GW - 220

GENERAL CORRESPONDENCE

YEAR(S): 2005-1995

THE SANTA FE
NEW MEXICAN
Founded 1849

NM EMNRD OIL CONSERVATION
ATTN: Ed Martin
1220 S ST FRANCIS DR 12 03
SANTA FE NM 87505

ALTERNATE ACCOUNT: 56689
AD NUMBER: 00161261 ACCOUNT: 00002212
LEGAL NO: 78629 P.O. #: 06-199-050125
514 LINES 1 TIME(S) 287.84
AFFIDAVIT: 6.00
TAX: 22.41
TOTAL: 316.25

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, R. Lara, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 78629 a copy of which is hereto attached was published in said newspaper 1 day(s) between 03/24/2006 and 03/24/2006 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 24th day of March, 2006 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ R. Lara
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 24th day of March, 2006

Notary Janet L. Montoya

Commission Expires: 12/30/07

OK To Pay
Ed Martin
3-29-06

OFFICIAL SEAL
Janet L. Montoya
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 12/30/07

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal application has been submitted to the Director of the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-360) - Mr. Murray Erickson, Guardian Wellhead Protection, Inc., P.O. Box 13188, Odessa, Texas 79768 has submitted an application for their Hobbs Service Facility located in the NW/4 SW/4 of Section 36, Township 18 South, Range 37 East, Lea County, New Mexico. All effluents that may be generated at the facility will be collected in an netted open top tank and transported off-site for disposal at an OCD approved facility. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 70 feet with a total dissolved solids concentration of greater than 1200 mg/L. The discharge permit addresses how oilfield products and waste will be properly handled, stored and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water. The OCD proposed conditions can be viewed at www.emnrd.state.nm.us/ocd in the Draft Discharge Permit for this facility.

(GW-220) - Mr. Aaron Maurer, Bearcat Drilling, 5424 US Highway 64, Farmington, New Mexico 87499 has submitted a renewal application for their Farmington Service Yard located in the NW/4 NW/4 of Section 19, Township 29 North, Range 12 West, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top receptacle and transported off-site for disposal at an OCD approved facility. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 10 feet with a total dissolved solids concentration of approximately 200 mg/L. The discharge permit addresses how oilfield products and waste will be properly handled, stored and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water. The OCD proposed conditions can be viewed at www.emnrd.state.nm.us/ocd in the Draft Discharge Permit for this facility.

(GW-065) - Public Service Company of New Mexico, D. J. Engert, Compressor Plant Manager, Alvarado Square, Albuquerque, New Mexico 87102-1007, has submitted a discharge plan renewal application for their Redonda Compressor Station located in the SE/4 NW/4, Section 25, Township 8 North, Range 3 West, NMPM, Valencia County, New Mexico. Approximately 245 gallons per month of washdown water and used oil is collected in an above ground steel tank sited within a bermed area and stored prior to transport to an OCD approved off-site recycle facility. The discharge permit addresses how oilfield products and waste will be properly handled, stored and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water. Groundwater most likely to be affected by an accidental discharge is at a depth ranging from 80 feet with a total dissolved solids concentration of 1050 mg/l.

(GW-066) - Public Service Company of New Mexico, D. J. Engert, Compressor Plant Manager, Alvarado Square, Albuquerque, New Mexico 87102-1007, has submitted a discharge plan renewal application for their Espejo Compressor Station located in Unit 9, Rio Rancho Estates, Township 12 North, Range 2 East, NMPM, Sandoval County, New Mexico. Approximately 83 gallons per month of washdown water and used oil is collected in an above ground steel tank sited within a bermed area and stored prior to transport to an OCD approved off-site recycle facility. The discharge permit addresses how oilfield products and waste will be properly handled, stored and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water. Groundwater most likely to be affected by an accidental discharge is at a depth ranging from 719 feet with a total dissolved solids concentration of 364 mg/l.

(GW-263) - Public Service Company of New Mexico, Wilford B. Nez, Senior Engineering Tech, Alvarado Square MS 2104, Albuquerque, New Mexico 87158, has submitted a discharge plan renewal application for their Star Lake Compressor Station located in the NW/4, Section 34, Township 20 North, Range 6 West, NMPM, McKinley County, New Mexico. Any potential discharge at the facility will be collected and stored in a covered above ground tank prior to transport to an OCD approved off-site disposal facility. The discharge permit addresses how oilfield products and waste will be properly handled, stored and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water. Groundwater most likely to be affected by an accidental discharge is at a depth of 58 feet with a total dissolved solids concentrations of approximately 1,750 mg/l.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 20th day of March 2006.

STATE OF
NEW MEXICO
OIL CONSERVATION
DIVISION

SEAL

MARK FESMIRE,
P.E., Director

Legal #78629
Pub. Mar. 24, 2006

AFFIDAVIT OF PUBLICATION

Ad No. 53193

STATE OF NEW MEXICO
County of San Juan:

CONNIE PRUITT, being duly sworn says: That she is the ADVERTISING MANAGER of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):

Friday, March 24, 2006.

And the cost of the publication is $113.46.

Connie Pruitt

ON 3/24/06 CONNIE PRUITT appeared before me, whom I know personally to be the person who signed the above document.

Wynell Corey

My Commission Expires November 17, 2008.

COPY OF PUBLICATION

918 Legals

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal application has been submitted to the Director of the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-220) – Mr. Aaron Maurer, Bearcat Drilling, 5424 US Highway 64, Farmington, New Mexico 87499 has submitted a renewal application for their Farmington Service Yard located in the NW/4 NW/4 of Section 19, Township 29 North, Range 12 West, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top receptacle and transported off-site for disposal at an OCD approved facility. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 10 feet with a total dissolved solids concentration of approximately 200 mg/L. The discharge permit addresses how oilfield products and waste will be properly handled, stored and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water. The OCD proposed conditions can be viewed at www.emnrd.state.nm.us/ocd in the Draft Discharge Permit for this facility.

(GW-263) – Public Service Company of New Mexico, Wilford B. Nez, Senior Engineering Tech, Alvarado Square MS 2104, Albuquerque, New Mexico 87158, has submitted a discharge plan renewal application for their Star Lake Compressor Station located in the NW/4, Section 34, Township 20 North, Range 6 West, NMPM, McKinley County, New Mexico. Any potential discharge at the facility will be collected and stored in a covered above ground tank prior to transport to an OCD approved off-site disposal facility. The discharge permit addresses how oilfield products and waste will be properly handled, stored and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water. Groundwater most likely to be affected by an accidental discharge is at a depth of 58 feet with a total dissolved solids concentrations of approximately 1,750 mg/l.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 20th day of March 2006.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

SEAL

MARK FESMIRE, P.E., Director

Legal No. 53193 published in The Daily Times, Farmington, New Mexico on Friday, March 24, 2006.

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 12/27/05,

or cash received on _____ in the amount of $ 100.00

from Bearcat Drilling

for Farmington Service Facility (Facility Name) GW-220 (DP No.)

Submitted by: [signature] Date: 1-12-06

Submitted to ASD by: _____ Date: _____

Received in ASD by: _____ Date: _____

Filing Fee ✓ New Facility ___ Renewal ✓

Modification ___ Other _____ (specify)

Organization Code 521.07 Applicable FY 2001

To be deposited in the Water Quality Management Fund.

Full Payment ✓ or Annual Increment ___

BEARCAT DRILLING
P.O. BOX 717
FARMINGTON, NM 87499

WELLS FARGO
NEW MEXICO

[redacted]

PAY ONE HUNDRED DOLLARS AND NO/100

TO THE ORDER OF STATE OF NEW MEXICO OCD

DATE 12-27-05

AMOUNT $100.00

Bonifacio Vallejos

VOID AFTER 90 DAYS AUTHORIZED SIGNATURE

[redacted]

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES,GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☒ Renewal ☐ Modification

1. Type: Drilling Contractor
2. Operator: Bearcat Drilling
   Address: 5424 U.S. Hwy 64, P.O. Box 76 Farmington 87499
   Contact Person: Aaron Maurer Phone: 505-327-5218
3. Location: _____ /4 _____ /4 Section _____ Township _____ Range _____
   Submit large scale topographic map showing exact location. No change
4. Attach the name, telephone number and address of the landowner of the facility site. No change
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility. No change
6. Attach a description of all materials stored or used at the facility. No change
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included. No change
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures. No change
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems. No change
10. Attach a routine inspection and maintenance plan to ensure permit compliance. No change
11. Attach a contingency plan for reporting and clean-up of spills or releases. No change
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included. No change
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. No change

14. CERTIFICATIONI hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief. no change

Name: Aaron Maurer Title: E.H+S Coordinator

Signature: Aaron Maurer Date: 12-22-2005

E-mail Address: AaronJMaurer@Hotmail.com.

BEARCAT DRILLING LLC

PO BOX 717
FARMINGTON NM 87499
505-327-5218

April 7, 2000

OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
SANTA FE NM 87504

Mr. Roger Anderson

Bearcat Drilling LLC, purchased Walters Drilling INC August 31 1999. There are no changes at the facility.

We are sending a $50.00 filing fee plus a $690.00 For a GW 220 renewal.

Sincerely,

Bonnifacio Vallejos

Bonnifacio Vallejos
Drilling Superintendent

4-10-00
All Fees Paid

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Revised March 17, 1999

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS. REFINERIES, COMPRESSOR, AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☒ Renewal ☐ Modification

1. Type: OIL AND GAS-DRILLING CONTRACTOR
2. Operator: BEARCAT DRILLING, LLC

   Address: 5424 U.S. HIGHWAY 64, FARMINGTON, N.M. 87499

   Contact Person: BONIFACIO VALLEJOS Phone: 505-327-5218

3. Location: NW 1/4 NW 1/4 Section 19 Township 29N Range 12 W
   Submit large scale topographic map showing exact location.

4. Attach the name, telephone number and address of the landowner of the facility site.
   JAMES CLARK JR (972)-889-2100 12225 GREENVILLE AVE SUITE 950 DALLAS, TX 75243
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   NO CHANGES ON RECORD @ OCD
6. Attach a description of all materials stored or used at the facility.
   NO CHANGES ON RECORD @ OCD
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   NO CHANGES ON RECORD AT OCD
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
   NO CHANGES ON RECORD AT OCD
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   NO CHANGES ON RECORD AT OCD
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    NO CHANGES ON RECORD AT OCD
11. Attach a contingency plan for reporting and clean-up of spills or releases.
    NO CHANGES ON RECORD AT OCD
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
    NO CHANGES ON RECORD AT OCD
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
    NO CHANGES ON RECORD AT OCD
14. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: BONIFACIO VALLEJOS Title: DRILLING SUPERINTENDENT

Signature: Bonifacio Vallejos Date: APRIL 7, 2000

AFFIDAVIT OF PUBLICATION

Ad No. 42703

STATE OF NEW MEXICO
County of San Juan:

ALETHIA ROTHLISBERGER, being duly sworn says: That she is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meeting of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):

Tuesday, April 25, 2000

And the cost of the publication is: $81.14

Alethia Rothlisberger

On 4/26/2000 ALETHIA ROTHLISBERGER appeared before me, whom I know personally to be the person who signed the above document.

Nancy L Slade

My Commission Expires April 10, 2004

COPY OF PUBLICATION

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan application has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(GW-220) Bearcat Drilling LLC., Mr. Bonnifacio Vallejos, Drilling Superintendent, P.O. Box 717, Farmington, New Mexico, 87499, has submitted a renewal application for the previously approved discharge plan for their Farmington facility located in the NW/4 NW/4 of Section 19, Township 291 North, Range 12 West, NMPM, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top tank and transported offsite for disposal at an OCD approved facility. Groundwater most likely to be affected by a spill, leak or accidental discharge to the surface is at a depth of approximately 53 feet with a total dissolved solids concentration of approximately 1125 mg/l. The discharge plan addresses how spills, leaks and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this ***17th day of April 2000.***

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
/s/ Roger Anderson
for LORI WROTENBERY, Director

SEAL

Legal No. 42703, published in The Daily Times, Farmington, New Mexico, Tuesday, April 25, 2000.

THE SANTA FE
NEW MEXICAN
Founded 1849

26

NM OIL CONSERVATION DIVISION
ATTN: DONNA DOMINGUEZ
2040 S. PACHECO ST.
SANTA FE, NM 87505

AD NUMBER: 144370 ACCOUNT: 56689
LEGAL NO: 67277 P.O.#: 00199000278
180 LINES 1 time(s) at $ 79.35
AFFIDAVITS: 5.25
TAX: 5.29
TOTAL: 89.89

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE
I, B Perner being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication #67277 a copy of which is hereto attached was published in said newspaper 1 day(s) between 04/25/2000 and 04/25/2000 and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 25 day of April, 2000 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ Betty Perner
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 25 day of April A.D., 2000

Notary Candace R. Gurston

Commission Expires 11/16/2003

NOTICE OF PUBLICATION

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan application has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(GW-220) - Bearcat Drilling LLC., Mr. Bonnifacio Vallejos, Drilling Superintendent, P.O. Box 717, Farmington, New Mexico, 87499, has submitted a renewal application for the previously approved discharge plan for their Farmington facility located in the NW/4 NW/4 of Section 19, Township 291 North, Range 12 West, NMPM, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top tank and transported offsite for disposal at an OCD approved facility. Groundwater most likely to be affected by a spill, leak or accidental discharge to the surface is at a depth of approximately 53 feet with a total dissolved solids concentration of approximately 1125 mg/l. The discharge plan addresses how spills, leaks and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this ***17th day of April, 2000.***

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
LORI WROTENBERY, Director

Legal #67277
Pub. April 25, 2000

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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(GW-220) Bearcat Drilling LLC., Mr. Bonnifacio Vallejos, Drilling Superintendent, P.O. Box 717, Farmington, New Mexico, 87499, has submitted a renewal application for the previously approved discharge plan for their Farmington facility located in the NW/4 NW/4 of Section 19, Township 291 North, Range 12 West, NMPM, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top tank and transported offsite for disposal at an OCD approved facility. Groundwater most likely to be affected by a spill, leak or accidental discharge to the surface is at a depth of approximately 53 feet with a total dissolved solids concentration of approximately 1125 mg/l. The discharge plan addresses how spills, leaks and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this ***17th day of April 2000.***

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

for LORI WROTENBERY, Director

SEAL

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

May 26, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5050 9573

Mr. Bonifacia Vallejos
Bearcat Drilling, LLC
5424 U.S. Highway 64
Farmington, New Mexico 87499

mail address
PO Box 717

Resent 6/13/00
as certified mail
5050 9597

RE: Discharge Plan Renewal GW-220
Bearcat Drilling, LLC
Farmington Service Facility
San Juan County, New Mexico

Dear Mr. Vallejos:

The ground water discharge plan renewal application GW-220 for the Bearcat Drilling, LLC Farmington Service Facility located in the NW/4 NW/4 of Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, **is hereby approved** under the conditions contained in the enclosed attachment. Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the New Mexico Oil Conservation Division (OCD) Santa Fe Office within 10 working days of receipt of this letter.**

The original discharge plan application was submitted on August 17, 1995 and approved November 28, 1995. The discharge plan renewal application, dated April 7, 2000, submitted pursuant to Sections 5101.B.3. of the New Mexico Water Quality Control Commission (WQCC) Regulations also includes all earlier applications and all conditions later placed on those approvals. The discharge plan is renewed pursuant to Sections 5101.A. and 3109.C. Please note Section 3109.G., which provides for possible future amendment of the plan. Please be advised that approval of this plan does not relieve Bearcat Drilling, LLC of liability should operations result in pollution of surface water, ground water, or the environment.

Please be advised that all exposed pits, including lined pits and open tanks (tanks exceeding 16 feet in diameter), shall be screened, netted, or otherwise rendered nonhazardous to wildlife including migratory birds.

Please note that Section 3104 of the regulations provides: "When a plan has been approved, discharges must be consistent with the terms and conditions of the plan." Pursuant to Section 3107.C., Bearcat Drilling, LLC is required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

U.S. Postal Service
CERTIFIED MAIL RECEIPT Ford OLD
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

SANTE JUN 13 2000

Name (Please Print Clearly) (To be completed by mailer)
B. Vallejos
Street, Apt. No.; or PO Box No.
Bearcat Drlg.
City, State, ZIP+ 4
Farmington GW-220

PS Form 3800, July 1999 See Reverse for Instructions

7099 3220 0000 5050 9597

Pursuant to Section 3109.H.4., this renewal plan is for a period of five years. This renewal will expire on **November 28, 2005**, and Bearcat Drilling, LLC should submit an application in ample time before this date. Note that under Section 3106.F. of the regulations, if a discharger submits a discharge plan renewal application at least 120 days before the discharge plan expires and is in compliance with the approved plan, then the existing discharge plan will not expire until the application for renewal has been approved or disapproved. It should be noted that all discharge plan facilities will be required to submit the results of an underground drainage testing program as a requirement for discharge plan .

Bearcat Drilling, LLC will submit a storm water run-off plan for approval by the OCD within six (6) months of the date of this approval letter for the Farmington Service Facility facility.

The discharge plan renewal application for the Bearcat Drilling, LLC Farmington Service Facility is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan application will be assessed a fee equal to the filing fee of $50. There is a renewal flat fee assessed for oil field service company equal to one-half of the original flat fee or $690.00. The OCD has received the filing fee and the flat fee.

Please make all checks payable to: Water Management Quality Management Fund
C/o: Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505.

