

District I

P.O. Box 1980, Hobbs, NM

District II

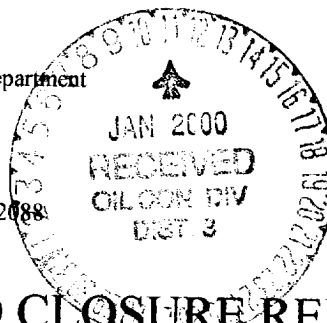
P.O. Drawer DD, Artesia, NM 88211

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 87504-2088SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICEPIT REMEDIATION AND CLOSURE REPORT

R157 1175

Operator: Questar Energy Company Telephone: (505) 326-9195Address: P.O. Box 2330 Farmington, NM 87499Facility Or: Knauff B #1E

Well Name

Location: Unit or Qtr/Qtr Sec N Sec 31 T 28N R 10W County San JuanPit Type: Separator X Dehydrator _____ Other _____Land Type: BLM _____, State X, Fee _____, Other _____Pit Location: Pit dimensions: Length 20 ft, width 20 ft, depth 13 ft
(Attach diagram)Reference: wellhead X other _____Footage from reference: 90 ftDirection from reference: 30 Degrees _____ East North X
_____ of _____
X West South _____Depth to Ground Water: 80 feet(vertical distance from
contaminants to seasonal
highwater elevation of
ground water)

_____	Less than 50 feet	(20 points)
<u>X</u>	50 ft to 99 feet	(10 points)
_____	Greater than 100 feet	(0 points)

10Wellhead 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)

0Distance 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)

0

P:\pits\PrrC@.WK3

RANKING SCORE (TOTAL POINTS):

10

Date Remediation Started: 11/13/97 Date Completed: 1/28/99

Excavation _____ Approx. cubic yards 168

Landfarmed X Insitu Bioremediation _____

Other _____

Remediation Method: Onsite X Offsite _____

(Check all appropriate sections)

General Description of Remedial Action : On 11/13/97, the pit was excavated to a depth of 13 feet. Excavation along the south wall was limited due to a pipeline. A sample was obtained from the south wall of the pit at a depth of 9 feet utilizing U.S.E.P.A. protocol and sent to On Site Technologies, Ltd. for GRO/DRO and BTEX analysis. On 1/15/98, the pit was risk assessed. Bedrock was encountered at 15 feet. A sample was obtained from the test hole at 15 feet utilizing U.S.E.P.A. protocol. Field space analysis revealed 0.0 ppm. On 1/28/99, 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 South Wall

Sample depth 9 feet

Sample date 11/13/97

Sample time 10:00

Sample Results

Benzene(ppm) ND

Total BTEX (PPM) 3.565

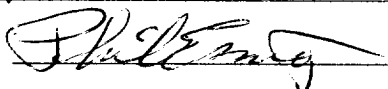
Field Headspace (ppm) 199

TPH 3575.2

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 1-4-00 PRINTED NAME Phil Emig

SIGNATURE  and TITLE Senior Operator

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: September 30, 1990

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill, deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well: oil well gas well **X** other
2. Name of Operator: **Questar Energy Company**
3. Address of Operator: **P.O. Box 2330 Farmington, NM 87499**
4. Location of Well: (Footage, Sec., T., R., M., or Survey Description)

Unit N Sec. 31 T 28 N R 10 W

5. Lease Designation and Serial No.
NM 0764
6. If Indian, Allottee or Tribe Name
7. If Unit or CA, Agmt. Design.:
8. Well Name and No.:
Knauff B #1E
9. API Well No.:
30-045-24240
10. Field & Pool/Exploratory Area:
Basin Dakota
11. County or Parish, State:
San Juan, New Mexico

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent

X Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

X Other: **Pit Closure**

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

**The pit associated with the subject well has been closed and replaced with a fiberglass tank.
Details of the closure are attached.**

14. I hereby certify that the foregoing is true and correct.

Signed: 

Phil Emig

Title: **Senior Operator**

Date: **1-4-00**

(This space for Federal or State office use)

Approved by _____

Title _____

Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency or the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**Risk Assessment
Questar Energy Company
Knauff B #1E**

Depth to Groundwater	80'
Distance to Water Source	>1000'
Distance to Surface Water	>1000'
TPH Limit (ppm)	1000

The subject pit was located in bedrock at a depth of 15 feet. The initial size of the pit was 15' x 15' x 3' deep. The stained soil was a silty sand and was excavated to a final pit size of 15' x 15' x 13' deep. Excavation along the south wall was limited due to an adjacent pipeline. Excavated soil amounted to approximately 168 total cubic yards and was landfarmed on location.

