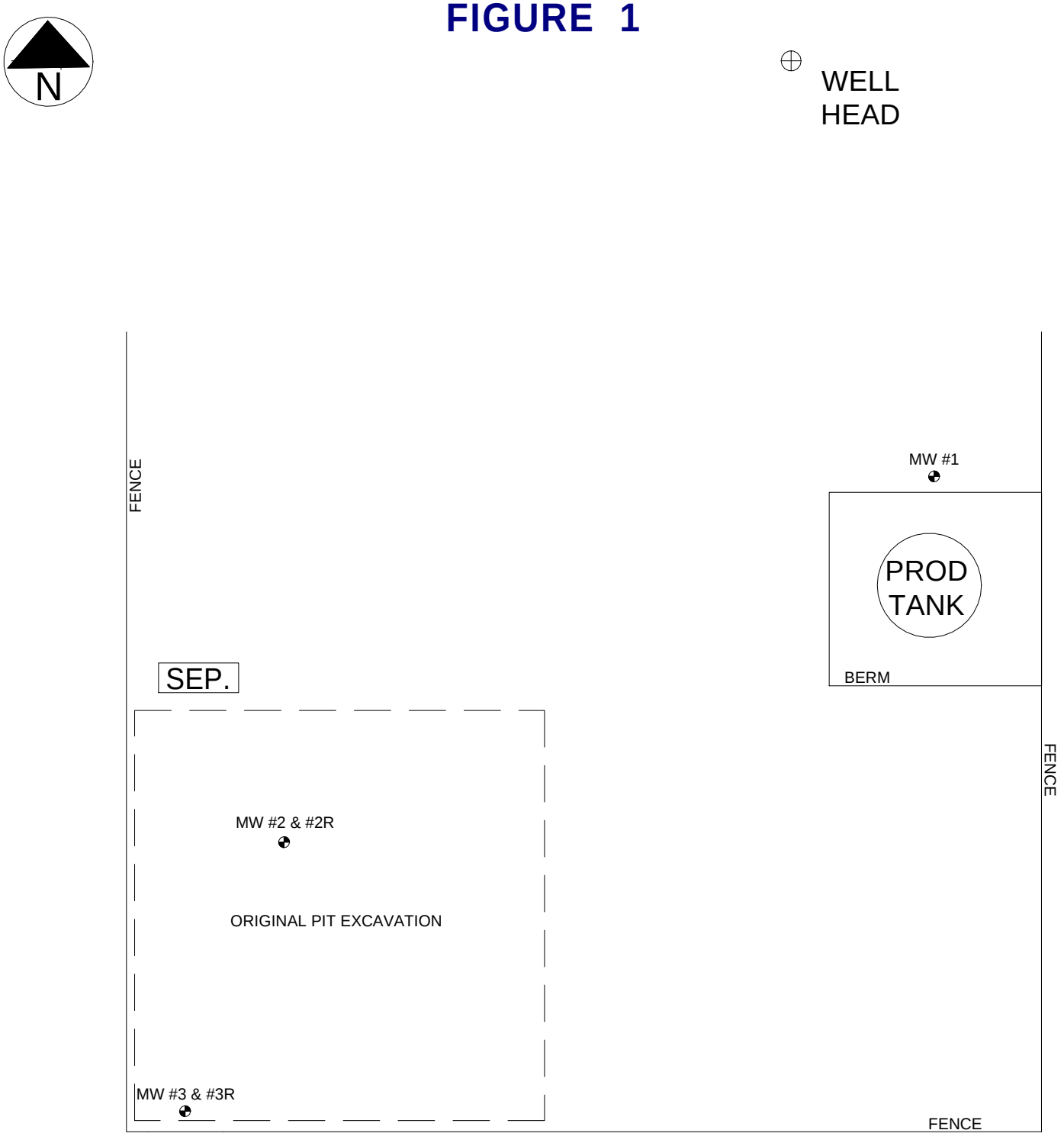
PARAMETERS	MW # 1	MW # 2	MW # 3R	MW # 4	Units
LAB pH	6.95	7.12	7.29	7.35	s. u.
LAB CONDUCTIVITY @ 25 C	5,700	6,980	4,300	4,900	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	2,850	3,485	2,150	2,450	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	2,825	3,453	2,134	2,447	mg / L
SODIUM ABSORPTION RATIO	3.9	11.7	3.0	2.7	ratio
TOTAL ALKALINITY AS CaCO3	284	780	328	324	mg / L
TOTAL HARDNESS AS CaCO3	1,365	920	1,085	1,330	mg / L
BICARBONATE as HCO3	284	780	328	324	mg / L
CARBONATE AS CO3	< 1	< 1	< 1	< 1	mg / L
HYDROXIDE AS OH	< 1	< 1	< 1	< 1	mg / L
NITRATE NITROGEN	15.0	6.0	6.1	12.5	mg / L
NITRITE NITROGEN	0.068	0.146	2.000	2.000	mg / L
CHLORIDE	18.5	503	9.0	10.5	mg / L
FLUORIDE	0.97	1.06	1.02	1.02	mg / L
PHOSPHATE	< 0.1	1.6	< 0.1	< 0.1	mg / L
SULFATE	1,740	1,290	1,250	1,470	mg / L
IRON	< 0.001	0.089	< 0.001	0.007	mg / L
CALCIUM	546	328	434	506	mg / L
MAGNESIUM	< 0.01	24.4	< 0.1	15.9	mg / L
POTASSIUM	2.5	10.0	2.5	2.5	mg / L
SODIUM	330	815	230	230	mg / L
CATION / ANION DIFFERENCE	0.08	0.08	0.39	0.32	%

CHLORIDE ONLY RESULTS

SAMP. PT.	DATE	RESULTS		mg / L	DTW (ft.)
MW # 2	08/25/99	632		"	12.02
	06/30/00	32.0		"	12.93
	05/17/01	148	DUPLICATE	"	12.41
	09/24/01	476	▼	"	12.31
	11/28/01	36.8	460	"	11.15
	02/19/02	304		"	12.06
MW # 2R	06/27/03	26.8		"	11.74
	08/25/03	17.6		"	11.75
	11/14/03	10.0		"	11.31
	03/25/04	10.4		"	13.00
MW # 3R	08/25/99	35.7		"	12.30
	06/30/00	22.5		"	13.10
	05/17/01	4.2		"	13.70
NMWQCC GROUNDWATER STANDARDS		250			

NOTE : mg / L = milligrams per liter , DTW = depth to water .