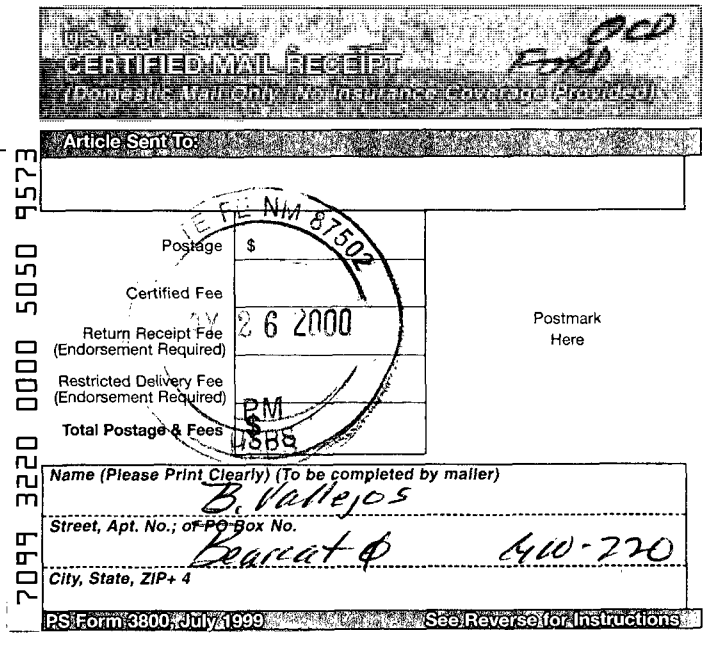
If you have any questions please contact Mr. W. Jack Ford at (505) 827-7156. On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge plan review.

Sincerely,

Roger C. Anderson
Chief, Environmental Bureau
Oil Conservation Division

RCA/wjf
Attachment

xc: OCD Aztec Office


U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
OCD
Ford
Article Sent To:
SANTA FE NM 87502
Postage $
Certified Fee
Return Receipt Fee (Endorsement Required)
MAY 26 2000
Restricted Delivery Fee (Endorsement Required)
PM
Total Postage & Fees $
Postmark Here
7099 3220 0000 5050 9573
Name (Please Print Clearly) (To be completed by mailer)
B. Vallejos
Street, Apt. No.; or PO Box No.
Bearcat #
GW-220
City, State, ZIP+ 4
PS Form 3800, July 1999
See Reverse for Instructions

ATTACHMENT TO THE DISCHARGE PLAN RENEWAL GW-220
BEARCAT DRILLING, LLC
FARMINGTON SERVICE FACILITY
DISCHARGE PLAN APPROVAL CONDITIONS
(May 26, 2000)

1. Payment of Discharge Plan Fees: The $50.00 filing fee has been received by the OCD. There is a required flat fee equal to one-half of the original flat fee for oil field service companies. The renewal flat fee required for this facility is $690.00 which has been received by the OCD.

2. Bearcat Drilling, LLC Commitments: Bearcat Drilling, LLC will abide by all commitments submitted in the discharge plan renewal application letter dated April 7, 2000 and these conditions for approval.

3. Waste Disposal: All wastes will be disposed of at an OCD approved facility. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt oilfield wastes that are non-hazardous may be disposed of at an OCD approved facility upon proper waste determination per 40 CFR Part 261. Any waste stream that is not listed in the discharge plan will be approved by OCD on a case-by-case basis.

4. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.

5. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

6. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.

7. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

8. Labeling: All tanks, drums and containers will be clearly labeled to identify their

8. Labeling: All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

9. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.

10. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity every 5 years. The permittee may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing.

11. Class V Wells: No Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD regulated facilities which inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.

12. Housekeeping: All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.

13. Spill Reporting: All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the OCD Hobbs District Office.

14. Transfer of Discharge Plan: The OCD will be notified prior to any transfer of ownership, control, or possession of a facility with an approved discharge plan. A written commitment to comply with the terms and conditions of the previously approved discharge plan must be submitted by the purchaser and approved by the OCD prior to transfer.

15. Storm Water Plan: The facility will have an approved storm water run-off plan.

16. Closure: The OCD will be notified when operations of the Farmington Service Facility are discontinued for a period in excess of six months. Prior to closure of the Farmington Service Facility a closure plan will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.

17. Certification: Bearcat Drilling, LLC, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Bearcat Drilling, LLC further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

BEARCAT DRILLING, LLC

by_____
Title

BEARCAT DRILLING LLC

PO BOX 717
FARMINGTON NM 87499
505-327-5218

April 7, 2000

OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
SANTA FE NM 87504

Mr. Roger Anderson

Bearcat Drilling LLC, purchased Walters Drilling INC August 31 1999. There are no changes at the facility.

We are sending a $50.00 filing fee plus a $690.00 For a GW 220 renewal.

Sincerely,

Bonnifacio Vallejos

Bonnifacio Vallejos
Drilling Superintendent

4-10-00
All Fees Paid

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Revised March 17, 1999

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS. REFINERIES, COMPRESSOR, AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☒ Renewal ☐ Modification

1. Type: OIL AND GAS-DRILLING CONTRACTOR
2. Operator: BEARCAT DRILLING, LLC

   Address: 5424 U.S. HIGHWAY 64, FARMINGTON, N.M. 87499

   Contact Person: BONIFACIO VALLEJOS Phone: 505-327-5218

3. Location: NW 1/4 NW 1/4 Section 19 Township 29N Range 12 W
   Submit large scale topographic map showing exact location.

4. Attach the name, telephone number and address of the landowner of the facility site.
   JAMES CLARK JR (972)-889-2100 12225 GREENVILLE AVE SUITE 950 DALLAS, TX 75243
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   NO CHANGES ON RECORD @ OCD
6. Attach a description of all materials stored or used at the facility.
   NO CHANGES ON RECORD @ OCD
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   NO CHANGES ON RECORD AT OCD
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
   NO CHANGES ON RECORD AT OCD
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   NO CHANGES ON RECORD AT OCD
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    NO CHANGES ON RECORD AT OCD
11. Attach a contingency plan for reporting and clean-up of spills or releases.
    NO CHANGES ON RECORD AT OCD
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
    NO CHANGES ON RECORD AT OCD
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
    NO CHANGES ON RECORD AT OCD
14. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: BONIFACIO VALLEJOS Title: DRILLING SUPERINTENDENT

Signature: Bonifacio Vallejos Date: APRIL 7, 2000

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 4/7/00

or cash received on _____ in the amount of $ 50.00

from Bearcat Drilling LLC

for Farmington Service Facility (Facility Name) GW-220 (DP No.)

Submitted by: [signature] Date: 4/10/00

Submitted to ASD by: _____ Date: _____

Received in ASD by: _____ Date: _____

Filing Fee ✓ New Facility ___ Renewal ✓

Modification ___ Other _____ (specify)

Organization Code 521.07 Applicable FY 2000

To be deposited in the Water Quality Management Fund.

Full Payment ✓ or Annual Increment ___

BEARCAT DRILLING LLC
312 West La Plata
Farmington, NM 87401

FIRST NATIONAL BANK OF FARMINGTON
FARMINGTON, NM
95-54/1022

PAY

FIFTY DOLLARS AND NO/100

VOID IF NOT PRESENTED FOR PAYMENT WITHIN 90 DAYS

CHECK NO.	DATE	PAY EXACTLY
[redacted]	04-07-00	$50.00

TO THE ORDER OF

NMED WATER QUALITY MANAGEMENT

Bonifacio Vallejos
AUTHORIZED SIGNATURE

[redacted]

BEARCAT DRILLING LLC, 312 West La Plata Farmington, NM 87401

PAYEE	CHECK NO.	DATE
NMED WATER QUALITY MANAGEMENT	[redacted]	04-07-00

VOUCHER	VENDOR INVOICE NO.	INVOICE DATE	TOTAL AMOUNT	PRIOR PAYMENTS	NET AMOUNT
oil conservation division					$50.00

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 4/7/00,

or cash received on _____ in the amount of $ 690.00

from Bearcat Drilling LLC

for Farmington Service Facility (Facility Name) GW-220 (DP No.)

Submitted by: _____ Date: 4/10/00

Submitted to ASD by: _____ Date: _____

Received in ASD by: _____ Date: _____

Filing Fee ___ New Facility ___ Renewal ___

Modification ___ Other _____ (specify)

Organization Code 521.07 Applicable FY 2000

To be deposited in the Water Quality Management Fund.

Full Payment ✓ or Annual Increment ___

BEARCAT DRILLING LLC
312 West La Plata
Farmington, NM 87401

FIRST NATIONAL BANK OF FARMINGTON
FARMINGTON, NM
95-54/1022

PAY SIX HUNDRED NINETY DOLLARS AND NO/100

VOID IF NOT PRESENTED FOR PAYMENT WITHIN 90 DAYS

CHECK NO.	DATE	PAY EXACTLY
[redacted]	04-07-00	$690.00

TO THE ORDER OF
NMED WATER QUALITY MANAGEMENT

Bonifacio Valley
AUTHORIZED SIGNATURE

[redacted]

BEARCAT DRILLING LLC, 312 West La Plata Farmington, NM 87401

PAYEE	CHECK NO.	DATE
NMED WATER QUALITY MANAGEMENT	[redacted]	04-07-00

VOUCHER	VENDOR INVOICE NO.	INVOICE DATE	TOTAL AMOUNT	PRIOR PAYMENTS	NET AMOUNT
OIL CONSERVATION DIVISION					$690.00

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

Jennifer A. Salisbury
CABINET SECRETARY

Oil Conservation Div.
Environmental Bureau
2040 S. Pacheco
Santa Fe, NM 87505

March 15, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5050 9443

Mr. Gary S. Brink
Walters Drilling Inc.
P.O. Box 717
Farmington, New Mexico 87499

RE: Discharge Plan Renewal Notice for Walters Drilling Inc. Facility

Dear Mr. Brink:

Walters Drilling Inc. has the following discharge plan which expires during the current calendar year.

GW-220 expires 11/28/2000 – Farmington Facility

WQCC 3106.F. If the holder of an approved discharge plan submits an application for discharge plan renewal at least 120 days before the discharge plan expires, and the discharger is not in violation of the approved discharge plan on the date of its expiration, then the existing approved discharge plan for the same activity shall not expire until the application for renewal has been approved or disapproved. A discharge plan continued under this provision remains fully effective and enforceable. An application for discharge plan renewal must include and adequately address all of the information necessary for evaluation of a new discharge plan. Previously submitted materials may be included by reference provided they are current, readily available to the secretary and sufficiently identified to be retrieved. [12-1-95]

The discharge plan renewal application for each of the above facilities is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan renewal will be assessed a fee equal to the filing fee of $50.00 plus a flat fee equal to one-half of the original flat fee for oil field service company facilities. The $50.00 filing fee is to be submitted with the discharge plan renewal application and is nonrefundable.

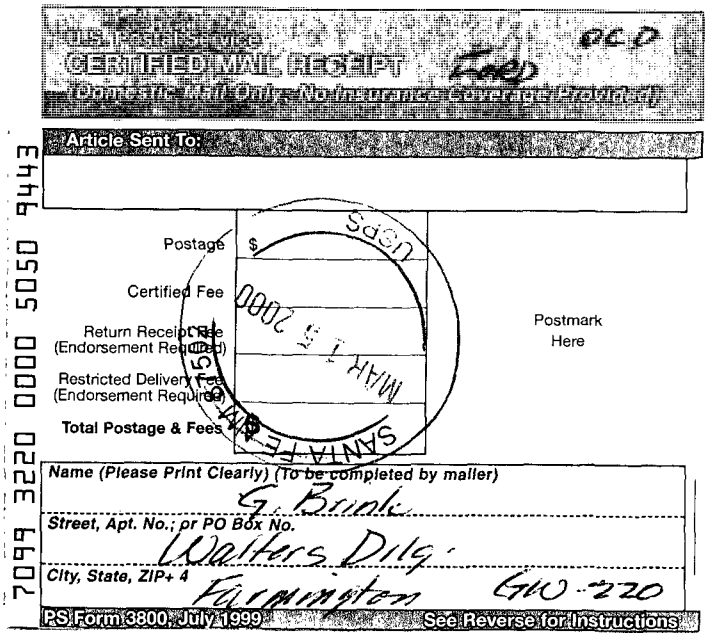
Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office. Please submit the original discharge plan renewal application and one copy to the OCD Santa Fe Office and one copy to the OCD Aztec District Office. **Note that the completed and signed application form must be submitted with your discharge plan renewal request.** (A copy of the discharge plan application form is enclosed to aid you in preparing the renewal application. A complete copy of the regulations is available on OCD's website at **www.emnrd.state.nm.us/ocd/**).

If the above sited facility no longer has any actual or potential discharges and a discharge plan is not needed, please notify this office. If the Walters Drilling Inc. has any questions, please do not hesitate to contact me at (505) 827-7152.

Sincerely,

Roger C. Anderson
Oil Conservation Division

cc: OCD Aztec District Office



ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 2/4/97,

or cash received on _____ in the amount of $ 1104.00

from Walters Drilling

for Farmington (Facility Name) GW-220 (DP No.)

Submitted by: _____ Date: _____

Submitted to ASD by: R Chacon Date: 3/19/97

Received in ASD by: _____ Date: _____

Filing Fee ___ New Facility X Renewal ___

Modification ___ Other _____ (specify)

Organization Code 521.07 Applicable FY 97

To be deposited in the Water Quality Management Fund.

Full Payment Y or Annual Increment X

2 thru 5 of 5

Walters DRILLING INC.
P.O. BOX 717
FARMINGTON, NEW MEXICO 87499

CITIZENS BANK
FARMINGTON, NM 87401
95-207-1022

[redacted]

PAY	DATE	CHECK NO.	CHECK AMOUNT
WALTERS DRILLING CO. [redacted]	02/04/97	14795	$1,104.00

TO THE ORDER OF NMED-Water Quality Management

[redacted]

Security features included. Details on back.

WALTERS DRILLING INC.

[redacted] VENDOR NO. [redacted] VENDOR NAME [redacted]

TRANSACTION DATE	REFERENCE	GROSS AMOUNT	DEDUCTION	NET AMOUNT
95500				$1,104.00

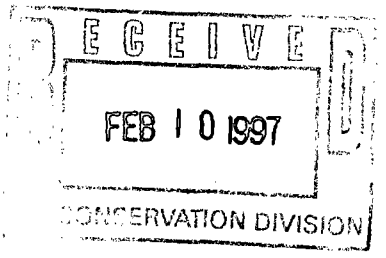
CHECK DATE	CHECK NO.	TOTAL GROSS	TOTAL DEDUCTION	CHECK AMOUNT

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

January 29, 1997

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-258-751



Mr. Gary S. Brink
Walters Drilling
P.O. Box 717
Farmington, NM 87499

RE: Discharge Plan Fees GW-220
Farmington Facility
San Juan County, New Mexico

Dear Mr. Brink:

On December 1, 1995, Walters Drilling, received, via certified mail, an approval dated November 28, 1995 from the New Mexico Oil Conservation Division (OCD) for discharge plan GW-220. Each discharge plan has a filing fee and a flat fee as described in WQCC Section 3114 (**see attachment**). The OCD has not as of this date (January 29, 1997) received the annual incremental amount of $276. The last check submitted by Walters Drilling was dated December 12, 1995. The total flat fee amount remaining is $1,104 of the original $1,380 flat fee for discharge plan GW-220.

Walters Drilling will submit the remaining $1,104 flat fee in full by March 3, 1997 in order to be in compliance with Water Quality Control Commission Regulation 3114.B.6, or the OCD may initiate enforcement actions which may include fines and/or an order to cease all operations at the facility. Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

If you have any questions regarding this matter, please contact me at (505)-827-7152 or Mr. Patricio Sanchez at (505) 827-7156.

Sincerely,

Roger Anderson
Environmental Bureau Chief

RCA/pws

xc: Mr. Denny Foust - Aztec OCD district office
attachment

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

January 29, 1997

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-258-751

Mr. Gary S. Brink
Walters Drilling
P.O. Box 717
Farmington, NM 87499

RE: Discharge Plan Fees GW-220
Farmington Facility
San Juan County, New Mexico

Dear Mr. Brink:

On December 1, 1995, Walters Drilling, received, via certified mail, an approval dated November 28, 1995 from the New Mexico Oil Conservation Division (OCD) for discharge plan GW-220. Each discharge plan has a filing fee and a flat fee as described in WQCC Section 3114 (see **attachment**). The OCD has not as of this date (January 29, 1997) received the annual incremental amount of $276. The last check submitted by Walters Drilling was dated December 12, 1995. The total flat fee amount remaining is $1,104 of the original $1,380 flat fee for discharge plan GW-220.

Walters Drilling will submit the remaining $1,104 flat fee in full by March 3, 1997 in order to be in compliance with Water Quality Control Commission Regulation 3114.B.6, or the OCD may initiate enforcement actions which may include fines and/or an order to cease all operations at the facility. Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

If you have any questions regarding this matter, please contact me at (505)-827-7152 or Mr. Patricio Sanchez at (505) 827-7156.

Sincerely,

Roger Anderson
Environmental Bureau Chief

RCA/pws

xc: Mr. Denny Foust - Aztec OCD district office
attachment

P 288 258 751

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Mr. Brink - Walters Drilling.	
Street & Number Gw-220 - Flaffic.	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form **3800**, April 1995

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 12/6/95,
or cash received on 12/15/95 in the amount of $ 276.00
from Walters Drilling
for Farmington Facility (Facility Name) GW-220 (OP No.)
Submitted by: _____ Date: _____
Submitted to ASD by: R.C. Anderson Date: 1/16/96
Received in ASD by: Angela Herrera Date: 1-17-96

Filing Fee ___ New Facility X Renewal ___
Modification ___ Other _____ (specify)

Organization Code 521.07 Applicable FY 96

To be deposited in the Water Quality Management Fund.

Full Payment ___ or Annual Increment X

1 of 5

[redacted]

Walters DRILLING INC.
P.O. BOX 717
FARMINGTON, NEW MEXICO 87499

CITIZENS BANK
FARMINGTON, NM 87401
95-207-1022

DATE	CHECK NO.	CHECK AMOUNT
12/06/95	13058	$276.00

PAY WALTERS DRILLING CO. 276DOLS00CTS

TO THE ORDER OF
State of New Mexico
NMED - Water Quality Management
Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

Walter L. Walters

[redacted]

WALTERS DRILLING INC.