On November 13, 1997 Cimarron Oilfield Service Co. performed a pit closure verification. The pit was excavated to a depth of 13 feet. A soil sample from the center bottom at 13 feet provided a headspace concentration of 1.2 ppm and a Total Petroleum Hydrocarbon (TPH) concentration of 3575.2 ppm. A BTEX analysis provided a benzene concentration of non-detect and a total BTEX concentration of 3.565 ppm. No groundwater was encountered, and first water was not recorded at a nearby cathodic well until a depth of 80 feet. Excavated soils were landfarmed on location.

A risk assessment was performed to establish lateral extent south of the associated pit. The risk assessment was performed on January 15, 1998 by Cimarron. A bore hole was established at the south side of the original pit to a depth of 15 feet, where bedrock was encountered. A sample from this depth provided a headspace concentration of 0.0 ppm. No hydrocarbon or staining was noticeable at any depth.

Landfarm sampling was provided by Cimarron on January 28, 1999. A 5-point sample was extracted and analyzed. Results of the sample provided a TPH concentration of 140 ppm and a headspace concentration of 2 ppm.

Having determined lateral and vertical extent as well as achieving action levels below NMOCD and BLM requirements, this pit should be considered to have reached "final closure". Questar Energy Company has removed and remediated all soils to the extent practical. Based on this information and the physical location of the pit, there is little to no risk to human health or environment.

Questar Energy Company

Date Started: January 15, 1998January 15, 1998

Overview of Pit Location and Sampling :				Bore # 1	
				Depth (ft)	
				1	damp
				2	sandy clay
				3	
				4	
				5	
				6	
				7	
				8	
				9	gray clay
				10	no hydrocarbon
				11	odor
				12	
				13	
				14	
				15	Bedrock
Location: Knauff B #1E Quad: N Section: 31 Township: 28N Range: 10W Pit: Separator Reference: 90° North 30° West of wellhead Pit Size: 20' x 20' x 13' deep Depth to Groundwater: 80' Soil Type: Silty sand Ranking Score: 10 Bedrock Encountered: Yes Closure Standard: 1000 Groundwater Encountered: No					
Comments: A Geo-Probe was used to drill a test hole at the south side of the original pit. A test hole was drilled to 15' where bedrock was encountered. A soil sample was taken at 15' and field headspace analysis was performed, which showed 0.0 ppm. The soil was sandy clay from 0' to 2' with more gray clay starting to appear with increasing depth. No hydrocarbon odor or staining was noticeable at any depth.					

Location : <u>Knauff B #1-E</u>		Overview of Location and Sampling :			
Quad : <u>N</u> Section : <u>31</u>					
Range : <u>10 W</u> Township: <u>28 N</u>					

Sample #	Location	OVM
1	C Btm @ 13'	1.2
2	N wall @ 9'	0.8
3	E wall @ 8'	27.7
4	S wall @ 8'	189
5	W wall @ 7'	1.6
6		
7		
8		
9		
10		
11		
12		

Pit : Separator
Reference : 80' N 30 W of wellhead
Initial Size : 15' x 15' x 3' deep
Final Size : 20' x 20' x 13' deep
Yds. Excavated : 168 cy

Depth to Groundwater: 80'
Nearest Water Source: >1000'
Nearest Surface Water: >1000'
NIMOD Ranking Score: 10
TPH Closure Standard: 1000

Comments : Soil is light brown, moist, silty sand.
Excavation along the south wall was limited due to a pipeline.
A sample from the south wall at 9' was submitted to "On-Site" labs for DRO/GRO (8015) and BTEX (8020) analysis.

Pit Profile : North to South :	Pit Profile : East to West :
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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Frank McDonald*
 Company: *Cimmaron Oilfield Service*
 Address: *P.O. Box 3235*
 City, State: *Farmington, NM 87401*

Date: *24-Nov-97*
 COC No.: *6578*
 Sample No.: *16870*
 Job No.: *2-1000*

Project Name: *Questar Energy - Knauff B #1-E Separator Pit*
 Project Location: *South Wall @ 9'*