FIGURE 1



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

1 INCH = 25 FEET

0 25 50 FT.

CROSS TIMBERS OPERATING COMPANY

BERGIN GC 1E

SE/4 NW/4 SEC. 21, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: 1/4ly Monitor.

DRAWN BY: NJV

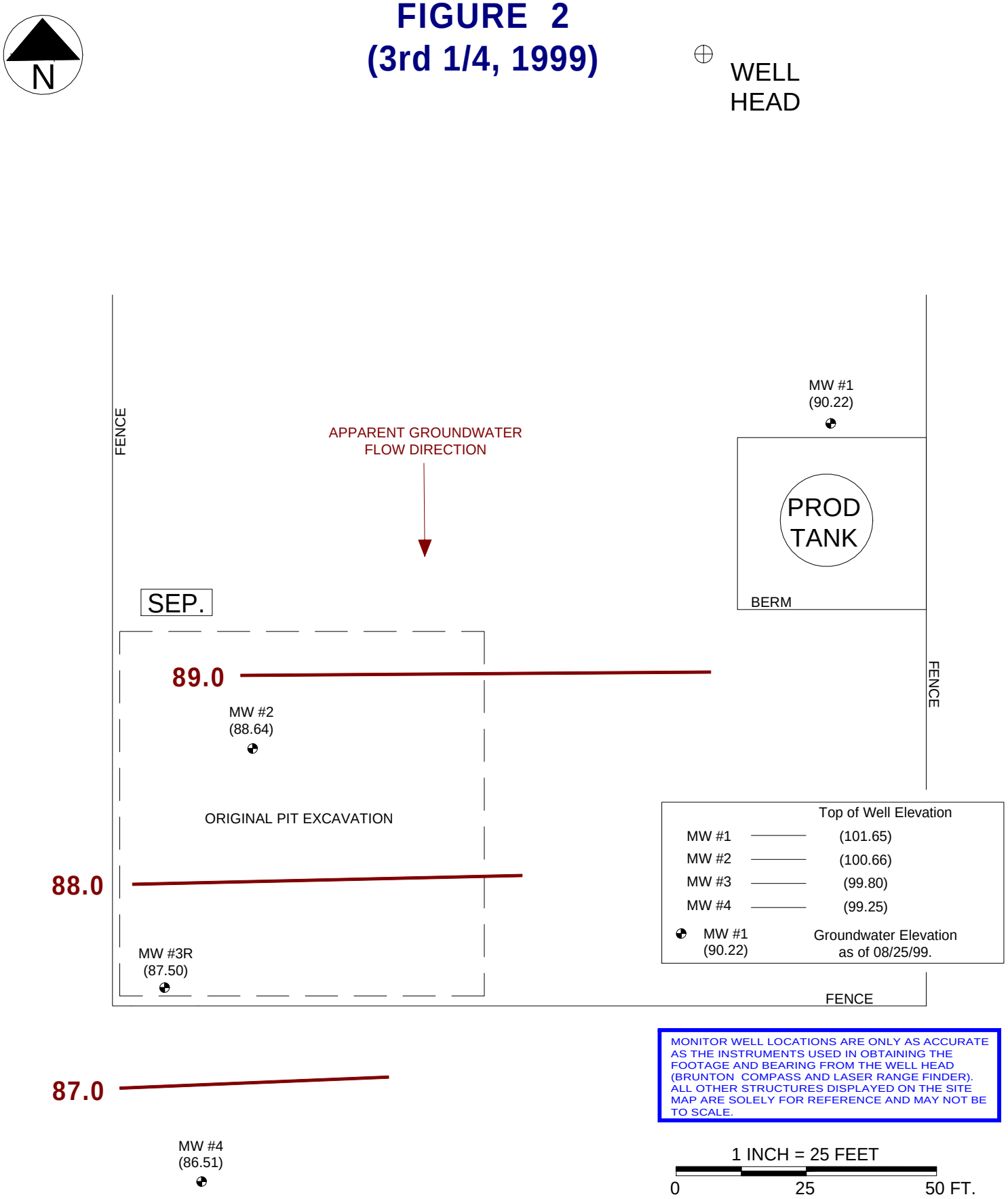
FILENAME: 08-25-99-SM.SKF

REVISED: 11/02/05 NJV

SITE MAP

08/99

FIGURE 2
(3rd 1/4, 1999)



CROSS TIMBERS OPERATING COMPANY

BERGIN GC 1E

SE/4 NW/4 SEC. 21, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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PHONE: (505) 632-1199