VENDOR NO. [redacted] VENDOR NAME [redacted]

TRANSACTION DATE	REFERENCE	GROSS AMOUNT	DEDUCTION	NET AMOUNT
	1st year annual installment	Discharge Plan		$276.00

RECEIVED
DEC 15 1995
Environmental Bureau
Oil Conservation Division

CHECK DATE	CHECK NO.	TOTAL GROSS	TOTAL DEDUCTION	CHECK AMOUNT

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

November 28, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-979

Mr. Gary S. Brink
Walters Drilling
P.O. Box 717
Farmington, NM 87499

RE: Approval of Discharge Plan GW-220
Walters Drilling, Farmington Facility
San Juan County, New Mexico

Dear Mr. Brink:

The **discharge plan GW-220 for the Walters Drilling Facility** located in NW/4 NW/4, Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, **is hereby approved** subject to the conditions contained in the enclosed attachment. The discharge plan consists of the application and its contents dated August 17, 1995 and subsequent clarification information received by the OCD on November 17, 1995 both from Walters Drilling.

The discharge plan application was submitted pursuant to Section 3-106 of the New Mexico Water Quality Control Commission Regulations. Please note Sections 3-109.E and 3-109.F which provide for possible future amendments or modifications of the plan. Please be advised that the approval of this plan does not relieve Walters Drilling of liability should the operations associated with this facility result in pollution of surface water, ground water, or the environment.

Please be advised that all exposed pits, including lined pits and open top tanks (tanks exceeding 16 feet in diameter), shall be screened, netted, or otherwise rendered nonhazardous to wildlife including migratory birds.

Please note that Section 3-104 of the regulations requires that **"When a plan has been approved, discharges must be consistent with the terms and conditions of the plan."** Pursuant to Section 3-107.C you are required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

Pursuant to Section 3-109.G.4, this plan is for a period of five (5) years. This approval will expire November 28, 2000, and you should submit an application for renewal six (6) months before this date.

The discharge plan application for the Walters Drilling is subject to the WQCC Regulation 3-114 discharge plan fee. Every billable facility submitting a discharge plan will be assessed a fee equal to the filing fee of fifty dollars ($50) plus the flat fee of one thousand three-hundred and eighty dollars ($1380.00) for service company facilities.

The $50 filing fee has been received by the OCD. The flat fee for an approved discharge plan has not been received by the OCD. The flat fee may be paid in five (5) equal annual installments of $276 per year, with the first installment due upon receipt of this approval. The flat fee check should be submitted to the **NMED - Water Quality Management** through the NMOCD office in Santa Fe, New Mexico.

On behalf of the staff of the Oil Conservation Division, I wish to thank you and your staff for your cooperation during this discharge plan review.

Sincerely,

William J. LeMay
Director

WJL/pws
Attachment

xc: Mr. Denny Foust - Environmental Geologist

ATTACHMENT TO DISCHARGE PLAN GW-220 APPROVAL
Walters Drilling - Farmington, NM
DISCHARGE PLAN REQUIREMENTS
November 28, 1995

1. **Payment of Discharge Plan Fees:** The one thousand three hundred and eighty dollar ($1380) flat fee shall be submitted upon receipt of this approval. The flat fee may be paid in a single payment due at the time of approval, or in equal annual installments of $276 per installment over the five (5) year duration of the plan, with the first payment due upon receipt of this approval, and subsequent payments due by November 28th of each following year.

2. **Drum Storage**: All drums containing materials other than fresh water must be stored on an impermeable pad (i.e. concrete, asphalt, or other suitable containment) with curbing. All empty drums should be stored on their sides with the bungs in place and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets should also be stored on an impermeable pad with curbing.

3. **Process Areas**: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device (i.e. drip pan) incorporated into the design.

4. **Above Ground Tanks**: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new facilities or modifications to existing facilities must place the tank on an impermeable type pad.

5. **Above Ground Saddle Tanks**: Above ground saddle tanks must have impermeable type pad and curb containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure. No berms are required for saddle tanks.

6. **Tank Labeling**: All tanks should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill, or ignite.

7. **Housekeeping**: All systems designed for spill collection/prevention should be inspected to ensure proper operation and to prevent overtopping or system failure.

8. **Spill Reporting**: All spills/releases shall be reported pursuant to OCD Rule 116 and WQCC 1-203 to the appropriate OCD District Office.(Aztec OCD at 334-6178)

Z 765 962 979

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to GW-220 - Approval	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form **3800**, March 1993

District I - (505) 393-6161
P. O. Box 1940
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88211-0719
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Revised 4/18/95

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to appropriate
District Office

DISCHARGE PLAN APPLICATION FOR OILFIELD SERVICE FACILITIES

(Refer to the OCD Guidelines for assistance in completing the application)

☒ New ☐ Renewal ☐ Modification

1. Type: Oil and gas well drilling contractor
2. Operator: Walters Drilling, Inc.

   Address: 5424 U.S. Highway 64, Farmington, NM 87401

   Contact Person: Gary Brink Phone: 505-327-5218
3. Location: NW 1/4 NW 1/4 Section 19 Township 29N Range 12W

   Submit large scale typographic map showing exact location.
   Attached with part 5.
4. Attach the name and address of the landowner of the facility site.
   HW Partnership P. O. Box 717, Farmington, NM 87499
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   Attached
6. Attach a description of all materials stored or used at the facility.
   Attached
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   Attached
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
   Attached
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   Attached
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    Attached
11. Attach a contringency plan for reporting and clean-up of spills or releases.
    Attached
12. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact fresh water. Depth to and quality of ground water must be included.
    Attached
13. Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
    Attached
14. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Gary S. Brink Title: Controlled/Vice-President

Signature: Gary S. Brink Date: August 17, 1995

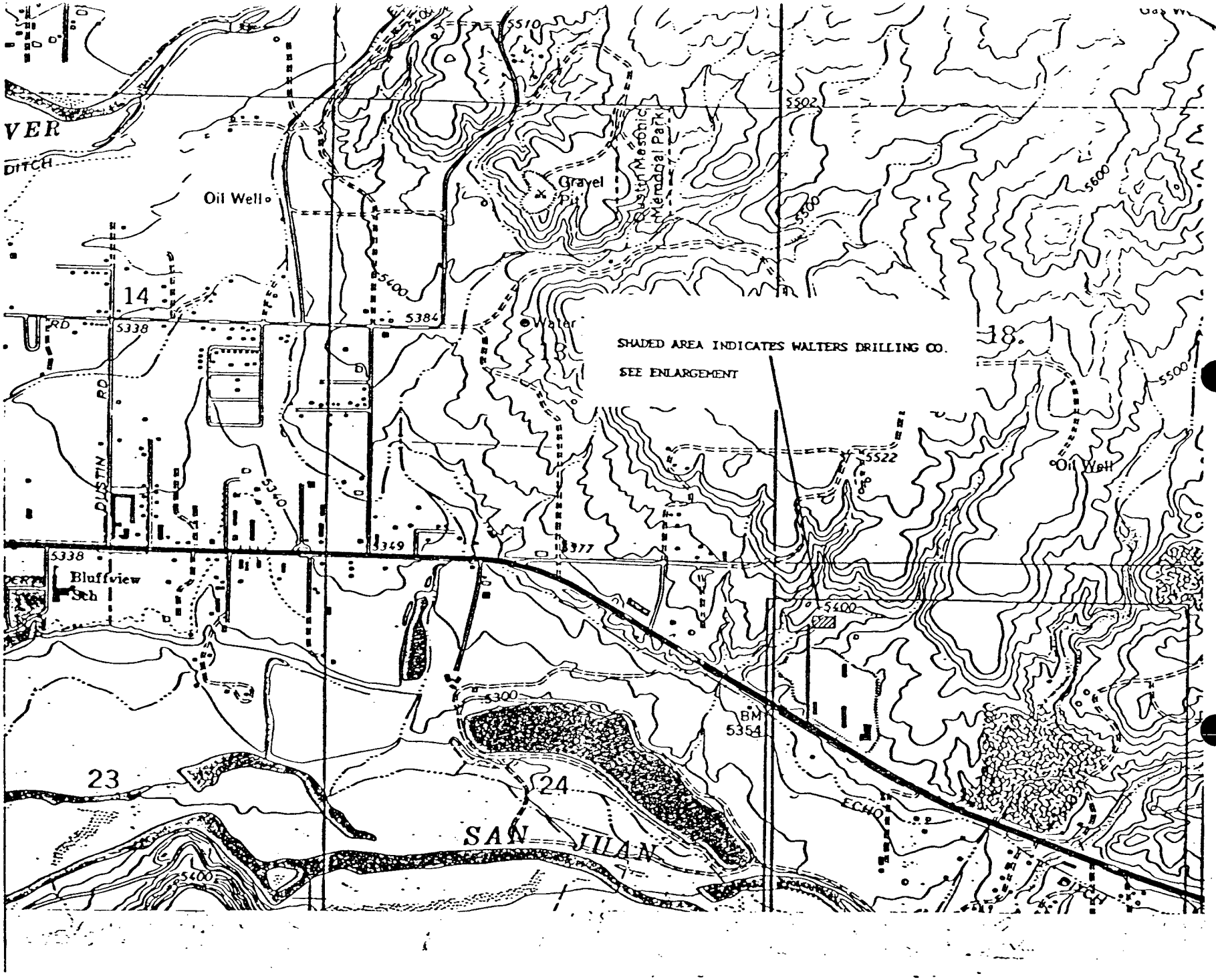
DISCHARGE PLAN APPLICATION

V. FACILITY DESCRIPTION: A CYCLONE FENCE COMPLETELY SURROUNDS TRACTS ONE, TWO, THREE, AND FOUR. THERE ARE NO PITS, TANKS, OR BERMS ON THE FACILITY. USED OIL IS STORED IN A SMALL TANK AT THE REAR OF THE MAIN BUILDING. MOTOR OIL, 90 WEIGHT OIL, TELLUS, SOLVENT AND GREASE ARE STORED IN 55 GALLON DRUMS IN THE MIDDLE OF THE MAIN BUILDING. THERE ARE NO OTHER STORED ITEMS ON THE FACILITY AND THERE ARE NO DISCHARGES OR PROCESSING FACILITIES.

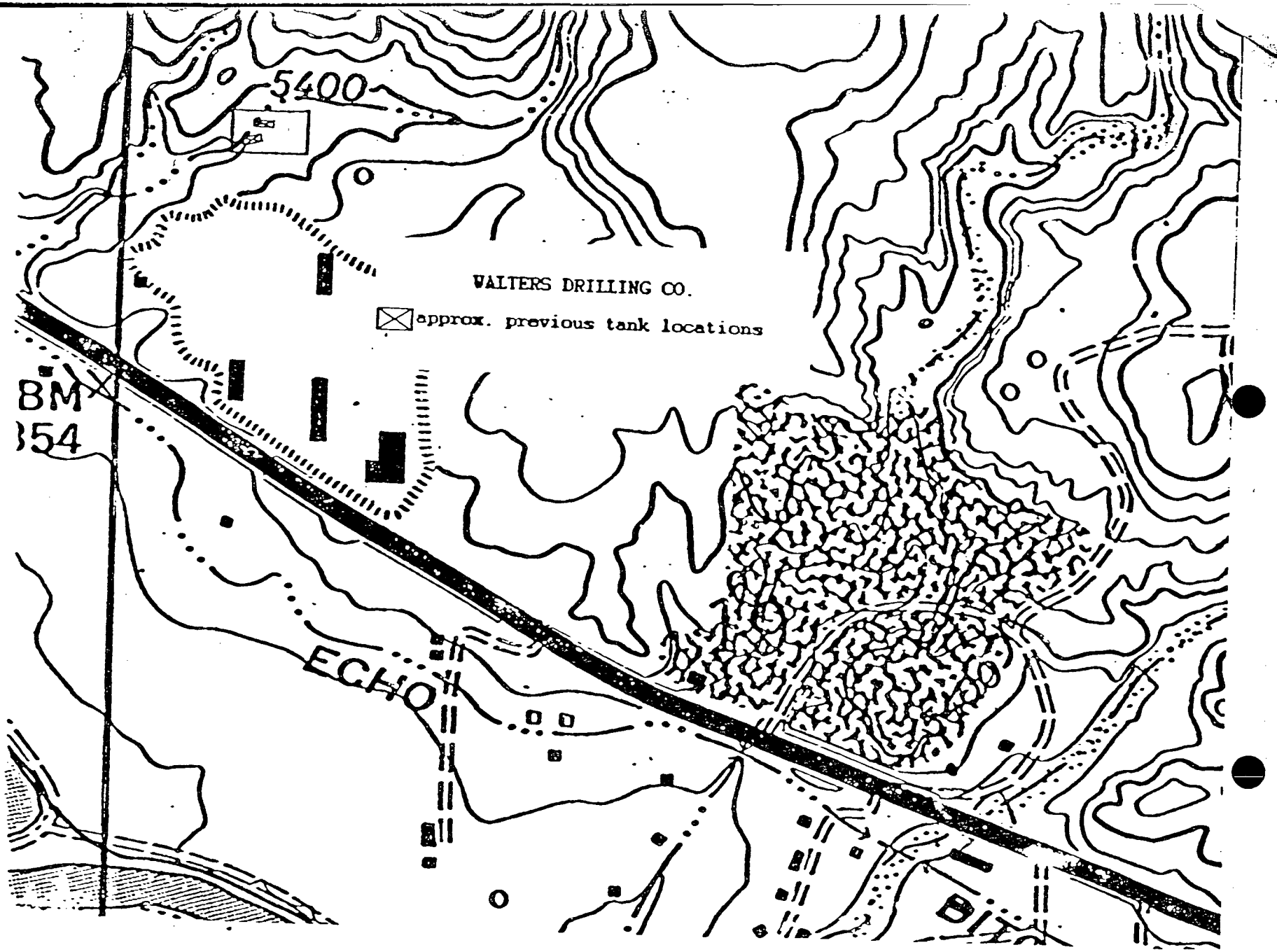
RECEIVED

NOV 2 7 1995

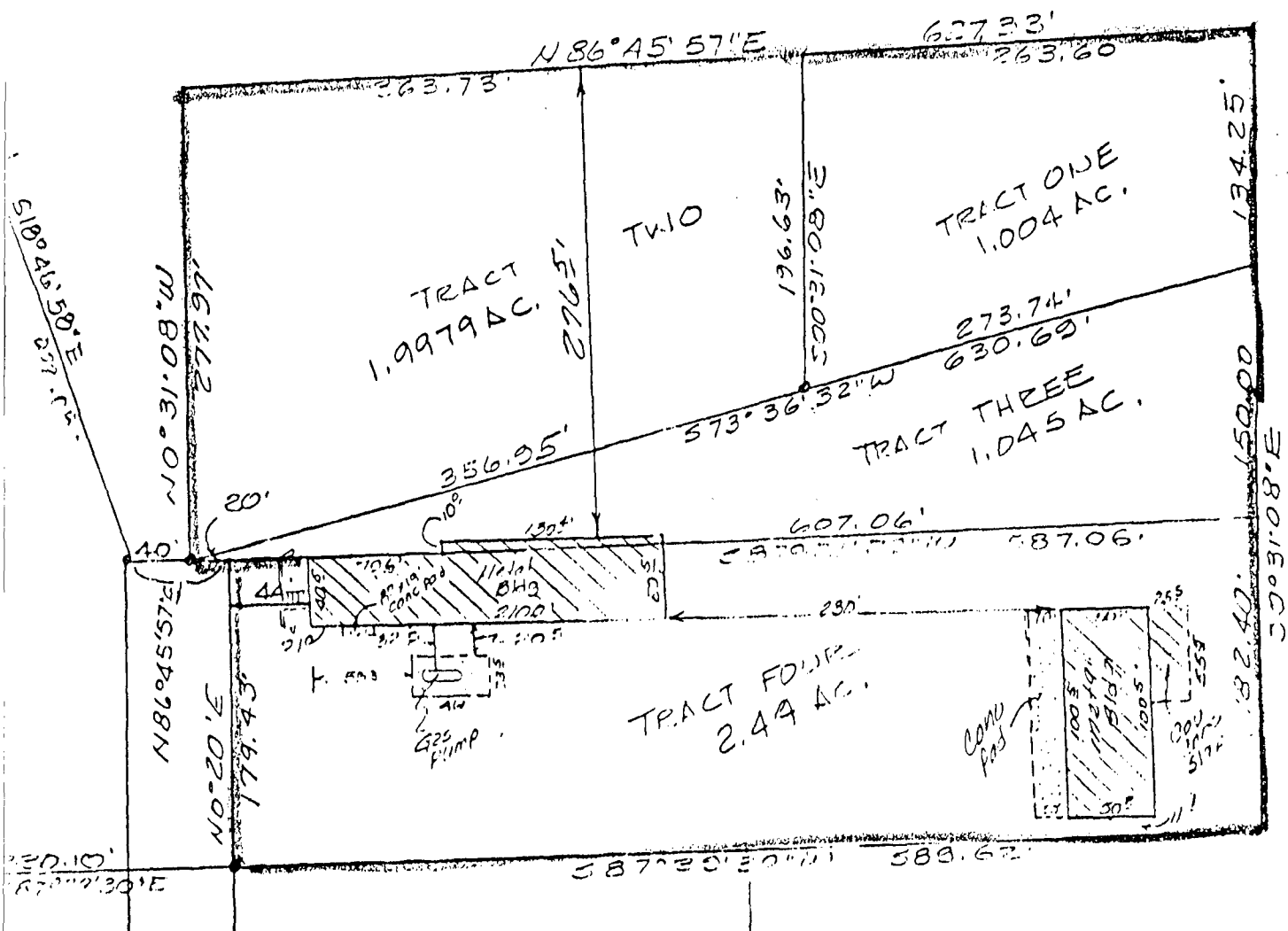
Environmental Bureau
Oil Conservation Division



Facility Description


5400
WALTERS DRILLING CO.
approx. previous tank locations
BM
354
ECHO

THENCE: S00°31'08"E, 134.25 feet;
THENCE: S73°36'32"W, 273.74 feet to the point of beginn



DESCRIPTION - TRACT 4

2.44 acres, more or less, being Quarter of the Northwest Quarte T29N, R12W, N.M.P.M., San Juan described as follows:
BEGINNING at a point which is feet N87°39'30"E from the North
THENCE: N00°20'E, 179.43 feet;
THENCE: N87°21'29"E, 587.06 fe
THENCE: S00°31'08"E, 182.40 fe
THENCE: S87°39'30"W, 589.62 fe