Sampled by: *FM* Date: *13-Nov-97* Time: *10:00*
 Analyzed by: *DC/HR* GRO Date: *19-Nov-97*
 Sample Matrix: *Soil* DRO Date: *20-Nov-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Gasoline Range Organics (C5 - C9)</i>	<i>5.2</i>	<i>mg/kg</i>	<i>0.5</i>	<i>mg/kg</i>
<i>Diesel Range Organics (C10 - C28)</i>	<i>3570</i>	<i>mg/kg</i>	<i>5</i>	<i>mg/kg</i>

ND - Not Detected at Limit of Quantitation

Quality Assurance Report

GRO QC No.: 0554-STD

DRO QC No.: 0555-STD

Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
<i>Gasoline Range (C5 - C9)</i>	<i>ND</i>	<i>ppb</i>	<i>2,702</i>	<i>2,702</i>	<i>0.0</i>	<i>15%</i>
<i>Diesel Range (C10 - C28)</i>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>207</i>	<i>3.4</i>	<i>15%</i>

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Gasoline Range (C5-C9)</i>	<i>81</i>	<i>71</i>	<i>(80-120)</i>	<i>14</i>	<i>20%</i>
<i>Diesel Range (C10-C28)</i>	<i>93</i>	<i>108</i>	<i>(75-125)</i>	<i>12</i>	<i>20%</i>

Method: *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by: *Jag*Date: *11/24/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Frank McDonald*
Company: *Cimmaron Oilfield Service*
Address: *P.O. Box 3235*
City, State: *Farmington, NM 87401*

Date: *24-Nov-97*
COC No.: *6578*
Sample No.: *16870*
Job No.: *2-1000*

Project Name: *Questar Energy - Knauff B #1-E Separator Pit*
Project Location: *South Wall @ 9'*
Sampled by: *FM*
Analyzed by: *DC*
Sample Matrix: *Soil*

Date: *13-Nov-97* Time: *10:00*
Date: *18-Nov-97*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	50	ug/kg
<i>Toluene</i>	185	ug/kg	50	ug/kg
<i>Ethylbenzene</i>	1312	ug/kg	50	ug/kg
<i>m,p-Xylene</i>	1567	ug/kg	50	ug/kg
<i>o-Xylene</i>	502	ug/kg	50	ug/kg
<i>TOTAL</i>	3565	ug/kg		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved by: *[Signature]*
Date: *11/24/97*



ON SITE
TECHNOLOGIES, LTD.

QUALITY ASSURANCE REPORT *for EPA Method 8020*

Internal QC No.: 0559-STD
Surrogate QC No.: 0556-STD
Reference Standard QC No.: 0529/30-QC

Parameter	Result	Units of Measure
Average Amount of All Analytes in Blank	< 1.0	ppb

Calibration Check					
Parameter	Units of Measure	True Value	Analyzed Value	RPD	Limit
Benzene	ppb	60.0	62.8	5	15%
Toluene	ppb	60.0	65.0	8	15%
Ethylbenzene	ppb	60.0	63.9	6	15%
m,p-Xylene	ppb	120.0	123.7	3	15%
o-Xylene	ppb	60.0	63.3	5	15%

<i>Parameter</i>	<i>1 - Percent Recovered</i>	<i>2 - Percent Recovered</i>	<i>Limit</i>	<i>RPD</i>	<i>RPD Limit</i>
<i>Benzene</i>	97	100	(39-150)	3	20%
<i>Toluene</i>	100	102	(46-148)	2	20%
<i>Ethylbenzene</i>	99	102	(32-160)	3	20%
<i>m,p-Xylene</i>	95	97	(35-145)	2	20%
<i>o-Xylene</i>	99	101	(35-145)	2	20%

<i>Surrogate Recoveries</i>		
Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovery	(70-130)	
16870-6578	94	
	JML	(M)
	11/26/97	11/24/97

PO BOX 2606 • FARMINGTON NM 87400

ON SITE
TECHNOLOGIES, LTD.

[illegible]

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client

Date Started: January 28, 1999 Date Completed: January 28, 1999

Ranking Score : 10 Closure Standard : 1000 ppm

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Feb-99

Client:	Cimarron Oilfield Service	Client Sample Info:	Questar
Work Order:	9902020	Client Sample ID:	Knauff B #1E LF
Lab ID:	9902020-01A	Matrix:	SOIL
Project:	Knauff B #1E LF	Collection Date:	1/28/99 1:00:00 PM
		COC Record:	5686

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				
T/R Hydrocarbons: C10-C28	140	25		mg/Kg	1	Analyst: HR 2/19/99
GASOLINE RANGE ORGANICS		SW8015				
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	Analyst: HR 2/7/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