PROJECT: 1/4ly Monitoring

DRAWN BY: NJV

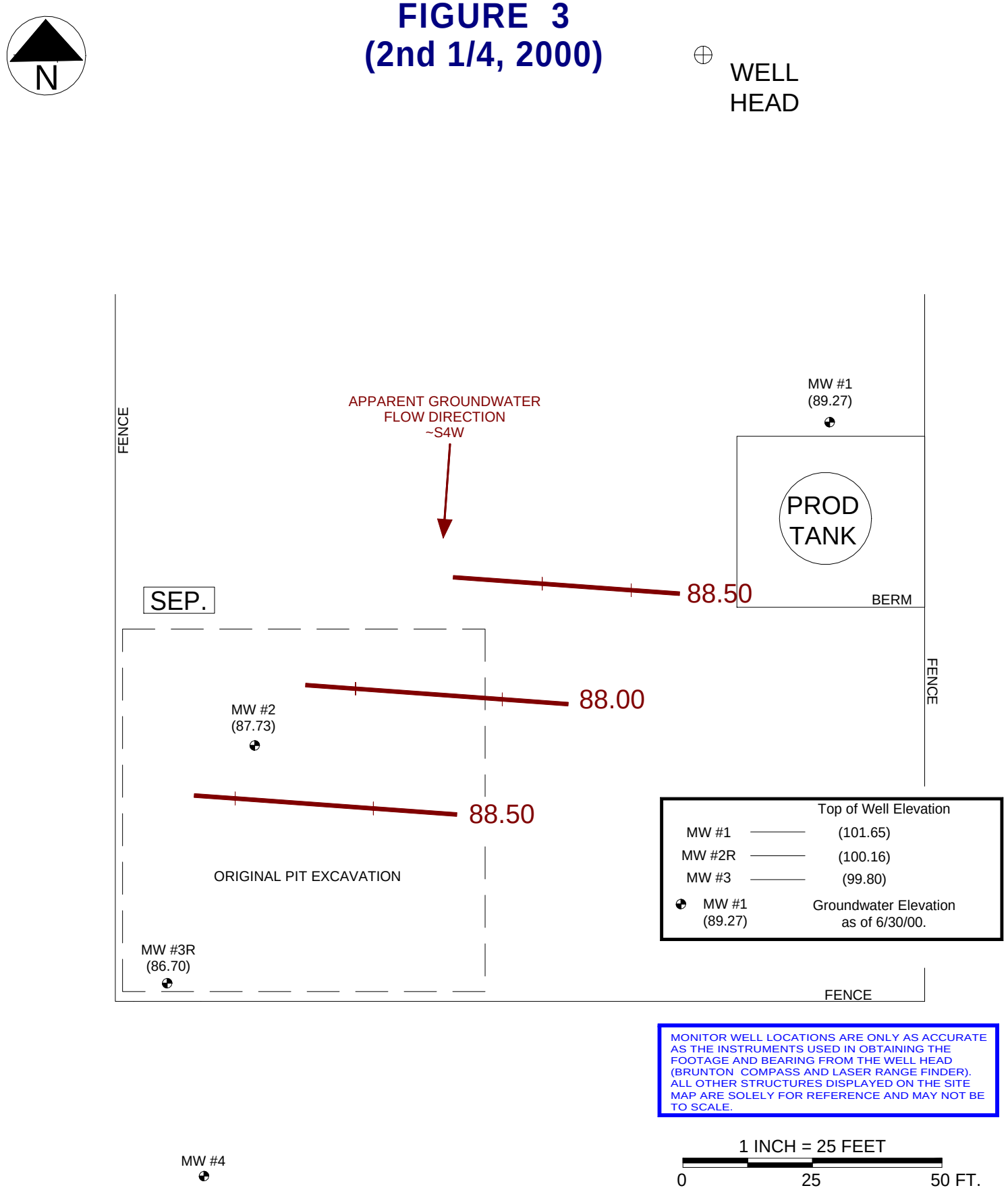
FILENAME: 08-25-99-GW.SKF

REVISED: 08/31/99 NJV

GROUNDWATER GRADIENT MAP

08/99

FIGURE 3
(2nd 1/4, 2000)