DESCRIPTION - TRACT 5 ACCESS

1.239 acres, more or less, beir west Quarter of the Northwest C T29N, R12W, N.M.P.M., San Juan being described as follows:
BEGINNING at a point which i the Northwest Corner of said

Facility Description

DISCHARGE PLAN APPLICATION

PART VI. MATERIALS STORED OR USED AT THE FACILITY:

NAME	GENERAL MAKEUP,	SOLDIS, LIQUID	CONTAINER TYPE	EST. STORAGE VOLUME	LOCATION
1. DRILLING FLUIDS					
2. BRINES					
3. ACIDS, CAUSTICS					
4. DETERGENTS, SOAPS	ROUGHNECK RIG WASH	S	DRUM	400 LBS	SHOP
5. SOLVENTS, DEGREASERS	KERMAC SOLVENT	L	DRUM	55 GALLONS	SHOP
6. PARAFFIN TREATMENT EMULSION BREAKERS					
7. BIOCIDES					
8. OTHERS	SHELL SPIRAX GEAR OIL	L	DRUM	55 GALLONS	SHOP
	SHELL RIMULA OIL 10W	L	DRUM	55 GALLONS	SHOP
	SHELLZONE ANTIFREEZE	L	DRUM	55 GALLONS	SHOP
	SHELL AVINIA GREASE	S	DRUM	120 LBS	SHOP

DISCHARGE PLAN APPLICATION

PART VII. SOURCES AND QUANTITIES OF EFFLUENT AND WASTE SOLIDS GENERATED AT THE FACILITY:

WASTE TYPE	GENERAL COMPOSITION AND SOURCE	VOLUME PER MONTH	MAJOR ADDITIVES
1. TRUCK WASTES			
2. TRUCK, TANK AND DRUM WASHING			
3. STEAM CLEANING OF PARTS, EQUIP., TANKS			
4. SOLVENT/DEGREASER USE	SOLVENTS FROM SMALL PARTS	2 GALLONS	NAPTHA
5. SPENT ACIDS, CAUSTICS, OR COMPLETION FLUIDS			
6. USED, SLOP OIL	USED OIL FROM RIG	100 GALLONS	
7. USED LUBRICATION AND MOTOR OILS	OIL CHANGES	50 GALLONS	
8. OIL FILTERS	OIL CHANGES	5 GALLONS	
9. SOLIDS AND SLUDGES FROM TANKS			
10. PAINTING WASTES			
11. SEWAGE			
12. OTHER WASTE LIQUIDS	USED OIL DRUMS	5	EMPTY OIL DRUMS
13. OTHER WASTE SOLIDS			

DISCHARGE PLAN APPLICATION

PART VII. SOURCES AND QUANTITIES OF EFFLUENT AND WASTE SOLIDS GENERATED AT THE FACILITY:

IN THE EVENT OF A LEAK, SPILL OR RELEASE THE RP WILL TAKE THE APPROPRIATE MEASURES TO STOP THE SOURCE. ONCE THE SITE HAS BEEN SECURED THE RP WILL CONTAIN THE SPILL BY CONSTRUCTING DIKES, BERMS AND OR THE USE OF ABSORBENT MATERIALS. SITE STABILIZATION AND ASSESSMENT WILL BE DONE BY ENVIROTECH, 5796 US HWY 64, FARMINGTON, NM..

DISCHARGE PLAN APPLICATION

PART VIII. SUMMARY DESCRIPTION OF EXISTING LIQUID AND SOLIDS WASTE COLLECTION AND DISPOSAL:

WASTE TYPE	TANK/DRUM	FLOOR DRAIN SUMP	PITS, LINED OR UNLINED	ONSITE INJECTION WELL	LEACH FIELD	OFFSITE DISPOSAL
1. TRUCK WASTES						
2. TRUCK, TANK AND DRUM WASHING	T					
3. STEAM CLEANING OF PARTS, EQUIP., TANKS						
4. SOLVENT/DEGREASER USE						
5. SPENT ACIDS, CAUSTICS, OR COMPLETION FLUIDS						
6. WASTE, SLOP OIL						
7. USED LUBRICATION AND MOTOR OILS	T					D&D OIL RECYLING BLOOMFIELD, NM
8. OIL FILTERS	D					BELT SALVAGE CORTEZ, CO
9. SOLIDS AND SLUDGES FROM TANKS						
10. PAINTING WASTES						
11. SEWAGE						
12. OTHER WASTE LIQUIDS						
13. OTHER WASTE SOLIDS	USED OIL DRUMS					SALVAGE PLUS KIRTLAND, NM

DISCHARGE PLAN APLICATION

VIII. USED OIL IS STORED IN 55 GALLON DRUMS AND A 450 GALLON STORAGE TANK. THE DRUMS ARE DRAINED INTO THE TANK AND THE OIL FROM THE TANK IS TRANSFERRED TO AN OIL RECYCLING CENTER (D&D OIL).

ALL OIL FILTERS ARE DRAINED AND CRUSHED BY BELT SALVAGE AND RECYCLED THROUGH THEIR RECYCLING PROGRAM.

ALL EMPTY 55 GALLON DRUMS ARE DRAINED AND TRUCKED TO SALVAGE PLUS FOR DISPOSAL IN THEIR RECYCLING CENTER.

SOLVENT IS USED IN A SEPARATE TANK FOR THE CLEANING OF SMALL PARTS. THE SOLVENT IS USED OVER AND OVER.

IX. THE 450 GALLON STORAGE TANK HAS BEEN PLACED IN A DRIP PAN (1/4" X 5' X 5') TO CATCH ANY DRIPS OR SPLASHES. THE TANK IS SITTING ON CEMENT AND NOW HAS STAIRS ON ONE END TO FACILITATE DRAINING OF THE DRUMS. THE TANK IS ON AN ELEVATED SKID INSIDE OF THE DRIP PAN.

X. THE ELEVATED SKID ON THE 450 GALLON OIL STORAGE TANK ALLOWS FOR VISUAL LEAK DETECTION. A VISUAL INSPECTION OF THE STORAGE TANK WILL BE DONE DAILY. MAINTENANCE WILL BE DONE AS NEEDED OR AT LEAST SEMI-ANNUALLY ON THE VALVES.

IN THE EVENT OF A REPORTABLE SPILL THE RP WILL REPORT THE SPILL IN ACCORDANCE WITH NMOCD RULE 116 AND WQCC 1-203 AND CONTACT THE AZTEC NMOCD OFFICE .

IN THE CASE OF A SPILL WITH THE POTENTIAL TO LEAVE THE BUILDING AREA THE RP WILL C0NTACT A DIRT CONTRACTOR AND HAVE ADEQUATE BERMS CONSTRUCTED TO MINIMIZE SOIL CONTAMINATION. THE BERMS WILL BE CONSTRUCTED SUCH THAT PRECIPITATION AND OR RUN OFF WILL NOT INCREASE THE AREA OF SOIL CONTAMINATION.

XI. IT IS ANTICIPATED THAT ANY SPILL OR LEAKAGE WOULD OCCUR AT THE 450 GALLON STORAGE TANK.

A) IN THE CASE OF A NON-REPORTABLE SPILL, ABSORBENT SOCKS WOULD BE USED TO CONTAIN THE SPILL. IN THE EVENT OF A REPORTABLE SPILL THE RP WOULD REPORT THE SPILL IN ACCORDANCE WITH NMOCD RULE 116 AND WQCC 1-203 AND CONTACT THE AZTEC NMOCD OFFICE . IF A REPORTABLE SPILL WERE TO OCCUR THE RP WOULD UTILIZE ABSORBENT SOCKS, VACUUM TRUCKS, DIRT CONTRACTORS , ENVIRONMENTAL PROFESSIONALS AT HIS DISCRETION TO ASSURE CONTAMINATION IS KEPT AT A MINIMUM.

XII.

A) THE NEAREST SURFACE WATER WAY IS THE SAN JUAN RIVER WHICH IS LOCATED APPROXIMATELY ONE MILE AWAY. U. S. GEOLOGICAL SURVEY, OPEN-FILE REPORT 84-608 IS INCLUDED AS EXHIBIT A.

B) ANY DISHCHARGE WOULD BE CONTAINED AND OR ISOLATED SUCH THAT NO GROUND WATER WOULD BE EFFECTED.

C) 1.) SOIL TYPES FOR THIS FACILITY ARE SAND CLAY MIXTURE WITH A SANDSTONE BASE BEING ENCOUNTERED BETWEEN 10 AND 12 FEET DEPENDING ON THE AREA OF THE FACILITY IN WHICH WORK IS BEING DONE.
2.) N/A
3.) N/A

XIII. AS PART OF WALTERS DRILLING, INC. DISHARGE PLAN THE NEW MEXICO OIL CONSERVATION DIVISION GUIDELINES FOR REMEDIATION OF LEAKS, SPILLS AND RELEASES DATED AUGUST 13, 1993 WILL BE USED, SEE EXHIBIT B.

IN COMPLIANCE WITH YOUR LETTER DATED APRIL 24, 1995 REGARDING THE INSPECTION OF OUR FACILITY, THE FOLLOWNG INFORMATION IS SUBMITTED:

1. THE USE OF LEAD BASE THREAD DOPE HAS BEEN DISCONTINUED.

2. ALL EMPTY DRUMS HAVE BEEN REMOVED FROM THE FACILITY. WE BRING WASTE OIL FROM THE RIG TO THE YARD AND DRAIN IT INTO OUR STORAGETANK. WHEN FIVE OR SIX DRUMS (A PICKUP LOAD) ARE ACCUMULATED, THEY ARE TRUCKED TO SALVAGE PLUS FOR RECYCLING.

3. ALL SMALL OIL SPILLS HAVE BEEN RAKED AND THE ENTIRE YARD WILL BE DRAGGED TO LOOSEN THE TOPSOIL AND ALLOW AERATION.

4. WE ARE REQUIRING ALL EMPLOYEES WHO WORK IN THE YARD TO BE AWARE OF THE IMPORTANCE OF MAINTAINING A CLEAN AND SAFE WORK AREA.

5. ALL DRILLING MUDS AND CHEMICALS HAVE BEEN REMOVED FROM THE FACILITY. WE WILL NO LONGER STORE ANY TYPE OF FLUID ADDITIVES IN THE YARD.

6. BULK STORAGE OF OILS, ANTIFREEZES, AND GREASES WILL BE LABELLED AS WELL AS THE OIL STORAGE TANK.

7. USED OIL DRUMS BROUGHT IN FROM THE RIG WILL BE LABELLED AS USED OIL AND EMPTY DRUMS FROM BULK STORAGE WILL BE MARKED THE SAME.

8. ALL PAINTING AT THE FACILITY HAS BEEN DISCOURAGED. IF THERE COMES A NEED TO PAINT, THE EMPTY CANS WILL BE LEFT TO DRY BEFORE DISPOSAL.

9. AN MSDS FOR SHOP SOLVENT HAS BEEN OBTAINED AND THE TANK WILL BE MARKED AS SOLVENT.

10. THE EMPTY DRUMS THAT HAD ACCUMULATED RAINWATER WERE DRAINED INTO A PLASTIC LINED PIT AND ALLOWED TO EVAPORATE. THE EMPTY DRUMS WERE THEN TRUCKED TO SALVAGE PLUS FOR RECYCLING.

11. WE HAVE NO SUMPS ON THE FACILITY AND WILL NOT INSTALL ANY IN THE FUTURE.

12. NO NEW CONSTRUCTION IS BEING PLANNED, HOWEVER, ALL GUIDELINES WILL BE FOLLOWED SHOULD THESE PLANS CHANGE.

OCD

AVAILABILITY OF HYDROLOGIC DATA IN SAN JUAN COUNTY, NEW MEXICO

U.S. GEOLOGICAL SURVEY

Open-File Report 84-608

Prepared in cooperation with
SAN JUAN COUNTY COMMISSION, NEW MEXICO

EXHIBIT A

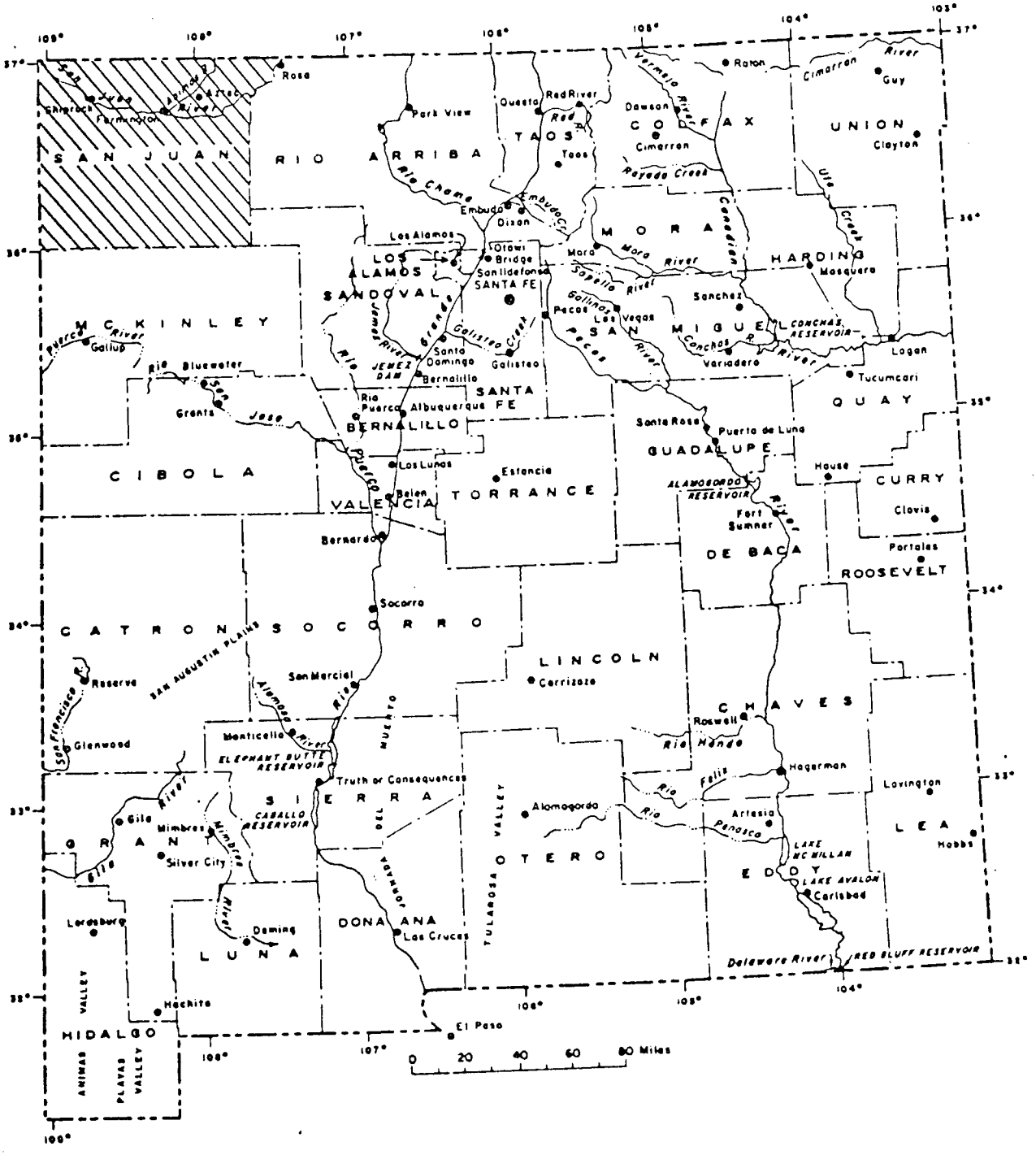


Figure 1.--Location of San Juan County, New Mexico.

PRESENTATION OF THE DATA

Information is presented in this report about water wells, springs, and streamflow-gaging stations in San Juan County. The locations and descriptive information for 1,877 wells, 172 springs, and 39 streamflow-gaging stations are listed in the tables. The locations of wells and gaging stations are shown on plate 1, as are springs with yields exceeding 10 gallons per minute. The generalized distribution of geologic formations that are exposed at the land surface is also shown on plate 1.

The hydrologic information in table 1 is a duplication of some of the data that were compiled by the U.S. Geological Survey for table 1 of the report by Stone and others (1983). Table 1 is a compilation of information on wells and springs that were in existence in San Juan County prior to 1978. Included in the table are 887 wells and 172 springs; 406 wells and 144 springs are on the Navajo Indian Reservation in the western half of the county. The lines at the left margin of table 1 indicate wells or springs that are a few miles outside of the county; this information may be useful in defining hydrologic conditions near the eastern or southern county boundaries.

Hydrologic data furnished by the New Mexico State Engineer Office are included in table 2. The data are preliminary and subject to revision. Generally, the wells listed in this table were drilled from 1978 to 1983. Included in the table are 990 wells in San Juan County; 43 wells are in the western half of the county on the Navajo Indian Reservation. Most of the wells in the vicinity of the towns of Bloomfield, Farmington, and Aztec are shallow domestic wells drilled in the Animas, La Plata, and San Juan River valleys. The lines at the left margin of table 2 indicate wells that are a few miles east of the county; this well data may be useful in defining hydrologic conditions near the eastern boundary of the county.

Descriptions of 39 streamflow-gaging stations are listed in table 3. Twenty-one of the stations were active in 1984 and the remainder were in use at various times in the past. The stations are located on the Animas, Chaco, La Plata, and San Juan Rivers, and their tributaries which flow through San Juan County. Twenty-eight of the stations are located in San Juan County, New Mexico, four in McKinley County, New Mexico, six in Colorado, and one in Utah. The descriptions include a detailed location, the size of the drainage area upstream from the station, the period of record, the type and altitude of the gage, miscellaneous remarks concerning the quality of the record and the availability of water-quality data, and the average and extreme discharges. Daily discharges are given for the 1982 water year (October 1, 1981, through September 30, 1982) or the last year of record for a discontinued station. The stations listed in the table are the principal collection sites for surface-water data published by the U.S. Geological Survey.