CROSS TIMBERS OPERATING COMPANY

BERGIN GC 1E

SE/4 NW/4 SEC. 21, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

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PROJECT: 1/4ly Monitoring

DRAWN BY: NJV

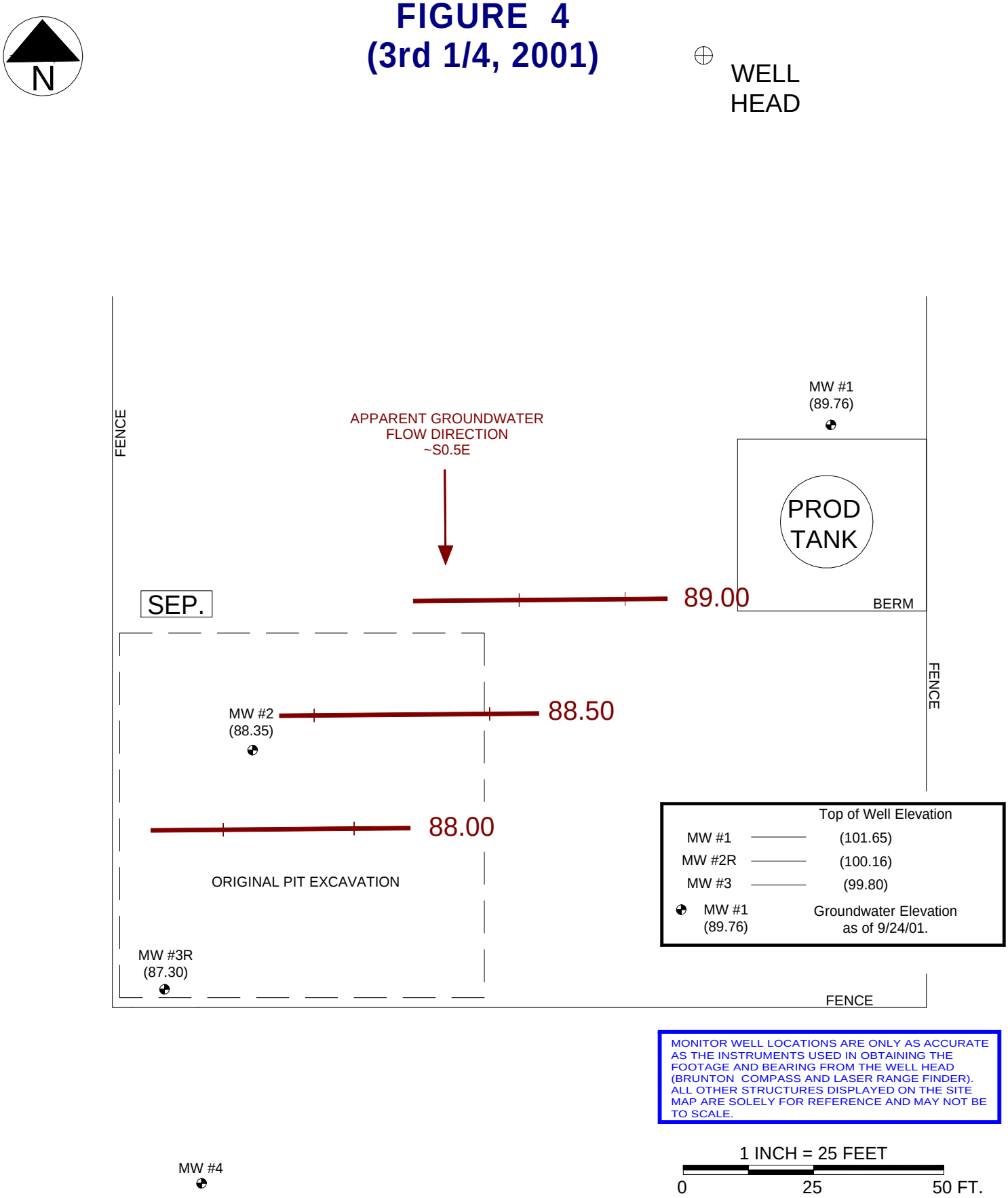
FILENAME: 06-30-00-GW.SKF

REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP

06/00

FIGURE 4
(3rd 1/4, 2001)



CROSS TIMBERS OPERATING COMPANY

BERGIN GC 1E

SE/4 NW/4 SEC. 21, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

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CONSULTING PETROLEUM / RECLAMATION SERVICES

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PROJECT: 1/4ly Monitoring

DRAWN BY: NJV

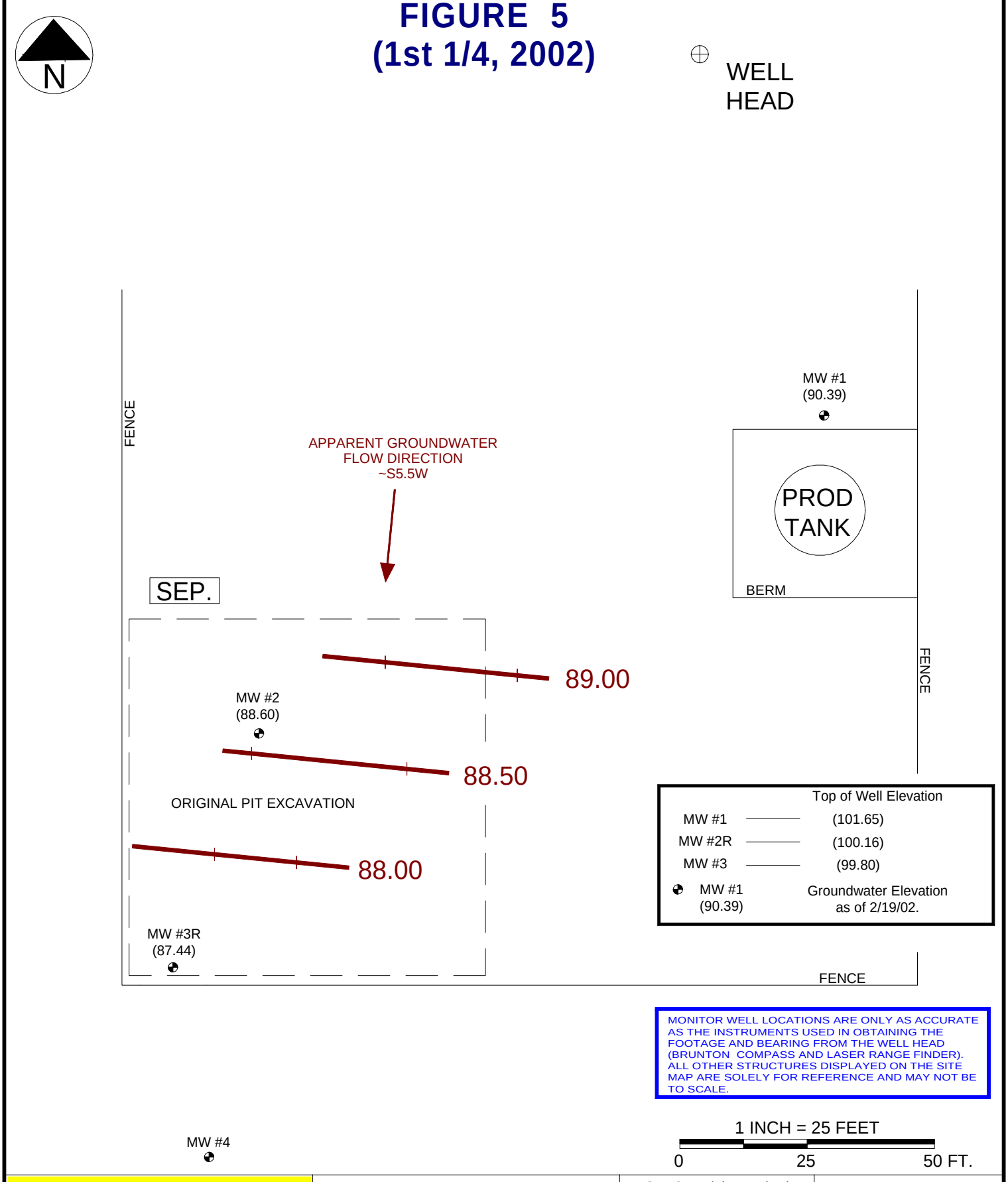
FILENAME: 09-24-01-GW.SKF

REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP

09/01

FIGURE 5
(1st 1/4, 2002)