Additional information about many of the wells listed in tables 1 and 2 is available from the sources given in table 1 and from the U.S. Geological Survey and the State Engineer Office in Albuquerque, New Mexico. Stream-discharge data for the period of record of the 39 stations listed in table 3 are available from computer files of the U.S. Geological Survey. Water-quality data that have been collected at the wells and streamflow-gaging stations indicated by the solid symbols on plate 1 are also available from the U.S. Geological Survey or the New Mexico Bureau of Mines and Mineral Resources in Socorro.

USE OF THE MAP AND DATA TABLES

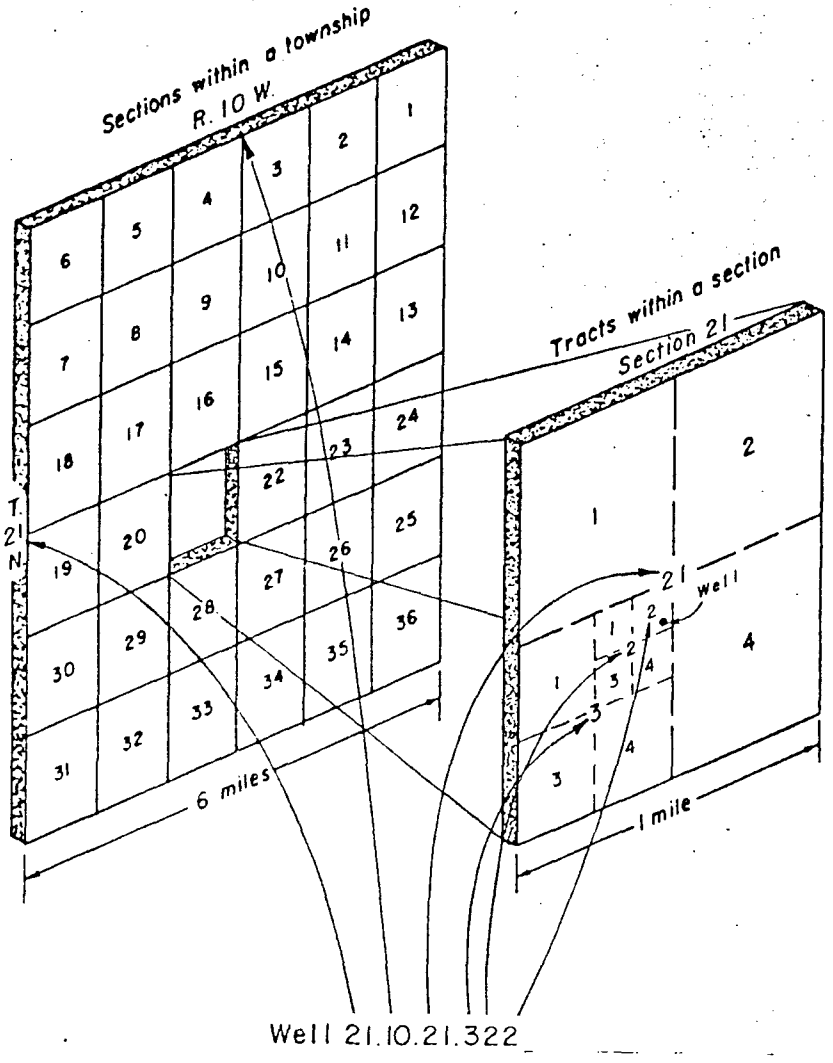
The locations where hydrologic data have been collected are shown on plate 1. The hydrologic conditions at a known well site, for example, may be projected to an adjacent site where new water supplies might be needed, if geologic conditions are similar. Such extrapolations, however, need to be made with caution.

The stream-discharge data given in table 3 (station locations on plate 1) provide information on streamflow characteristics, such as average and peak flows and surface-water quality. This information may be used to determine the relative amounts of water than can be delivered to surface-water users, to estimate quantities of water that may be available for future use, to determine high- and low-water stream stages, and to aid in designing roads, bridges, and other structures.

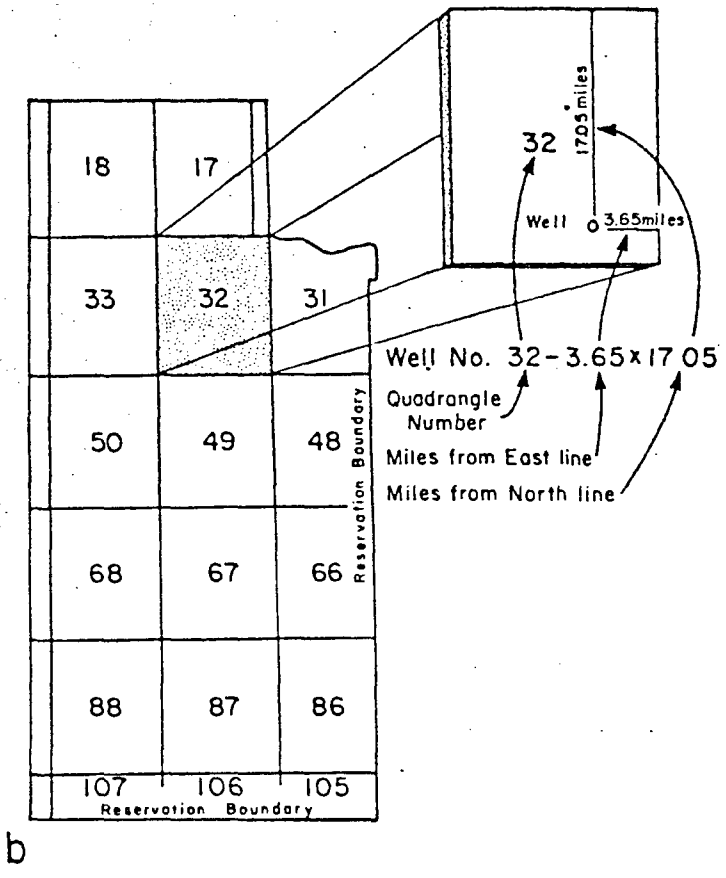
WELL-NUMBERING SYSTEMS

Two numbering systems are used in this report to locate a well. The first uses the common subdivision of lands into townships, ranges, and sections. In this system, the location number is divided into four segments separated by periods. The first segment indicates the township north of the New Mexico Base Line and the second denotes the range west of the New Mexico Principal Meridian. The third segment indicates the section within the township and the fourth segment indicates the tract within which the well is located. To determine the fourth segment of the location number, the section is divided into quarters numbered 1, 2, 3, and 4 for the NW¼, NE¼, SW¼, and SE¼ respectively. The quarter section may be further subdivided in a similar manner. The number of digits in the fourth segment of the location number indicates the degree of accuracy in locating the well. One digit indicates the location only could be determined to a 160-acre tract; two digits, 40-acre tract; three digits, 10-acre tract; and four digits, 2½-acre tract. A well with a location number 21.07.28.213 is located in the southwest ¼ of the northwest ¼ of the northeast ¼ of section 28, Township 21 North, Range 7 West (fig. 2).

A different numbering system is used for the main part of the Navajo Reservation. This area is divided into 15-minute quadrangles, each of which is assigned a number. The well number consists of the quadrangle number followed by the distance in miles from the east line and the distance in miles from the north line, in that order. Thus, a well numbered 32 - 3.65 x 17.05 is in quadrangle number 32, 3.65 miles from the east line and 17.05 from the north line as shown in figure 2.



Township and Range System of numbering wells in New Mexico



System of numbering wells on the Navajo Indian Reservation

Figure 2.--Well-numbering systems.

SELECTED REFERENCES

Baltz, E. H., Jr., and West, S. W., 1967, Ground-water resources of the southern part of the Jicarilla Apache Indian Reservation and adjacent areas, New Mexico: U.S. Geological Survey Water-Supply Paper 1576-H, 89 p.

Brimhall, R. M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Cretaceous and Tertiary rocks of the southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Brown, D. R., and Stone, W. J., 1979, Hydrogeology of Aztec quadrangle, San Juan County, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrogeologic Sheet 1.

Callahan, J. T., and Harshbarger, J. W., 1955, Memorandum on water-supply investigation at Shiprock School, Navajo Indian Reservation, San Juan County, New Mexico: U.S. Geological Survey open-file report, 11 p.

Dane, C. H. and Bachman, G. O., 1955, Geologic map of New Mexico: U.S Geological Survey, 2 sheets, scale 1:500,000.

Davis, G. E., Hardt, W. F., Thompson, L. K., and Cooley, M. E., 1963, Records of ground-water supplies, part 1, in Geohydrologic data in the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah: Arizona Land Department, Water Resources Report 12-A, 159 p.

Halpenny, L. C., and Harshbarger, J. W., 1950, Water-supply investigation of Sanostee area, Navajo Indian Reservation, San Juan County, New Mexico: U.S. Geological Survey open-file report, 26 p.

Kelly, T. E., 1977, Geohydrology of the Westwater Canyon Member, Morrison Formation, of the southern San Juan Basin, New Mexico: New Mexico Geological Society Guidebook, 28th Field Conference, p. 285-290.

Kister, L. R., and Hatchett, J. L., 1963, Selected chemical analyses of ground water, part 2, in Geohydrologic data in the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah, Arizona Land Development: Water Resources Report 12-B, 58 p.

Rapp, J. R., 1959, Reconnaissance of the geology and ground-water resources of the Farmington area, San Juan County, New Mexico: U.S. Geological Survey open-file report, 13 p.

Shomaker, J. W., 1976, Summary of well and spring records near Star Lake Mine area (McKinley County): Consulting report to Genge Environmental Consultants, 14 p.

SELECTED REFERENCES - Concluded

Stone, W. J., Lyford, F. P., Frenzel, P. F., Mizell, N. H., and Padgett, E. T., 1983, Hydrology and water resources of San Juan basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6, 70 p., 103 figs., 14 tables.

U.S. Geological Survey, various years, Water resources data for New Mexico: U.S. Geological Survey Water-Supply Papers (prior to 1962) and annual water-data reports (1962-83).

Wright, A. F., 1979, Bibliography of the geology and hydrology of the San Juan Basin, New Mexico: U.S. Geological Survey Bulletin 1481, 123 p.

Table 1.--Records of water wells and springs in San Juan County prior to 1978

EXPLANATION

LOCATION.--The location of a well or spring is described by using the system of quartering by sections (example: 24.13.9.134) or the numbering system for the Navajo Reservation (example: 33-7.16x8.96). The systems are explained in the text and shown in figure 2. All locations are defined as accurately as possible with the information available.

LATITUDE-LONGITUDE.--Latitude and longitude are reported in degrees, minutes, and seconds (example: 363010 1084525 = lat 36° 30' 10" N, long 108° 45' 25" W). If the exact location of a well or spring is unknown, the latitude and longitude at the center of the smallest subdivision of a section as indicated in the location number is given. Latitudes and longitudes were not computed for sites that could not be located more accurately than a quarter section.

NUMBER OR NAME.--The number or name assigned to a well may be the owner's name or number, the BIA or Navajo name or number, a traditional name, or the name of a nearby landmark. Springs and dug wells are identified under this heading.

DEPTH.--Depth is the total depth of a well (in feet) below land surface that was obtained from driller's records, measured (M) by U.S. Geological Survey, reported by individuals, or estimated (E). Wells that have been plugged back or deepened have the original depth noted in "Remarks". If the depth is questionable, it is marked with a "Q".

ALTITUDE.--Altitude of the land surface (in feet) above sea level at the well or spring. If an altitude was not recorded in field data or a location was not precise, the altitude reported was at the center of the smallest subdivision of a section as indicated in the location number. Altitudes are estimated (E) at sites with vague locations.

DEPTH TO WATER.--Depth to water below land surface (in feet). Values with decimal point accuracy were measured, others reported (R) or estimated (E). A plus sign (+) indicates the water level is above the land surface. "F" indicates the well was flowing on the date given.

DATE.--The date given is that of the water-level measurement noted on the same line. If no water level is noted, a date in this column is given to establish the well's existence at that particular time.

PRODUCING INTERVAL.--Producing interval is the depth (in feet) below land surface in the well that is open to the water-bearing unit.

PRINCIPAL WATER-BEARING UNIT(S).--The abbreviations of the geologic formation(s) that contain the water-bearing units are as follows:

Quaternary:
- Qal - Alluvium
- Qc - Colluvium (landslide, talus)

Tertiary:
- Tc - Chuska Sandstone
- Tsq - San Jose Formation
- Tn - Nacimiento Formation

Tertiary-Cretaceous:
- TKoa - Ojo Alamo Sandstone
- TKi - Intrusives

Cretaceous:
- Kk - Kirtland Shale
- Kkm - Farmington Sandstone Member
- Kkf - Kirtland Shale, Fruitland Formation, undivided
- Kf - Fruitland Formation
- Kpc - Pictured Cliffs Sandstone
- Kch - Cliff House Sandstone
- Kmf - Menefee Formation
- Kpl - Point Lookout Sandstone
- Kg - Gallup Sandstone
- Kd - Dakota Sandstone

Jurassic:
- Jm - Morrison Formation
- Jmb - Brushy Basin Shale Member
- Jmw - Westwater Canyon Sandstone Member
- Jmr - Recapture Shale Member
- Jms - Salt Wash Sandstone Member
- Jb - Bluff Sandstone
- Js - Summerville Formation
- Je - Entrada Sandstone

Triassic:
- T w - Wingate Sandstone

Permian:
- Pdc - De Chelly Sandstone

Pennsylvanian:
- Penn - Pennsylvanian rocks undivided

SPECIFIC CONDUCTANCE.--Specific conductance of the water, which is a function of dissolved solids, is reported in micromhos per centimeter at 25° Celsius. An asterisk (*) indicates that a chemical analysis of common constituents is reported in table 2 of Stone and others (1983). A double asterisk (**) indicates that an analysis, which includes trace elements, is reported in table 3 of Stone and others (1983).

DATE.--The sampling date.

LOGS AVAILABLE.--The types of logs available are indicated below. Many are in the files of the U.S. Geological Survey.

DLR, driller; TOP, formation tops; COR, core analysis; SAND, sand analysis; LTH, lithologic logs; N, neutron; GR, gamma ray; RES, resistivity; IND, induction; MIC, microlog; SP, spontaneous potential; DEN, density; CAL, caliper

REFERENCE.--Much of the data in this table was compiled from sources listed below. Lower case letters indicate the sources as follows:

h, Waring and Andrews (1935); j, Baltz and West (1967); l, Shomaker, J. W., (U.S. Geological Survey) (written commun., 1967); m, Rapp (1959); n, Callahan and Harshbarger (1955); o, Halpenny and Harshbarger (1950); q, Kister and Hatchett (1963); r, Davis, Hardt, Thompson, and Cooley (1963); s, Brimhall (1973); u, Kelly (1977); a*, Shomaker (1976); c*, Brown and Stone (1979).

DRAWDOWN, DISCHARGE, DURATION.--These values are reported unless followed by an asterisk (*) which indicates that more complete aquifer-test data are available in table 4 of Stone and others (1983). Discharges are reported (R), measured (M), or estimated (E); artesian flow is indicated by "F".

REMARKS.--This column may include the following abbreviations:

R, reported; M, measured by U.S. Geological Survey; E, estimated; DST, drill-stem test; Q, quadrangle or questionable, depending on context; WBF, water-bearing formation; QW, quality of water; SWL, static water level; F, flow or flowing; WL, water level; SPC, specific conductance in micromhos at 25° Celsius, TDS, dissolved solids in milligrams per liter; TD, total depth.

FORMATION CONTACT -- Approximately located

HYDROLOGIC DATA EXPLANATION

$\frac{20}{Qal}$ WATER WELL--Number is depth of well below land surface, in feet; letters indicate geologic source of water. (See principal water-bearing unit(s) in table 1, and aquifer in table 2.)

2 32x WATER WELLS--Underlined symbol with number indicates the number of closely spaced wells at one location. Number with "x" is the number of wells in that section (one square mile)

OBSERVATION WELL--Water-level measurements have been made periodically*

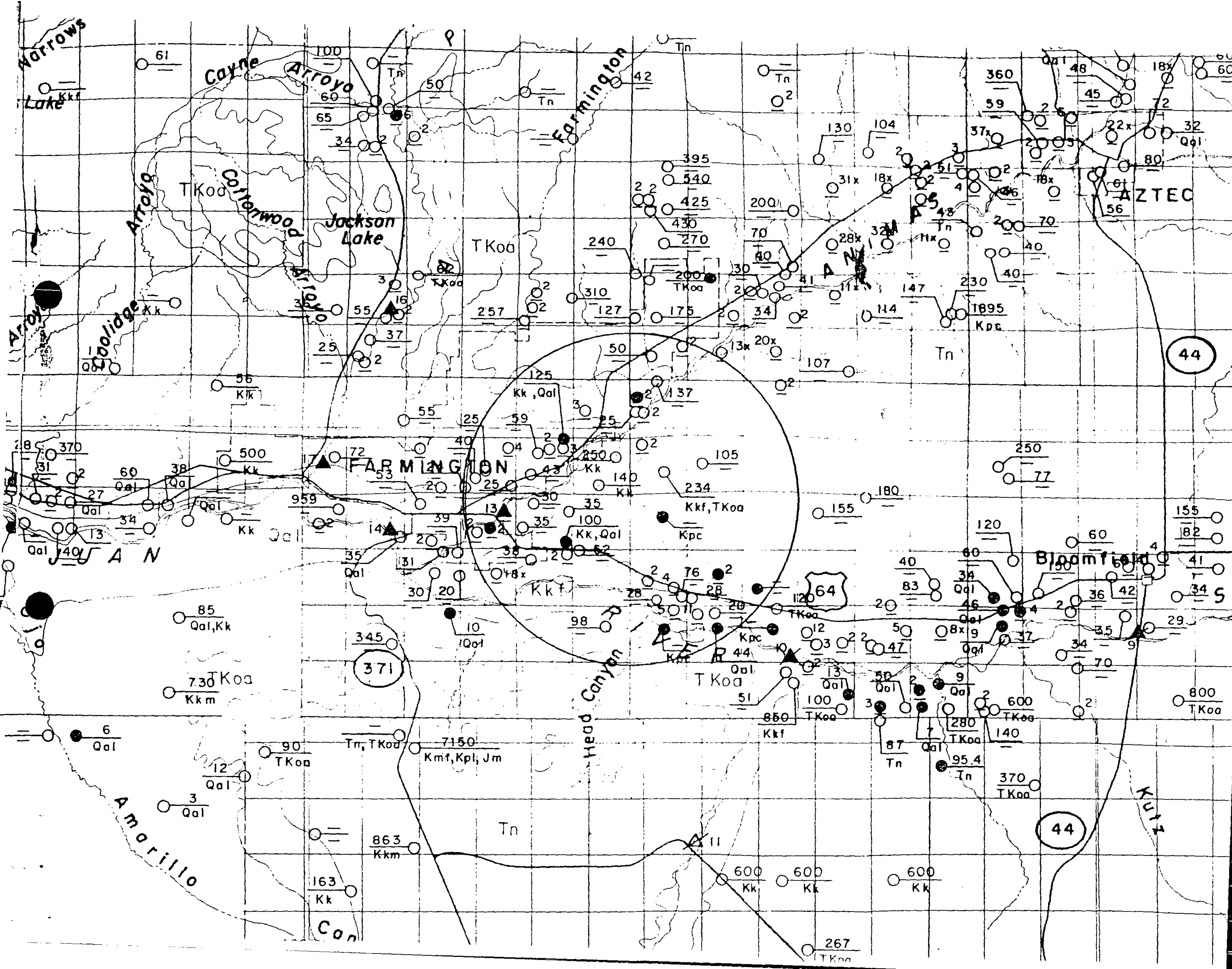
Tc SPRING--Discharge generally greater than 10 gallons per minute (tables 1 and 2); letters indicate probable geologic source of water. (See geologic formation abbreviation in tables 1 and 2.)