CROSS TIMBERS OPERATING COMPANY

BERGIN GC 1E

SE/4 NW/4 SEC. 21, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: 1/4ly Monitoring

DRAWN BY: NJV

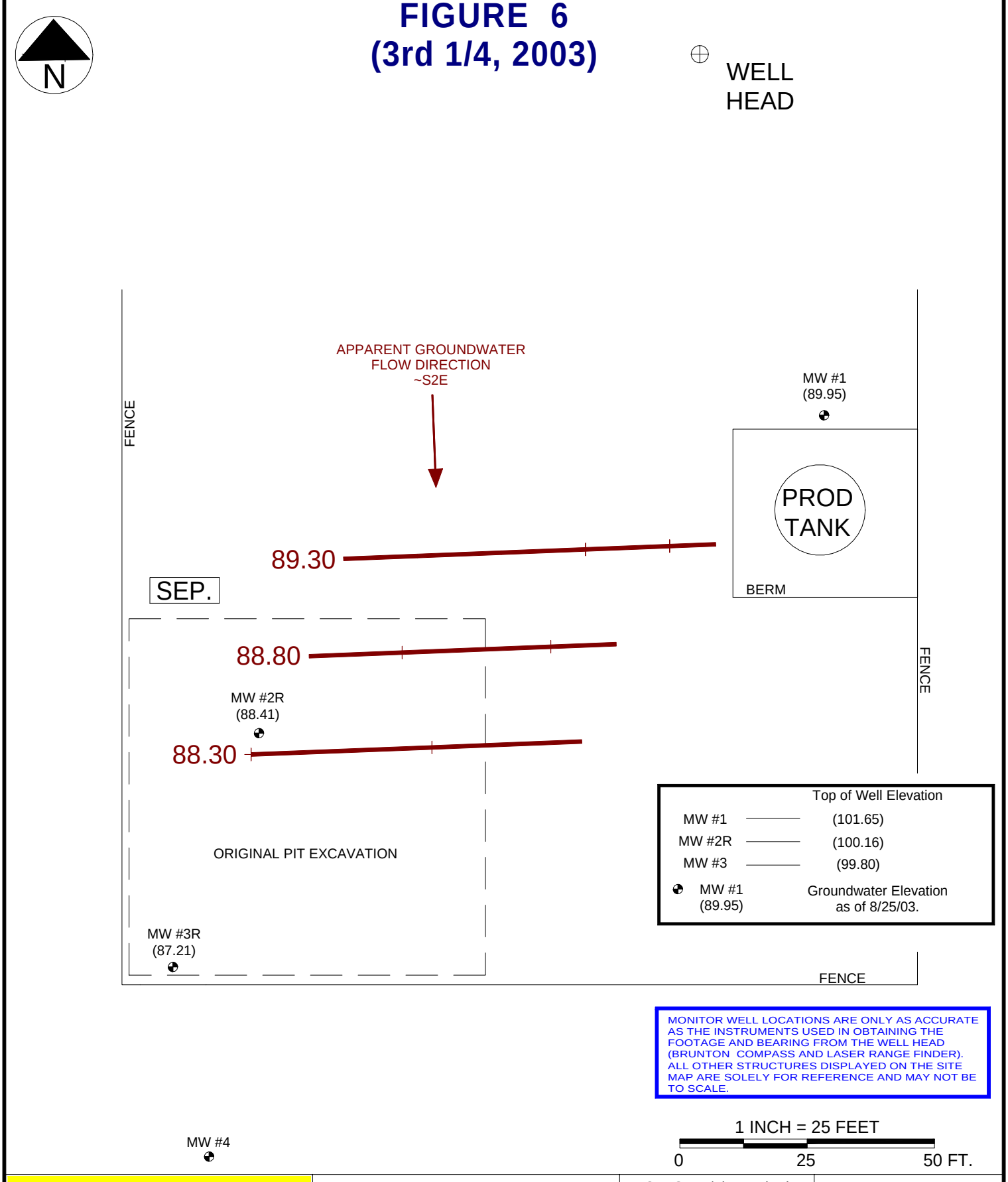
FILENAME: 02-19-02-GW.SKF

REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP

02/02

FIGURE 6
(3rd 1/4, 2003)



CROSS TIMBERS OPERATING COMPANY

BERGIN GC 1E

SE/4 NW/4 SEC. 21, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: 1/4ly Monitoring

DRAWN BY: NJV

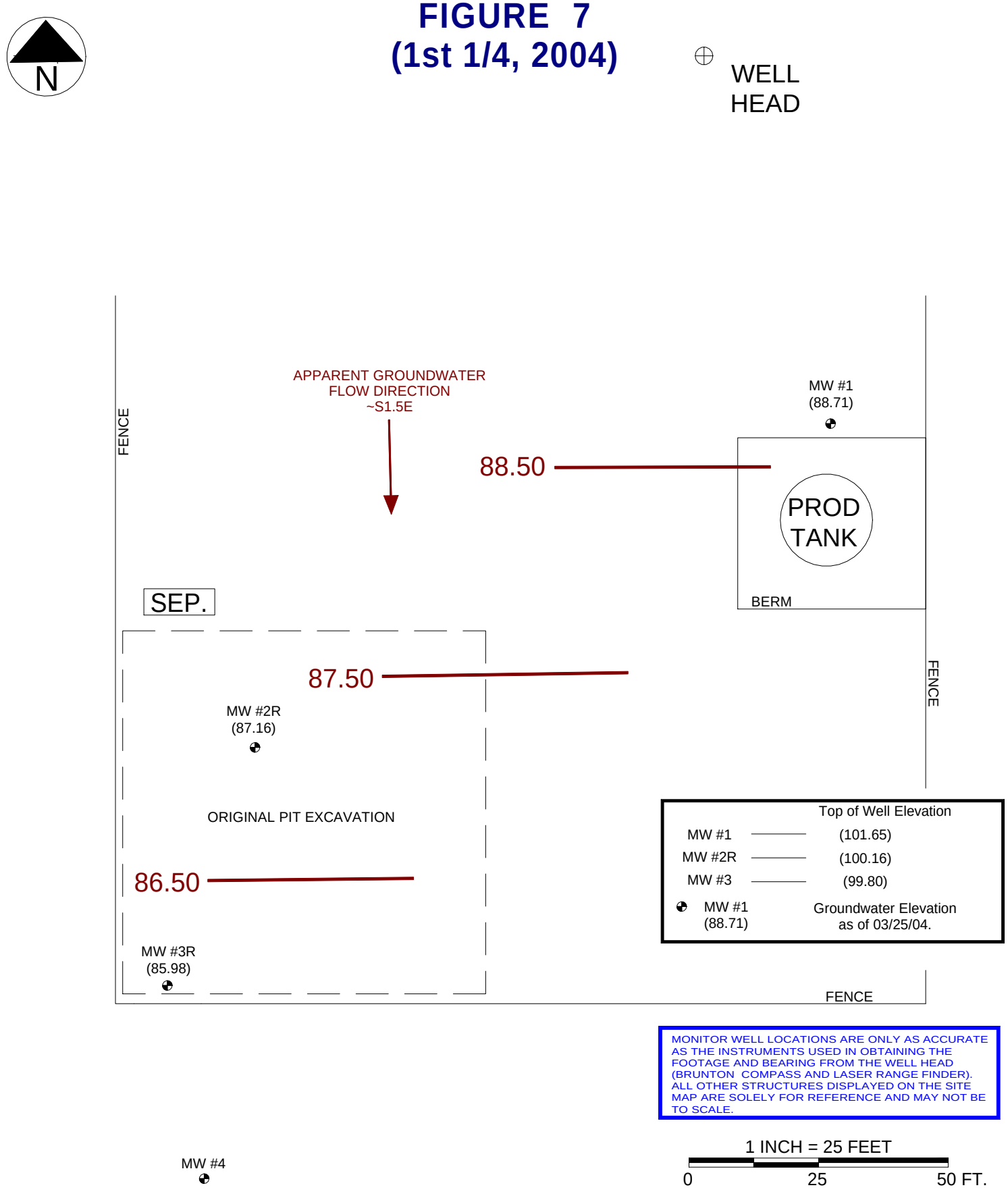
FILENAME: 08-25-03-GW.SKF

REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP

08/03

FIGURE 7
(1st 1/4, 2004)



CROSS TIMBERS OPERATING COMPANY

BERGIN GC 1E

SE/4 NW/4 SEC. 21, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: 1/4ly Monitoring

DRAWN BY: NJV

FILENAME: 03-25-04-GW.SKF

REVISED: 11/02/05 NJV

GROUNDWATER GRADIENT MAP

03/04

FIGURE 8

BLAGG ENGINEERING, INC.

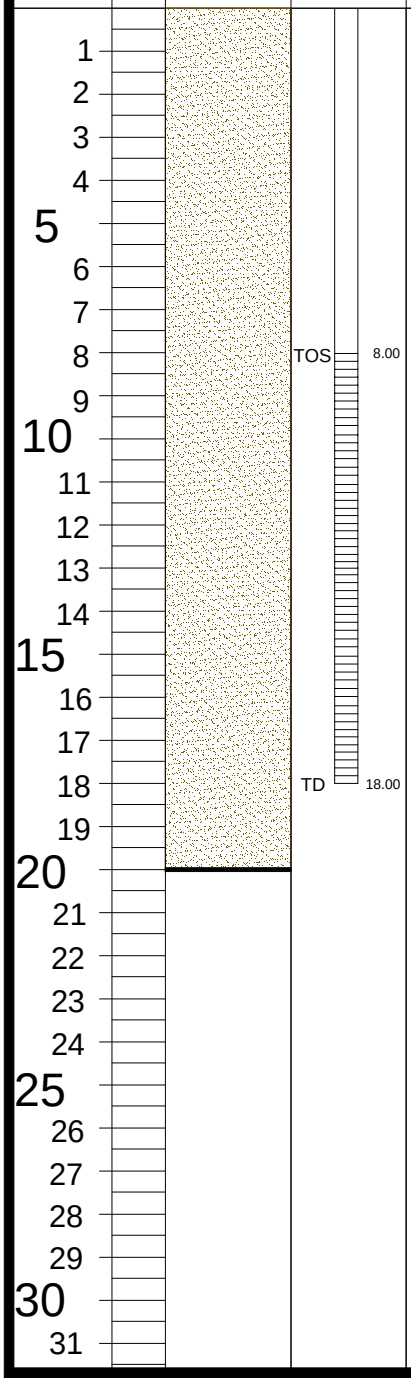
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

CLIENT:	XTO ENERGY INC.
LOCATION NAME:	BERGIN GC # 1E
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHPROBE)
BORING LOCATION:	S33W, 159 FEET FROM WELL HEAD.

BORING #.....	BH - 2R
MW #.....	2R
PAGE #.....	2A
DATE STARTED	6/10/03
DATE FINISHED	6/10/03
OPERATOR.....	JCB
PREPARED BY	NJV

DEPTH FEET | INTERVAL | LITHOLOGY INTERVAL | MW SCHEMATIC



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.00 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH BROWN SAND TO SILTY SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED (BELOW 10 FT. BELOW GRADE), FIRM, NO APPARENT HYDROCARBON ODOR OBSERVED (0.0 - 20.0 FT. BELOW GRADE).