$\triangle^{12}$ STREAMFLOW GAGING STATION--Active in 1982; number refers to station description and period of record in table 3*

STREAMFLOW GAGING STATION--Discontinued prior to 1982, number refers to station description and period of record in table 3

NOTE: Solid symbols (● ▲) indicate water-quality data are available *

* Ground-water level and surface-water discharge measurements, and water-quality data available from Water Resources Division of U.S. Geological Survey, Albuquerque, New Mexico.


Narrows
Lake
Cayne
Arroyo
Farmington
Cottonwood
Arroyo
Jackson Lake
Coolidge
FARMINGTON
AZTEC
Bloomfield
Head Canyon
Amarillo
Kutz
Can
JUAN
44
371
64
TKoa
Tn
Kkf
Qal

WALTERS Drilling Located at 29.12.19.11

Table 1.--Records of water wells and springs in San Juan County prior to 1978 - Continued

Location	Latitude-Longitude	Number or name	Depth (feet)	Altitude (feet)	Depth to Water (feet)	Date	Producing interval (feet)	Principal water-bearing unit(s)	Specific conductance (umhos at 25°C)	Date	Logs available	Reference	Drawdown (feet)	Discharge (gal/min)	Duration (hours)	Remarks
29.11.25.132	364158 1075653	Bur. Rec. #39	10M	5,470	1.8	04-16-68	-	Tn	6,300	04-16-68	-	-	-	-	-	-
29.11.30.211	364212 1080152	Narciso Archibeque	46	5,465	43	-	-	Qal	748 *	04-09-68	-	-	-	-	-	-
29.11.30.233	364152 1080152	Delbert Blake	9M	5,390	8.8	04-09-68	-	Qal	886 *	04-09-68	-	-	-	-	-	-
29.11.31.3321	364043 1080217	-	1,720	5,437	-	-	-	Kpc	-	-	TOP	-	-	-	-	Converted to water.
29.11.31.3342	364037 1080214	Edgar Lund	600	5,458	29.1	10-09-74	300	TKoa	-	-	-	-	-	-	-	Oil test plugged back.
29.11.31.3424	364042 1080158	Richard Sego	326	5,480	-	-	-	TKoa	-	-	-	-	-	-	-	"Not fit to drink".
29.11.34.4144	364046 1075827	-	800	5,640	-	-	-	TKoa	-	-	TOP	-	-	-	-	Source for H_2O injected; plugged back from TD of 1,355 feet.
29.12.06.133	364521 1080847	George McColm	16	5,440	6	11-24-53	-	Qal	2,250 *	11-24-53	-	m	-	10	-	-
29.12.07.4133	364417 1080817	7th Day Avent Church	234	5,600	170.5	10-08-74	-	Kkf, TKoa	2,500	10-08-74	-	-	-	-	-	-
29.12.18	-	Pan Am Pet.	-	-	-	-	1,435-1,448	Kpc	- *	04-30-59	-	m	-	-	-	TDS = 29,800 mg/L, 1959.
29.12.19.3211	364242 1080833	Thomas F. Kirby	62	5,360	45.4	04-05-68	-	Qal	2,100	04-05-68	-	-	-	-	-	-
29.12.19.3231	364235 1080837	Thomas F. Kirby	44	5,350	32.1	04-05-68	-	Qal	900	04-05-68	-	-	-	-		- -
29.12.20	-	-	-	-	-	-	1,550	Kpc	- *	- -590	-	m	-	-	-	Analysis only. TDS = 30,200 mg/L, 1959.
29.12.20	-	Pan Am Pet.	1,415	5,457	-	-	1,378-1,388	Kpc	59,200 *	02-22-59	-	-	-	-	-	Gas well, sample from pit.
29.12.21.3	-	-	-	-	-	-	-	-	4,090 **	03-15-74	-	-	-	-	-	Analysis only.
29.12.28	-	Pan Am	-	-	-	-	-	Kpc	- *	04-30-59	-	-	-	-	-	Gas well; TDS 37,800 m
29.12.28.2111	364215 1080609	D. H. Brownlee	120	5,392	18.8	11-07-74	-	TKoa	-	-	-	-	-	-	-	Unused.
29.12.29	-	Pan Am	44	-	-	-	-	Qal	- *	04-30-59	-	m	-	-	-	Reported casing depth; TDS = 2,210 mg/L.
29.12.30	-	-	-	-	-	-	1,240	Kpc	- *	- -59	-	m	-	-	-	WBF depth = 1,240 ft; TDS = 45,600 mg/L.
29.12.33.2411	364111 1080553	-	850	5,360	F	10-21-74	-	Kkf	12,250	10-21-74	-	-	-	5E	-	Hammond Canal Well.
29.12.34.421	364056 1080450	Bureau of Reclamation	13M	5,370	5.3	04-17-68	-	Qal	2,950 *	04-17-68	-	-	-	-	-	Stovepipe casing.
29.12.34.4341	364036 1080500	Chas. Christianson	100	5,480	65.5	10-21-74	-	TKoa	-	-	-	-	-	-	-	-
29.12.35.342	364042 1080410	Bureau of Reclamation #26	6M	5,380	3.6	04-18-68	-	Qal	4,620 *	04-18-68	-	-	-	-	-	Stovepipe casing.

TDS (TOTAL DISSOLVED SOLIDS) = 0.75 × Specific Conductance (umhos @ 25°C)

$TDS = 0.75 \times \left(\frac{2100 + 900}{2}\right) \Rightarrow TDS = 1125\ [mg/L]$

DEPTH to Groundwater $\approx \frac{62 + 44}{2} \approx 53'$

Table 2.—Records of water wells in San Juan County, 1978-83 - Continued

LOCATION	NAME	WELL NUMBER	USE	DEPTH	PERFORATIONS	AQUIFER
29.12.14.11	Trantham, Teddy O.	SJ-0548	dom, stk	180		
29.12.15.143	Kennedy, George L.	SJ-1510	dom	155	135-155	
29.12.19.344	Horvath, Robert T.	SJ-0567	dom	28		
29.12.19.414	Brainard, Lee	SJ-0657	dom	85		
29.12.19.431	James, Truett C.	SJ-1070	dom, stk	38		
29.12.19.44	Hanson, Gale	SJ-0953	dom	76		
29.12.20.333	Hammond, Bob	SJ-0338	dom, stk	28		
29.12.24.32	Murphy, John L.	SJ-1597	dom	40		
29.12.24.34	Thomason, James W.	SJ-0400	dom, stk	83	60-83	
29.12.25.12	Sutherlen	SJ-0938	dom	80		
29.12.25.14	Cross, Frankie J.	SJ-0706	dom	49		
29.12.25.14	Kirby, Richard L.	SJ-0652	dom	42		
29.12.25.14	Runyan, Roy A.	SJ-1322	dom	42		
29.12.25.143	Palmer, Andrew L.	SJ-0617	dom	47		
29.12.25.24	Sierra, Raymond M.	SJ-1466	dom, stk	27		
29.12.25.31	Bradley, Davis	SJ-0570	dom	36		
29.12.25.43	Jacob, Lawrence	SJ-0763	dom	60	20-60	
29.12.26.21	Roquemore, Dean	SJ-0777	dom	47		
29.12.26.211	Dufur, Ralph L.	SJ-1109	dom	100		
29.12.26.24	Nunn, Ewing H.	SJ-1194	dom	38		
29.12.26.34	Durrett, James M.	SJ-0112	dom,stk	47		
29.12.26.42	Fielder, Charles E.	SJ-1802	dom	70	59-69	
29.12.26.42	Osburn, Lewis R.	SJ-1326	dom	50		
29.12.26.422	Buck, Lee A.	SJ-1469	dom, stk	45		
29.12.26.422	Lozon, Lawrence J.	SJ-0399	dom	45		
29.12.27.13	Bustos, Daniel	SJ-1590	dom	63		
29.12.27.131	Reynolds, Ronald	SJ-0726	dom	50		
29.12.27.133	Chacon, Alfonso J.	SJ-0827	dom	55		
29.12.27.133	Kaiser, Charles	SJ-1008	dom	51		
29.12.27.134	Torres, Richard	SJ-0666	dom	35		
29.12.27.31	Bencomo, Joe	SJ-0572	dom	35		
29.12.27.31	Harmon, Douglas A.	SJ-1700	dom	87		
29.12.27.31	Palmer, Charlie W.	SJ-1728	dom	25		
29.12.27.311	Clark, Doris	SJ-1690	dom	25		
29.12.27.311	Orellano, Reynaldo W	SJ-0904	dom, stk	32		
29.12.27.313	Brewer, Gerald A.	SJ-0901	dom, stk	32		

WALTERS Drilling Located @ 29.12.19.11

GUIDELINES

FOR

REMEDIATION

OF

LEAKS, SPILLS AND RELEASES

(AUGUST 13, 1993)

New Mexico Oil Conservation Division

EXHIBIT B

INTRODUCTION

The following document is to be used as a **guide** on all federal, state and fee lands when remediating contaminants resulting from leaks, spills and releases of oilfield wastes or products. The New Mexico Oil Conservation Division (OCD) requires that corrective actions be taken for leaks, spills or releases of any material which has a reasonable probability to injure or be detrimental to public health, fresh waters, animal or plant life, or property or unreasonably interfere with the public welfare or use of the property. These guidelines are intended to provide direction for remediation of soils and fresh waters contaminated as a result of leaks, spills or releases of oilfield wastes and products in a manner that assures protection of fresh waters, public health and the environment.

Fresh waters (to be protected) includes the water in lakes, playas, surface waters of all streams regardless of the quality of the water within any given reach, and all underground waters containing 10,000 milligrams per liter (mg/l) or less of total dissolved solids (TDS) except for which, after notice and hearing, it is found that there is no present or reasonably foreseeable beneficial use which would be impaired by contamination of such waters. The water in lakes and playas shall be protected from contamination even though it may contain more than 10,000 mg/l of TDS unless it can be shown that hydrologically connected fresh ground water will not be adversely affected.

Procedures may deviate from the following guidelines if it can be shown that the proposed procedure will either remediate, remove, isolate or control contaminants in such a manner that fresh waters, public health and the environment will not be impacted. Specific constituents and/or requirements for soil and ground water analysis and/or remediation may vary depending on site specific conditions. Deviations from approved plans will require OCD notification and approval.

****** Note:** **Notification to OCD of leaks, spills and releases does not relieve an operator of responsibility for compliance with any other federal, state or local law and/or regulation regarding the incident. Other agencies (ie. BLM, Indian Tribes, etc) may also have guidelines or requirements for remediation of leaks spills and releases.**

TABLE OF CONTENTS

I. NOTIFICATION OF LEAK, SPILL OR RELEASE

Leaks, spills and releases of any wastes or products from oilfield operations are required to be reported to the OCD pursuant to OCD Rule 116 (Appendix A) or New Mexico Water Quality Control Commission (WQCC) Regulation 1-203 (Appendix B). Appendix C contains the phone numbers and addresses for reporting incidents to the OCD district and Santa Fe offices. Notification will include all information required under the respective rule or regulation. Below is a description of some of the information required:

A. RESPONSIBLE PARTY AND LOCAL CONTACT

The name, address and telephone number of the person/persons in charge of the facility/operation as well as the owner and/or operator of the facility/operation and a local contact.

B. FACILITY

The name and address of the facility or operation where the incident took place and the legal location listed by quarter-quarter, section, township and range, and by distance and direction from the nearest town or prominent landmark so that the exact site location can be readily located on the ground.

C. TIME OF INCIDENT

The date, time and duration of the incident.

D. DISCHARGE EVENT

A description of the source and cause of the incident.

E. TYPE OF DISCHARGE

A description of the nature or type of discharge. If the material leaked, spilled or released is anything other than crude oil, condensate or produced water include its chemical composition and physical characteristics.

F. QUANTITY

The known or estimated volume of the discharge.

G. SITE CHARACTERISTICS

The relevant general conditions prevailing at the site including precipitation, wind conditions, temperature, soil type, distance to nearest residence and population centers and proximity of fresh water wells or watercourse (ie. any river, lake, stream, playa, arroyo, draw, wash, gully or natural or man-made channel through which water flows or has flowed).

H. IMMEDIATE CORRECTIVE ACTIONS

Any initial response actions taken to mitigate immediate threats to fresh waters, public health and the environment.

II. INITIAL RESPONSE ACTIONS

Upon learning of a leak, spill or release of any material which has a reasonable probability to injure or be detrimental to public health, fresh waters, animal or plant life, or property or unreasonably interfere with the public welfare or use of the property, the responsible party (RP) should take the following immediate actions unless the actions could create a safety hazard which would result in a threat to personal or public injury:

A. SOURCE ELIMINATION AND SITE SECURITY

The RP should take the appropriate measures to stop the source of the leak, spill or release and limit access to the site as necessary to reduce the possibility of public exposure.

B. CONTAINMENT

Once the site is secure, the RP should take steps to contain the materials leaked, spilled or released by construction of berms or dikes, the use of absorbent pads or other containment actions to limit the area impacted by the event and prevent potential fresh water contaminants from migrating to watercourses or areas which could pose a threat to public health and safety.

C. SITE STABILIZATION

After containment, the RP should recover any products or wastes which can be physically removed from the surface within the containment area. The disposition of all wastes or products removed from the site must be approved by the OCD.

III. SITE ASSESSMENT

Prior to final closure (Section VIII), soils into which nonrecoverable products or wastes have infiltrated and which have a reasonable probability to injure or be detrimental to public health, fresh waters, animal or plant life, or property or unreasonably interfere with the public welfare or use of the property should be assessed for their potential environmental impacts and remediated according to the procedures contained in the following sections. Assessment results form the basis of any required remediation. Sites will be assessed for severity of contamination and potential environmental and public health threats using a risk based ranking system.

The following characteristics should be determined in order to evaluate a sites potential risks, the need for remedial action and, if necessary, the level of cleanup required at the site:

A. GENERAL SITE CHARACTERISTICS

1. Depth To Ground Water

The operator should determine the depth to ground water at each site. The depth to ground water is defined as

the vertical distance from the lowermost contaminants to the seasonal high water elevation of the ground water. If the exact depth to ground water is unknown, the ground water depth can be estimated using either local water well information, published regional ground water information, data on file with the New Mexico State Engineer Office or the vertical distance from adjacent ground water or surface water.

2. Wellhead Protection Area

The operator should determine the horizontal distance from all water sources including private and domestic water sources. Water sources are defined as wells, springs or other sources of fresh water extraction. Private and domestic water sources are those water sources used by less than five households for domestic or stock purposes.

3. Distance To Nearest Surface Water Body

The operator should determine the horizontal distance to all downgradient surface water bodies. Surface water bodies are defined as perennial rivers, streams, creeks, irrigation canals and ditches, lakes, ponds and playas.

B. SOIL/WASTE CHARACTERISTICS

Soils/wastes within and beneath the area of the leak, spill or release should be evaluated to determine the type and extent of contamination at the site. In order to assess the level of contamination, observations should be made of the soils at the surface and samples of the impacted soils should be taken in the leak, spill or release area. Observations should note whether previous leaks, spills or releases have occurred at the site. Additional samples may be required to completely define the lateral and vertical extent of contamination. Soil samples should be obtained according to the sampling procedures in Sections V.A. and V.B. This may be accomplished using a backhoe, drill rig, hand auger, shovel or other means.

Initial assessment of soil contaminant levels is not required if an operator proposes to determine the final soil contaminant concentrations after a soil removal or remediation pursuant to section VI.A.

Varying degrees of contamination described below may co-exist at an individual site. The following sections describe the degrees of contamination that should be documented during the assessment of the level of soil contamination:

1. Highly Contaminated/Saturated Soils

Highly contaminated/saturated soils are defined as those soils which contain a free liquid phase or exhibit gross staining.

2. Unsaturated Contaminated Soils

Unsaturated contaminated soils are defined as soils which are not highly contaminated/saturated, as described above, but contain benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH) or other potential fresh water contaminants unique to the leak, spill or release. Action levels and sampling and analytical methods for determining contaminant concentrations are described in detail in Sections IV. and V.