▼ GW DEPTH ON 6/27/03 = 9.74 FT. (APPROX.) FROM GROUND SURFACE.

NOTES:
- SAND TO SILTY SAND.
- TOS - TOP OF SCREEN FROM GROUND SURFACE.
- TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
- GW - GROUND WATER.

REMOVED MW #2 VIA MOBILE DRILL RIG, THEN UTILIZED CASING FOR MW #2R.

DRAWING:	DATE:	DWN BY:
BERGIN-2R	11/02/05	NJV

FIGURE 9

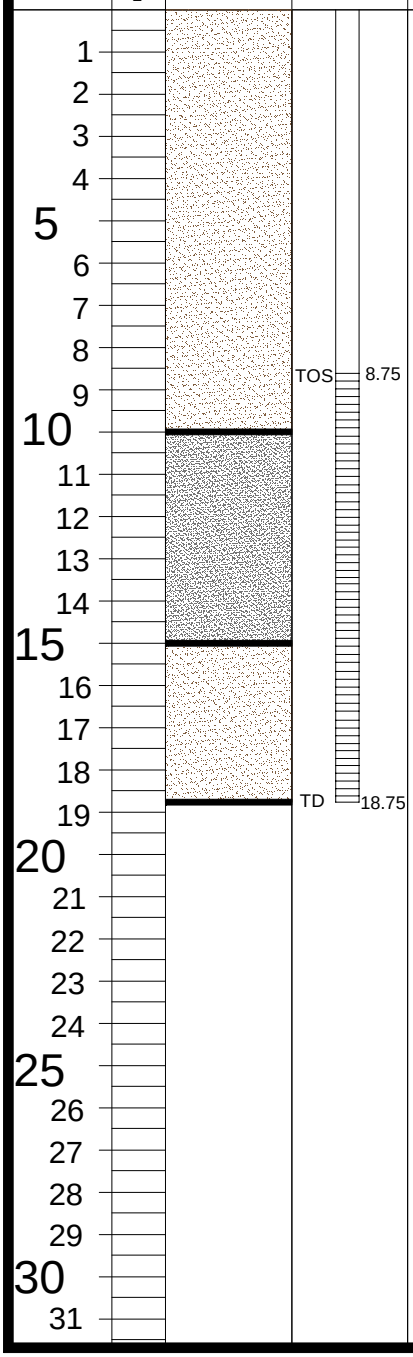
BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

CLIENT:	CROSS TIMBERS OIL COMPANY
LOCATION NAME:	BERGIN GC # 1E
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHPROBE)
BORING LOCATION:	S30W, 207 FEET FROM WELL HEAD.

BORING #.....	BH - 3R
MW #.....	3R
PAGE #.....	3A
DATE STARTED	6/5/98
DATE FINISHED	6/5/98
OPERATOR.....	JCB
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.25 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH BROWN SAND TO SILTY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED (0.00 - 10.00 FT. INTERVAL).

LT. TO MED. GRAY SAND TO SILTY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, POSSIBLE HYDROCARBON ODOR DETECTED (10.00 - 15.00 FT. INTERVAL).

▼ GW DEPTH ON 6/12/98 = 12.76 FT. (APPROX.) FROM GROUND SURFACE.

DARK YELLOWISH BROWN SAND TO SILTY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED (15.00 - 18.75 FT. INTERVAL).

NOTES:

- SAND TO SILTY SAND.
- SAND TO SILTY SAND (DISCOLORED).

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.

DRAWING:	DATE:	DWN BY:
BERG-3R	6/15/98	NJV

FIGURE 10

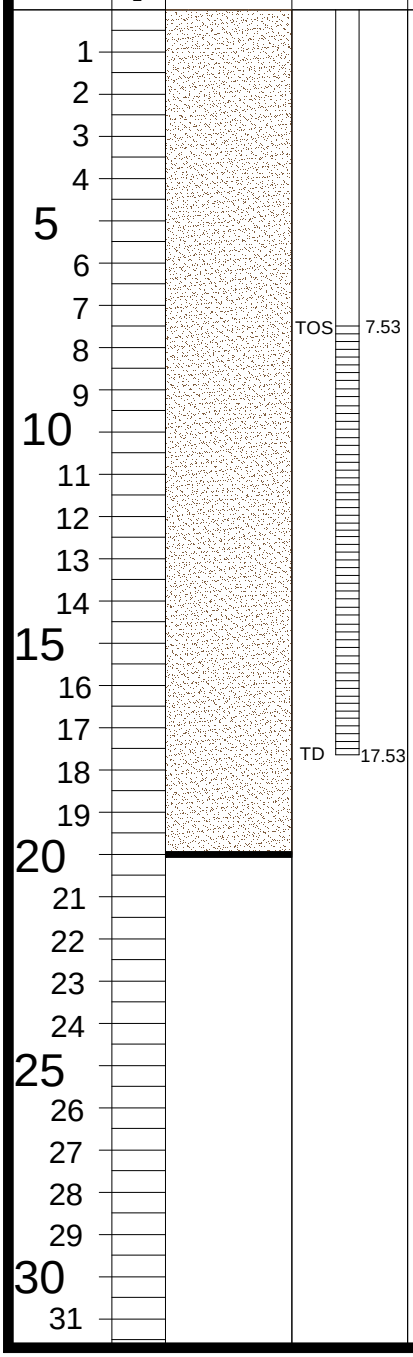
BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

CLIENT:	CROSS TIMBERS OIL COMPANY
LOCATION NAME:	BERGIN GC # 1E
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHPROBE)
BORING LOCATION:	S24W, 237 FEET FROM WELL HEAD.

BORING #.....	BH - 4
MW #.....	4
PAGE #.....	4
DATE STARTED	11/26/97
DATE FINISHED	11/26/97
OPERATOR.....	JCB
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.75 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH BROWN SAND TO SILTY SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED (0.00 - 20.00 FT. INTERVAL).