**** **(NOTE: Soils contaminated as a result of spills, leaks or releases of non-exempt wastes must be evaluated for all RCRA Subtitle C hazardous waste characteristics. The above definitions apply only to oilfield contaminated soils which are exempt from federal RCRA Subtitle C hazardous waste provisions and nonexempt oilfield contaminated soils which are characteristically nonhazardous according to RCRA Subtitle C regulations. Any nonexempt contaminated soils which are determined to be characteristically hazardous cannot be remediated using this guidance document and will be referred to the New Mexico Environment Department Hazardous Waste Program.)**

C. GROUND WATER QUALITY

If ground water is encountered during the soil/waste characterization of the impacted soils, a sample should be obtained to assess the incidents potential impact on ground water quality. Ground water samples should be obtained using the sampling procedures in Section V.C. Monitor wells may be required to assess potential impacts on ground water and the extent of ground water contamination, if there is a reasonable probability of ground water contamination based upon the extent and magnitude of soil contamination defined during remedial activities.

IV. SOIL AND WATER REMEDIATION ACTION LEVELS

A. SOILS

The sections below describe the OCD's recommended remediation action levels for soils contaminated with petroleum hydrocarbons. Soils contaminated with substances other than petroleum hydrocarbons may be required to be remediated based upon the nature of the contaminant and it's potential to impact fresh waters, public health and the environment.

1. Highly Contaminated/Saturated Soils

All highly contaminated/saturated soils should be remediated insitu or excavated to the maximum extent practicable. These soils should be remediated using techniques described in Section VI.A to the contaminant specific level listed in Section IV.A.2.b.

2. Unsaturated Contaminated Soils

The general site characteristics obtained during the site assessment (Section III.A.) will be used to determine the appropriate soil remediation action levels using a risk based approach. Soils which are contaminated by petroleum constituents will be scored according to the ranking criteria below to determine their relative threat to public health, fresh waters and the environment.

a. Ranking Criteria

Depth To Ground Water	Ranking Score
<50 feet	20
50 - 99	10
>100	0

Wellhead Protection Area

<1000 feet from a water source,or; <200 feet from private domestic water source	
Yes	20
No	0

Distance To Surface Water Body

<200 horizontal feet	20
200 - 1000 horizontal feet	10
>1000 horizontal feet	0

b. Recommended Remediation Action Level

The total ranking score determines the degree of remediation that may be required at any given site. The total ranking score is the sum of all four individual ranking criteria listed in Section IV.A.2.a. The table below lists the remediation action level that may be required for the appropriate total ranking score.

(NOTE: The OCD retains the right to require remediation to more stringent levels than those proposed below if warranted by site specific conditions (ie. native soil type, location relative to population centers and future use of the site or other appropriate site specific conditions.)

	Total Ranking Score		
	>19	10 - 19	0 - 9
Benzene(ppm)*	10	10	10
BTEX(ppm)*	50	50	50
TPH(ppm)**	100	1000	5000

* A field soil vapor headspace measurement (Section V.B.1) of 100 ppm may be substituted for a laboratory analysis of the Benzene and BTEX concentration limits.

** The contaminant concentration for TPH is the concentration above background levels.

B. GROUND WATER

Contaminated ground water is defined as ground water of a present or foreseeable beneficial use which contains free phase products, dissolved phase volatile organic constituents or other dissolved constituents in excess of the natural background water quality. Ground water contaminated in excess of the WQCC ground water standards or natural background water quality will require remediation.

V. SOIL AND WATER SAMPLING PROCEDURES

Below are the sampling procedures for soil and ground water contaminant investigations of leaks, spills or releases of RCRA Subtitle C exempt oil field petroleum hydrocarbon wastes. Leaks, spills or releases of non-exempt RCRA wastes must be tested to demonstrate that the wastes are not characteristically hazardous according to RCRA regulations. Sampling for additional

constituents may be required based upon the nature of the contaminant which was leaked, spilled or released.

A. HIGHLY CONTAMINATED OR SATURATED SOILS

The following method is used to determine if soils are highly contaminated or saturated:

1. Physical Observations

Study a representative sample of the soil for observable free petroleum hydrocarbons or immiscible phases and gross staining. The immiscible phase may range from a free hydrocarbon to a sheen on any associated aqueous phase. A soil exhibiting any of these characteristics is considered highly contaminated or saturated.

B. UNSATURATED CONTAMINATED SOILS

The following methods may be used for determining the magnitude of contamination in unsaturated soils:

1. Soil Sampling Procedures for Headspace Analysis

A headspace analysis may be used to determine the total volatile organic vapor concentrations in soils (ie. in lieu of a laboratory analysis for benzene and BTEX but not in lieu of a TPH analysis). Headspace analysis procedures should be conducted according to OCD approved industry standards or other OCD-approved procedures. Accepted OCD procedures are as follows:

a) Fill a 0.5 liter or larger jar half full of sample and seal the top tightly with aluminum foil or fill a one quart zip-lock bag one-half full of sample and seal the top of the bag leaving the remainder of the bag filled with air.

b) Ensure that the sample temperature is between 15 to 25 degrees Celsius (59-77 degrees Fahrenheit).

c) Allow aromatic hydrocarbon vapors to develop within the headspace of the sample jar or bag for 5 to 10 minutes. During this period, the sample jar should be shaken vigorously for 1 minute or the contents of the bag should be gently massaged to break up soil clods.

d) If using a jar, pierce the aluminum foil seal with the probe of either a PID or FID organic vapor meter (OVM), and then record the highest (peak) measurement. If using a bag, carefully open one end of the bag and insert the probe of the OVM into the bag and re-seal the bag around the probe as much as possible to prevent vapors from escaping. Record the peak measurement. The OVM must be calibrated to assume a benzene response factor.

2. **Soil Sampling Procedures For Laboratory Analysis**

a. Sampling Procedures

Soil sampling for laboratory analysis should be conducted according to OCD approved industry standards or other OCD-approved procedures. Accepted OCD soil sampling procedures and laboratory analytical methods are as follows:

i) Collect samples in clean, air-tight glass jars supplied by the laboratory which will conduct the analysis or from a reliable laboratory equipment supplier.

ii) Label the samples with a unique code for each sample.

iii) Cool and store samples with cold packs or on ice.

iv) Promptly ship sample to the lab for analysis following chain of custody procedures.

v) All samples must be analyzed within the holding times for the laboratory analytical method specified by EPA.

b. Analytical Methods

All soil samples must be analyzed using EPA methods, or by other OCD approved methods and must be analyzed within the holding time specified by the method. Below are laboratory analytical methods commonly accepted by OCD for analysis of soil samples analyzed for petroleum related constituents. Additional analyses may be required if the substance leaked, spilled or released has been anything other than petroleum based fluids or wastes.

i) Benzene, toluene, ethylbenzene and xylene

- EPA Method 602/8020

ii) Total Petroleum Hydrocarbons

- EPA Method 418.1, or;
- EPA Method Modified 8015

C. GROUND WATER SAMPLING

If an investigation of ground water quality is deemed necessary, it should be conducted according to OCD approved industry standards or other OCD-approved procedures. The following methods are standard OCD accepted methods which

should be used to sample and analyze ground water at RCRA Subtitle C exempt sites (Note: The installation of monitor wells may not be required if the OCD approves of an alternate ground water investigation or sampling technique):

1. Monitor Well Installation/Location

One monitor well should be installed adjacent to and hydrologically down-gradient from the area of the leak, spill or release to determine if protectable fresh water has been impacted by the disposal activities. Additional monitor wells, located up-gradient and down-gradient of the leak, spill or release, may be required to delineate the full extent of ground water contamination if ground water underlying the leak, spill or release has been found to be contaminated.

2. Monitor Well Construction

a) Monitor well construction materials should be:

i) selected according to industry standards;

ii) chemically resistant to the contaminants to be monitored; and

iii) installed without the use of glues/adhesives.

b) Monitor wells should be constructed according to OCD approved industry standards to prevent migration of contaminants along the well casing. Monitor wells should be constructed with a minimum of fifteen (15) feet of well screen. At least five (5) feet of the well screen should be above the water table to accommodate seasonal fluctuations in the static water table.

3. Monitor Well Development

When ground water is collected for analysis from monitoring wells, the wells should be developed prior to sampling. The objective of monitor well development is to repair damage done to the formation by the drilling operation so that the natural hydraulic properties of the formation are restored and to remove any fluids introduced into the formation that could compromise the integrity of the sample. Monitoring well development is accomplished by purging fluid from the well until the pH and specific conductivity have stabilized and turbidity has been reduced to the greatest extent possible.

4. Sampling Procedures

Ground water should be sampled according to OCD accepted standards or other OCD approved methods. Samples should be collected in clean containers supplied by the laboratory which will conduct the analysis or from a reliable laboratory equipment supplier. Samples for

different analyses require specific types of containers. The laboratory can provide information on the types of containers and preservatives required for sample collection. The following procedures are accepted by OCD as standard sampling procedures:

a) Monitor wells should be purged of a minimum of three well volumes of ground water using a clean bailer prior to sampling to ensure that the sample represents the quality of the ground water in the formation and not stagnant water in the well bore.

b) Collect samples in appropriate sample containers containing the appropriate preservative for the analysis required. No bubbles or headspace should remain in the sample container.

c) Label the sample containers with a unique code for each sample.

d) Cool and store samples with cold packs or on ice.

e) Promptly ship sample to the lab for analysis following chain of custody procedures.

f) All samples must be analyzed within the holding times for the laboratory analytical method specified by EPA.

5. Ground Water Laboratory Analysis

Samples should be analyzed for potential ground water contaminants contained in the waste stream, as defined by the WQCC Regulations. All ground water samples must be analyzed using EPA methods, or by other OCD approved methods and must be analyzed within the holding time specified by the method. Below are OCD accepted laboratory analytical methods for analysis of ground water samples analyzed for petroleum related constituents. Additional analyses may be required if the substance leaked, spilled or release has been anything other than a petroleum based fluid or waste.

a. Analytical Methods

i.) Benzene, Toluene, Ethylbenzene and Xylene

- EPA Method 602/8020

ii.) Major Cations and Anions

- Various EPA or standard methods

iii.) Heavy Metals

- EPA Method 6010, or;
- Various EPA 7000 series methods

.) Polynuclear Aromatic Hydrocarbons

- EPA Method 8100

VI. REMEDIATION

The following discussion summarizes recommended techniques for remediation of contaminated soil and ground water as defined in Section IV.A. and IV.B. OCD approval for remediation of an individual leak, spill or release site is not required if the company is operating under an OCD approved spill containment plan. All procedures which deviate from the companies spill containment plan must be approved by OCD.

A. SOIL REMEDIATION

When RCRA Subtitle C exempt or RCRA nonhazardous petroleum contaminated soil requires remediation, it should be remediated and managed according to the criteria described below or by other OCD approved procedures which will remove, treat, or isolate contaminants in order to protect fresh waters, public health and the environment.

In lieu of remediation, OCD may accept an assessment of risk which demonstrates that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh waters, public health and the environment.

1. Contaminated Soils

Highly contaminated/saturated soils and unsaturated contaminated soils exceeding the standards described in Section IV.A. should be either:

a) Excavated from the ground until a representative sample from the walls and bottom of the excavation is below the contaminant specific remediation level listed in Section IV.A.2.b or an alternate approved remediation level, or;

b) Excavated to the maximum depth and horizontal extent practicable. Upon reaching this limit a sample should be taken from the walls and bottom of the excavation to determine the remaining levels of soil contaminants, or;

c) Treated in place, as described in Section VI.A.2.b.ii. - Treatment of Soil in Place, until a representative sample is below the contaminant specific remediation level listed in Section IV.A.2.b, or an alternate approved remediation level, or;

d) Managed according to an approved alternate method.

2. Soil Management Options

All soil management options must be approved by OCD. The following is a list of options for either on-site treatment or off-site treatment and/or disposal of contaminated soils:

a. Disposal

Excavated soils may be disposed of at an off-site OCD approved or permitted facility.

b. Soil Treatment and Remediation Techniques

i. Landfarming

Onetime applications of contaminated soils may be landfarmed on location by spreading the soil in an approximately six inch lift within a bermed area. Only soils which do not contain free liquids can be landfarmed. The soils should be disced regularly to enhance biodegradation of the contaminants. If necessary, upon approval by OCD, moisture and nutrients may be added to the soil to enhance aerobic biodegradation.

In some high risk areas an impermeable liner may be required to prevent leaching of contaminants into the underlying soil.

Landfarming sites that will receive soils from more than one location are considered centralized sites and must be approved separately by the OCD prior to operation.

ii. Insitu Soil Treatment

Insitu treatment may be accomplished using vapor venting, bioremediation or other approved treatment systems.

iii. Alternate Methods

The OCD encourages alternate methods of soil remediation including, but not limited to, active soil aeration, composting, bioremediation, solidification, and thermal treatment.

B. GROUND WATER REMEDIATION

1. Remediation Requirements

Ground water remediation activities will be reviewed and approved by OCD on a case by case basis prior to commencement of remedial activities. When contaminated

ground water exceeds WQCC ground water standards, it should be remediated according to the criteria described below.

a. Free Phase Contamination

Free phase floating product should be removed from ground water through the use of skimming devices, total-fluid type pumps, or other OCD-approved methods.

b. Dissolved Phase Contamination

Ground water contaminated with dissolved phase constituents in excess of WQCC ground water standards can be remediated by either removing and treating the ground water, or treating the ground water in place. If treated waters are to be disposed of onto or below the ground surface, a discharge plan must be submitted and approved by OCD.

c. Alternate Methods

The OCD encourages other methods of ground water remediation including, but not limited to, air sparging and bioremediation. Use of alternate methods must be approved by OCD prior to implementation.

VII. TERMINATION OF REMEDIAL ACTION

Remedial action may be terminated when the criteria described below have been met:

A. SOIL

Contaminated soils requiring remediation should be remediated so that residual contaminant concentrations are below the recommended soil remediation action level for a particular site as specified in Section IV.A.2.b.

If soil action levels cannot practicably be attained, an evaluation of risk may be performed and provided to OCD for approval showing that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, public health and the environment.

B. GROUND WATER

A ground water remedial action may be terminated if all recoverable free phase product has been removed, and the concentration of the remaining dissolved phase contaminants in the ground water does not exceed New Mexico WQCC water quality standards or background levels. Termination of remedial action will be approved by OCD upon a demonstration of completion of remediation as described in above.

VIII. FINAL CLOSURE

Upon termination of any required remedial actions (Section VII.) the area of a leak, spill or release may be closed by backfilling any excavated areas, contouring to provide drainage away from the site, revegetating the area or other OCD approved methods.

IX. FINAL REPORT

Upon completion of remedial activities a final report summarizing all actions taken to mitigate environmental damage related to the leak, spill or release will be provided to OCD for approval.

APPENDIX A

A. The Division shall be notified of any fire, break, leak, spill, or blowout occurring at any injection or disposal facility or at any oil or gas drilling, producing, transporting, or processing facility in the State of New Mexico by the person operating or controlling such facility.

B. "Facility," for the purpose of this rule, shall include any oil or gas well, any injection or disposal well, and any drilling or workover well; any pipe line through which crude oil, condensate, casinghead or natural gas, or injection or disposal fluid (gaseous or liquid) is gathered, piped, or transported (including field flow-lines and lead-lines but not including natural gas distribution systems); any receiving tank, holding tank, or storage tank, or receiving and storing receptacle into which crude oil, condensate, injection or disposal fluid, or casinghead or natural gas is produced, received, or stored; any injection or disposal pumping or compression station including related equipment; any processing or refining plant in which crude oil, condensate, or casinghead or natural gas is processed or refined; and any tank or drilling pit or slush pit associated with oil or gas well or injection or disposal well drilling operations or any tank, storage pit, or pond associated with oil or gas production or processing operations or with injection or disposal operations and containing hydrocarbons or hydrocarbon waste or residue, salt water, strong caustics or strong acids, or other deleterious chemicals or harmful contaminants.

C. Notification of such fire, break, leak, spill, or blowout shall be in accordance with the provisions set forth below:

(1) Well Blowouts. Notification of well blowouts and/or fires shall be "immediate notification" described below. ("Well blowout" is defined as being loss of control over and subsequent eruption of any drilling or workover well, or the rupture of the casing, casinghead, or wellhead or any oil or gas well or injection or disposal well, whether active or inactive, accompanied by the sudden emission of fluids, gaseous or liquid, from the well.)

(2) "Major" Breaks, Spills, or Leaks. Notification of breaks, spills, or leaks of 25 or more barrels of crude oil or condensate, or 100 barrels or more of salt water, none of which reaches a watercourse or enters a stream or lake; breaks, spills, or leaks in which one or more barrels of crude oil or condensate or 25 barrels or more of salt water does reach a watercourse or enters a stream or lake; and breaks, spills, or leaks of hydrocarbons or hydrocarbon waste or residue, salt water, strong caustics or strong acids, gases, or other deleterious chemicals or harmful contaminants of any magnitude which may with reasonable probability endanger human health or result in substantial damage to property, shall be "immediate notification" described below.

(3) "Minor" Breaks, Spills, or Leaks. Notification of breaks, spills, or leaks of 5 barrels or more but less than 25 barrels of crude oil or condensate, or 25 barrels or more but less than 100 barrels of salt water, none of which reaches a watercourse or enters a stream or lake, shall be "subsequent notification" described below.

(4) "Gas Leaks and Gas Line Breaks. Notification of gas leaks from any source or of gas pipe line breaks in which natural or casinghead gas of any quantity has escaped or is escaping which may with reasonable probability endanger human health or result in substantial damage to property shall be "immediate notification" described below. Notification of gas pipe line breaks or leaks in which the loss is estimated to be 1000 or more MCF of natural or casinghead gas but in which there is no danger to human health nor of substantial damage to property shall be "subsequent notification" described below.

(5) Tank Fires. Notification of fires in tanks or other receptacles caused by lightning or any other cause, if the loss is, or it appears that the loss will be, 25 or more barrels of crude oil or condensate, or fires which may with reasonable probability endanger human health or result in substantial damage to property, shall be "immediate notification" as described below. If the loss is, or it appears that the loss will be at least 5 barrels but less than 25 barrels, notification shall be "subsequent notification" described below.