GW DEPTH ON 12/18/97 = 9.56 FT. (APPROX.) FROM GROUND SURFACE.

NOTES:

- SAND TO SILTY SAND.
- TOS - TOP OF SCREEN FROM GROUND SURFACE.
- TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
- GW - GROUND WATER.

DRAWING:	DATE:	DWN BY:
BERGIN-4	6/15/98	NJV

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : **CROSS TIMBERS OIL CO.**

CHAIN-OF-CUSTODY # : 6701

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : August 25, 1999

SAMPLER : N J V

Filename : 08-25-99.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	90.22	11.43	15.00	-	-	-	-	-
2	100.66	88.64	12.02	15.00	0830	6.6	3,700	1.50	-
3	99.80	87.50	12.30	20.00	0815	7.1	1,900	3.75	-
4	99.25	86.51	12.74	17.53	0920	7.3	1,900	2.50	-

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected BTEX for MW #'s 3 & 4 . Collected chloride samples in MW #'s 2 & 3 .

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : **CROSS TIMBERS OIL CO.**

CHAIN-OF-CUSTODY # : 6941

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : June 30, 2000

SAMPLER : N J V

Filename : 06-30-00.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	89.27	12.38	15.00	-	-	-	-	-
2	100.66	87.73	12.93	15.00	1030	6.8	3,000	1.00	-
3	99.80	86.70	13.10	20.00	1020	7.2	2,400	3.50	-
4	99.25		-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected chloride samples in MW #'s 2 & 3 .

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : **CROSS TIMBERS OPER. CO.** **CHAIN-OF-CUSTODY # :** 8402

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : May 17, 2001 **SAMPLER :** N J V

Filename : 05-17-01.WK4 **PROJECT MANAGER :** N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	89.25	12.40	15.00	-	-	-	-	-
2	100.66	88.25	12.41	15.00	1910	7.33	2,100	0.50	-
3	99.80	86.10	13.70	20.00	1610	7.07	2,000	1.50	-
4	99.25	-	-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected chloride samples in MW #'s 2 & 3 . Very poor recovery in MW # 2 , fair recovery in # 3 .

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY , INC.

CHAIN-OF-CUSTODY # : 9428

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : Sept. 24, 2001

SAMPLER : N J V

Filename : 09-24-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	89.76	11.89	15.00	-	-	-	-	-
2	100.66	88.35	12.31	15.00	1455	6.87	2,200	0.75	-
3	99.80	87.30	12.50	20.00	-	-	-	-	-
4	99.25	-	-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected chloride sample in MW # 2 only . Very poor recovery in MW # 2 .

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY , INC.

CHAIN-OF-CUSTODY # : 9441

73482

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

IML

Date : Nov. 28, 2001

SAMPLER : N J V

Filename : 11-28-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	91.16	10.49	15.00	-	-	-	-	-
2	100.66	89.51	11.15	15.00	1040	6.63	2,600	1.00	-
3	99.80	88.33	11.47	20.00	-	-	-	-	-
4	99.25	-	-	17.53	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected chloride sample in MW # 2 only . Poor recovery in MW # 2 .

Bailed approx. 0.75 gallons @ time 0840 . Returned @ time 1035 ;

Depth to water measured @ 11.17 ft. , then sampled .

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : **XTO ENERGY , INC.** **CHAIN-OF-CUSTODY # :** 9720

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : February 19, 2002 **SAMPLER :** N J V

Filename : 02-19-02.WK4 **PROJECT MANAGER :** N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	101.65	90.39	11.26	15.00	-	-	-	-	-
2	100.66	88.60	12.06	15.00	1330	6.94	2,200	0.75	-
3	99.80	87.44	12.36	20.00	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected chloride sample in MW # 2 only . Poor recovery in MW # 2 .

Bailed approx. 0.75 gallons @ time 1015 . Returned @ time 1327 ;

Depth to water measured @ 12.06 ft. , then sampled .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : 9830

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH , INC.

Date : June 27, 2003

SAMPLER : N J V

Filename : 06-27-03.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	89.72	11.93	15.00	-	-	-	-	-
2R	100.16	88.42	11.74	20.00	0935	7.05	1,300	21.1	4.25
3	99.80	87.27	12.53	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	06/27/03	06:45

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes:
2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : 11123

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH , INC.

Date : August 25, 2003

SAMPLER : N J V

Filename : 08-25-03.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	89.95	11.70	15.00	-	-	-	-	-
2R	100.16	88.41	11.75	20.00	1205	6.91	2,100	23.5	4.00
3	99.80	87.21	12.59	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	08/25/03	0910

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : 11143

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH , INC.

Date : November 14, 2003

SAMPLER : N J V

Filename : 11-14-03.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	90.42	11.23	15.00	-	-	-	-	-
2R	100.16	88.85	11.31	20.00	0833	7.03	2,400	12.0	4.25
3	99.80	87.67	12.13	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	11/11/03	0730

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : 11143

BERGIN GC # 1E - SEPARATOR PIT
UNIT F, SEC. 21, T29N, R11W

LABORATORY (S) USED : ENVIROTECH , INC.

Date : March 25, 2004

SAMPLER : N J V

Filename : 03-25-04.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	101.65	88.71	12.94	15.00	-	-	-	-	-
2R	100.16	87.16	13.00	20.00	1555	6.97	2,200	20.0	3.50
3R	99.80	85.98	13.82	20.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	03/25/04	1600

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Replaced MW # 2 with MW # 2R on 6 / 10 / 03 . 2 inch PVC - 10 ft. 0.010 slotted screen & 10 ft. casing .
Developed MW # 2R on 6 / 24 / 03 - excellent recovery . Collected chloride sample from MW # 2R only .