(6) Drilling Pits, Slush Pits, and Storage Pits and Ponds. Notification of breaks and spills from any drilling pit, slush pit, or storage pit or pond in which any hydrocarbon or hydrocarbon waste or residue, strong caustic or strong acid, or other deleterious chemical or harmful contaminant endangers human health or does substantial surface damage, or reaches a watercourse or enters a stream or lake in such quantity

(7) IMMEDIATE NOTIFICATION. "Immediate Notification" shall be as soon as possible after discovery and shall be either in person or by telephone to the district office of the Division district in which the incident occurs, or if the incident occurs after normal business hours, to the District Supervisor, the Oil and Gas Inspector, or the Deputy Oil and Gas Inspector. A complete written report ("Subsequent Notification") of the incident shall also be submitted in DUPLICATE to the appropriate district office of the Division within ten days after discovery of the incident.

(8) SUBSEQUENT NOTIFICATION. "Subsequent Notification" shall be a complete written report of the incident and shall be submitted in duplicate to the district office of the Division district in which the incident occurred within ten days after discovery of the incident.

(9) CONTENT OF NOTIFICATION. All reports of fires, breaks, leaks, spills, or blowouts, whether verbal or written, shall identify the location of the incident by quarter-quarter, section, township, and range, and by distance and direction from the nearest town or prominent landmark so that the exact site of the incident can be readily located on the ground. The report shall specify the nature and quantity of the loss and also the general conditions prevailing in the area, including precipitation, temperature, and soil conditions. The report shall also detail the measures that have been taken and are being taken to remedy the situation reported.

(10) WATERCOURSE, for the purpose of this rule, is defined as any lake-bed or gully, draw, stream bed, wash, arroyo, or natural or man-made channel through which water flows or has flowed.

APPENDIX B

1-203. NOTIFICATION OF DISCHARGE--REMEDIAL.

A. With respect to any discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, the following notifications and corrective actions are required:

1. As soon as possible after learning of such a discharge, but in no event more than twenty-four (24) hours thereafter, any person in charge of the facility shall orally notify the Chief, Ground Water Bureau, Environmental Improvement Division, or his counterpart in any constituent agency delegated responsibility for enforcement of these rules as to any facility subject to such delegation. To the best of that person's knowledge, the following items of information shall be provided:

a. the name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility;

b. the name and address of the facility;

c. the date, time, location, and duration of the discharge;

d. the source and cause of discharge;

e. a description of the discharge, including its chemical composition;

f. the estimated volume of the discharge; and

g. any actions taken to mitigate immediate damage from the discharge.

2. When in doubt as to which agency to notify, the person in charge of the facility shall notify the Chief, Ground Water Bureau,
Environmental Improvement Division. If that division does not have authority pursuant to Commission delegation, the division shall notify the appropriate constituent agency.

3. Within one week after the discharger has learned of the discharge, the facility owner and/or operator shall send written notification to the same division official, verifying the prior oral notification as to each of the foregoing items and providing any appropriate additions or corrections to the information contained in the prior oral notification.

4. The oral and written notification and reporting requirements contained in the three preceding paragraphs and the paragraphs below are not intended to be duplicative of discharge notification and reporting requirements promulgated by the Oil Conservation Commission (OCC) or by the Oil Conservation Division (OCD); therefore, any facility which is subject to OCC or OCD discharge notification and reporting requirements need not additionally comply with the nofification/and reporting requirements herein.

5. As soon as possible after learning of such a discharge, the owner/operator of the facility shall take such corrective actions as are necessary or appropriate to contain and remove or mitigate the damage caused by the discharge.

6. If it is possible to do so without unduly delaying needed corrective actions, the facility owner/operator shall endeavor to contact and consult with the Chief, Ground Water Bureau, Environmental Improvement Division or appropriate counterpart in a delegated agent, in an effort to determine the division's views as to what further corrective actions may be necessary or appropriate to the discharge in question. In any event, no later than fifteen (15) days after the discharger learns of the discharge, the facility owner/operator shall send to said Bureau Chief a written report describing any corrective actions taken and/or to be taken relative to the discharge. Upon a written request and for good cause shown, the Bureau Chief may extend the time limit beyond fifteen (15) days.

7. The Bureau Chief shall approve or disapprove in writing the foregoing corrective action report within thirty (30) days of its receipt by the division. In the event that the report is not satisfactory to the division, the Bureau Chief shall specify in writing to the facility owner/operator any shortcomings in the report or in the corrective actions already taken or proposed to be taken relative to the discharge, and shall give the facility owner/operator a reasonable and clearly specified time within which to submit a modified corrective action report. The Bureau Chief shall approve or disapprove in writing the modified corrective action report within fifteen (15) days of its receipt by the division.

8. In the event that the modified corrective action report also is unsatisfactory to the division, the facility owner/operator has five (5) days from the notification by the Bureau Chief that it is unsatisfactory to appeal to the division director. The division director shall approve or disapprove the modified corrective action report within five (5) days of receipt of the appeal from the Bureau Chief's decision. In the absence of either corrective action consistent with the approved corrective action report or with the decision of the director concerning the shortcomings of the modified corrective action report, the division may take whatever enforcement or legal action it deems necessary or appropriate.

B. Exempt from the requirements of this section are continuous or periodic discharges which are made;

1. in conformance with water quality control commission regulations and rules, regulations or orders of other state or federal agencies; or

2. in violation of water quality control commission regulations but pursuant to an assurance of discontinuance or schedule of compliance approved by the commission or one of its duly authorized constituent agencies.

C. As used in this section:

1. "discharge" means spilling, leaking, pumping, pouring, emitting, emptying, or dumping into water or in a location and manner where there is a reasonable probability that the discharged substance will reach surface or subsurface water;

2. "facility" means any structure, installation, operation, storage tank, transmission line, motor vehicle, rolling stock, or activity of any kind, whether stationary or mobile;

3. "oil" means oil of any kind or in any form including petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes;

4. "operator" means the person or persons responsible for the overall operations of a facility; and

5. "owner" means the person or persons who own a facility, or part of a facility.

D. Notification of discharge received pursuant to this regulation or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except for perjury or for giving a false statement.

APPENDIX C

TELEPHONE LISTING OIL CONSERVATION
FAX NO. 827-8177

MAIN LINE - 827-7131

DIRECTOR'S OFFICE:

William LeMay	827-7132
Florene Davidson	827-7132
Sally Martinez	827-7133

GAS MARKETING

Ron Merrett	827-7146
Lyn Hebert	827-1364
Dorothy Phillips	827-7137
Angela Romero	827-7148
Chris Williams	827-7149

ADMINISTRATIVE BUREAU

Edwin Martin	827-7151
Mary Anaya	827-7150
Lupe Sherman	827-7178

ENVIRONMENTAL BUREAU

Roger Anderson	827-7152
Mark Ashley	827-7155
Pat Sanchez	827-7156
Chris Eustice	827-7153
William Olson	827-7154
Mobil No.	660-1067

RECORDS CENTER

Elizabeth Roybal	827-8164
Lawrence Romero	827-8166

HEARING ROOM - 827-7082

LEGAL BUREAU

Rand Carroll	827-8156
Diane Richardson	827-8153

ENGINEERING BUREAU

David Catanach	827-8184
Roy Johnson	827-8198
Michael Stogner	827-8185
Ben Stone	827-8186
Kathy Valdes	827-8182
Vacant	827-8183

KEY ENTRY SECTION

Becky Espy	827-8194
Rick Brown	827-1363
Fran Chavez	827-7158
Dolly Huffman	827-8196
Isabel Montoya	827-8195
Lynn Rivera	827-8197
Andrea Lauber	827-1362

ONGARD IMPLEMENTATION

Ed Martin	827-7151

DISTRICT OFFICES

Aztec	334-6178
Artesia	748-1283
Hobbs	393-6161

FAX NOS. FOR DISTRICTS

AZTEC	334-6170
ARTESIA	748-9720
HOBBS	393-0720

OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
Santa Fe, NM 87505

November 20, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-976

Mr. Gary S. Brink
Walters Drilling
P.O. Box 717
Farmington, NM 87499

RE: Discharge Plan GW-220
Walters Drilling, Farmington facility
San Juan County, New Mexico

Dear Mr. Brink:

The NMOCD on September 1, 1995 sent a letter requesting additional information and commitments Pursuant to WQCC Section 3-106 C.7 regarding the Walters Drilling discharge plan application for its Farmington facility is located in NW/4 NW/4, Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, submitted on August 17, 1995. The NMOCD has not received the requested additional information and commitments.

Walters Drilling is nearing the 240 day time limit (12/23/95) from the time that the Director notified Walters Drilling of the "Discharge Plan Requirement," and as stated in WQCC 3-106 A. "... such person may discharge without an approved discharge plan until 240 days after written notification by the director that a discharge plan is required or such longer time as the director shall for good cause allow."

If Walters Drilling has any questions regarding this matter feel free to call me at (505)-827-7156 or Mr. Roger Anderson, Environmental Bureau Chief at (505)-827-7152.

Sincerely,

Patricio W. Sanchez
Petroleum Engineer, Environmental Bureau.

XC: Mr. Denny Foust - Environmental Geologist

Z 765 962 976

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to Walters GW-22V	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, March 1993

RECEIVED
AUG 28 1995
6354
FWS-NMESSO

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan application has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(GW-220)- Walters Drilling, Inc., Mr. Gary S. Brink, (505)-327-5218, 5424 U.S. Highway 64, Farmington, NM, 87401 has submitted a Discharge plan application for their Farmington facility located in the NW/4 NW/4, Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top tank and transported offsite for disposal at an OCD approved facility; Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 53 feet with a total dissolved solids concentration of approximately 1125 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 23rd day of August, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

S E A L

WILLIAM J. LEMAY, Director

NO EFFECT FINDING

The described action will have no effect on listed species

Date September 22, 1995

Consultation # GWOCD95-1

Approved by

U.S. FISH and WILDLIFE SERVICE
NEW MEXICO ECOLOGICAL SERVICES FIELD OFFICE
ALBUQUERQUE, NEW MEXICO

talked to
Rick Wilcox
on 10-10-95
- Answered his
questions.

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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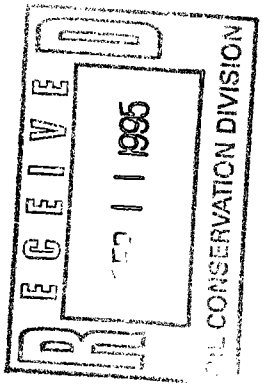
Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 23rd day of August, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
s/WILLIAM J. LEMAY, Director

Journal: August 28, 1995.



STATE OF NEW MEXICO
County of Bernalillo SS

Bill Tafoya being duly sworn declares and says that he is Classified Advertising manager of **The Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 1 times, the first publication being of the 28th day of August, 1995, and the subsequent consecutive publications on _____, 1995

Bill Tafoya

Sworn and subscribed to before me, a notary Public in and for the County of Bernalillo and State of New Mexico, this 28th day of, Aug 1995

OFFICIAL SEAL
Megan Garcia
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 5-20-98

Megan Garcia

PRICE $33.44
Statement to come at end of month.

CLA-22-A (R-1/93) ACCOUNT NUMBER C80937

AFFIDAVIT OF PUBLICATION

No. 35224

STATE OF NEW MEXICO
County of San Juan:

ROBERT LOVETT being duly sworn says: That he is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):

Wednesday, August 30, 1995

and the cost of publication was: $62.29

Robert Lovett

On 8/30/95 ROBERT LOVETT appeared before me, whom I know personally to be the person who signed the above document.

Mary L. Snead

My Commission Expires March 21, 1998

COPY OF PUBLICATION

Legals

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan application has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(GW-220)- Walters Drilling, Inc., Mr. Gary S. Brink, (505)-327-5218, 5424 U.S. Highway 64, Farmington, NM, 87401 has submitted a Discharge plan application for their Farmington facility located in the NW/4 NW/4, Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top tank and transported offsite for disposal at an OCD approved facility; Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 53 feet with a total dissolved solids concentration of approximately 1125 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 23rd day of August, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

SEAL

/s/ William J. LeMay
WILLIAM J. LEMAY, Director

Legal No. 35224 published in The Daily Times, Farmington, New Mexico, Wednesday, August 30, 1995.

OIL CONSERVATION DIVISION

September 1, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-963-045

Mr. Gary S. Brink
Walters Drilling
P.O. Box 717
Farmington, NM 87499

RE: Discharge Plan GW-220
Walters Drilling, Farmington facility
San Juan County, New Mexico

Dear Mr. Brink:

The NMOCD has received the proposed Walters Drilling discharge plan application for the facility located in NW/4 NW/4, Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. The NMOCD has prepared and sent out the public notice for the facility as stated in WQCC section 3-108 and has performed a preliminary review of the discharge plan proposed by Walters Drilling as signed by Mr. Gary S. Brink on August 17, 1995.

The following comments and request for additional information are based on the review of the Walters Drilling application. **Please note that unless otherwise stated, response to all comments shall be received and reviewed by the OCD prior to approval of the discharge plan application.**

Refer to the application package submitted by Walters Drilling on August 17, 1995 as signed by Mr. Gary S. Brink.

I. Pursuant to WQCC section 3-114 Walters Drilling is subject to the $50 (fifty dollar) filing fee and the $1,380 (One Thousand Three Hundred and Eighty Dollar) flat fee. **The $50 filing fee has been received by the NMOCD, the $1,380 flat fee has not been received.**

II. The review that follows will site specific information from your application that needs to be clarified. Enclosed you will find several attachments which will be mentioned throughout this review. The service company guidelines that were provided to Walters Drilling at the inspection will be referenced during this process.

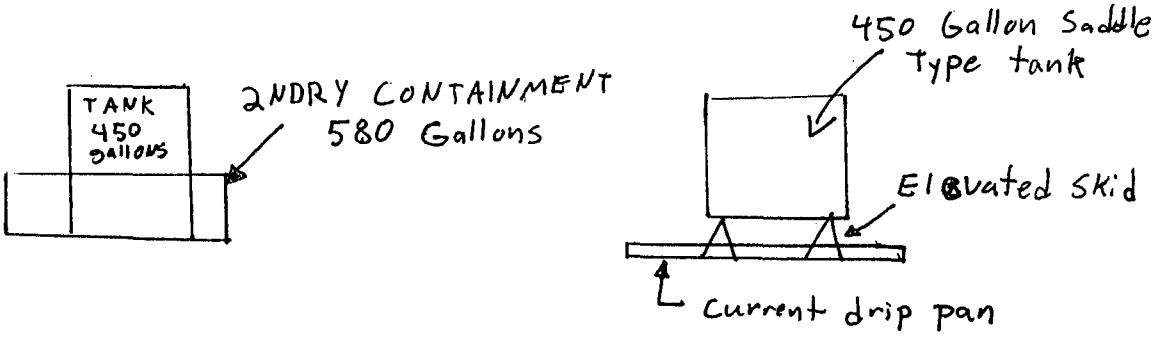
A. ITEM VII. of the guidelines - Sources and Quantities of effluent and Waste Solids Generated at the Facility.

Address how a potential spill stream will be handled and sampled in order to determine proper disposal options - per 40 CFR part 261 Hazardous Characteristics. Also use attachment No. 4 where applicable. This can be handled under "Spill contingency plan."

NOTE: Enclosed you find literature that explains exempt and non-exempt wastes in the oil patch. Walters Drilling is encouraged to read the information and apply it at the yard as well as on location. (Attachment No. 1)

B. ITEM IX. of the guidelines - Proposed modifications.

There are a couple of options for the 450 gallon storage tank - place the tank in a secondary containment of 1 1/3 times the volume or 580 gallons or leave the tank as is and place it on an elevated skid. (see diagram).



C. ITEM X. of the guidelines - Inspection, Maintenance and Reporting.

1. Attachment No. 2 is the NMOCD rule 116 and WQCC 1-203 for spill reporting - include these reporting requirements as part of the discharge plan. In the event of a spill that is reportable according to the above rules - contact the Aztec NMOCD office at 334-6178.

2. Describe how precipitation/runoff will be managed according to part X. C. of the guidelines.

E. ITEM XI. of the guidelines - Spill/Leak prevention and reporting procedures (contingency plans).

Use the guidelines to prepare a "Contingency Plan" for the facility. This is guideline section XI. A, B, and C.

NOTE: NMOCD permitted facilities with class II injection wells such as SUNCO and BASIN can only take exempt wastes.

F. ITEM XII. of the guidelines. Site Characteristics.

1. Attachment No. 3 gives hydrogeologic information for the site of GW-- 220.
2. If Walters Drilling chooses the following groundwater report may be purchased from New Mexico Bureau of Mines and Mineral Resources - Phone (505)-835-5410; "Hydrogeology and water resources of San Juan Basin, New Mexico." Hydrologic Report 6, 1983.

G. ITEM XIII. of the guidelines. Other Compliance Information.

1. Attachment No. 4 - labelled XIII. A. and XIII. B. , include as part of the discharge plan.
2. **Label WASTE OIL as USED OIL.**

H. All potential hazardous waste issues will be addressed by NMED - Hazardous Waste and Radioactive Materials Bureau. (505)-827-1558

Submit the requested information and commitments within 30 days of receipt of this letter. This will expedite the final review of the application and approval of the discharge plan. **Submit the information in three copies - two to Santa Fe, and one copy to Aztec.**

If you have any questions, please feel free to call me at (505)-827-7156.

Sincerely,

Patricio W. Sanchez
Petroleum Engineer

xc: Mr. Denny Foust - Environmental Geologist

Z 765 963 045

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

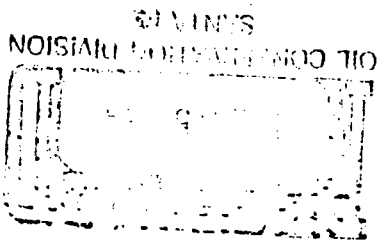
UNITED STATES POSTAL SERVICE

Sent to Gv-220 - Walters.	
Street and No. Gary S. Brink.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, March 1993

OCD

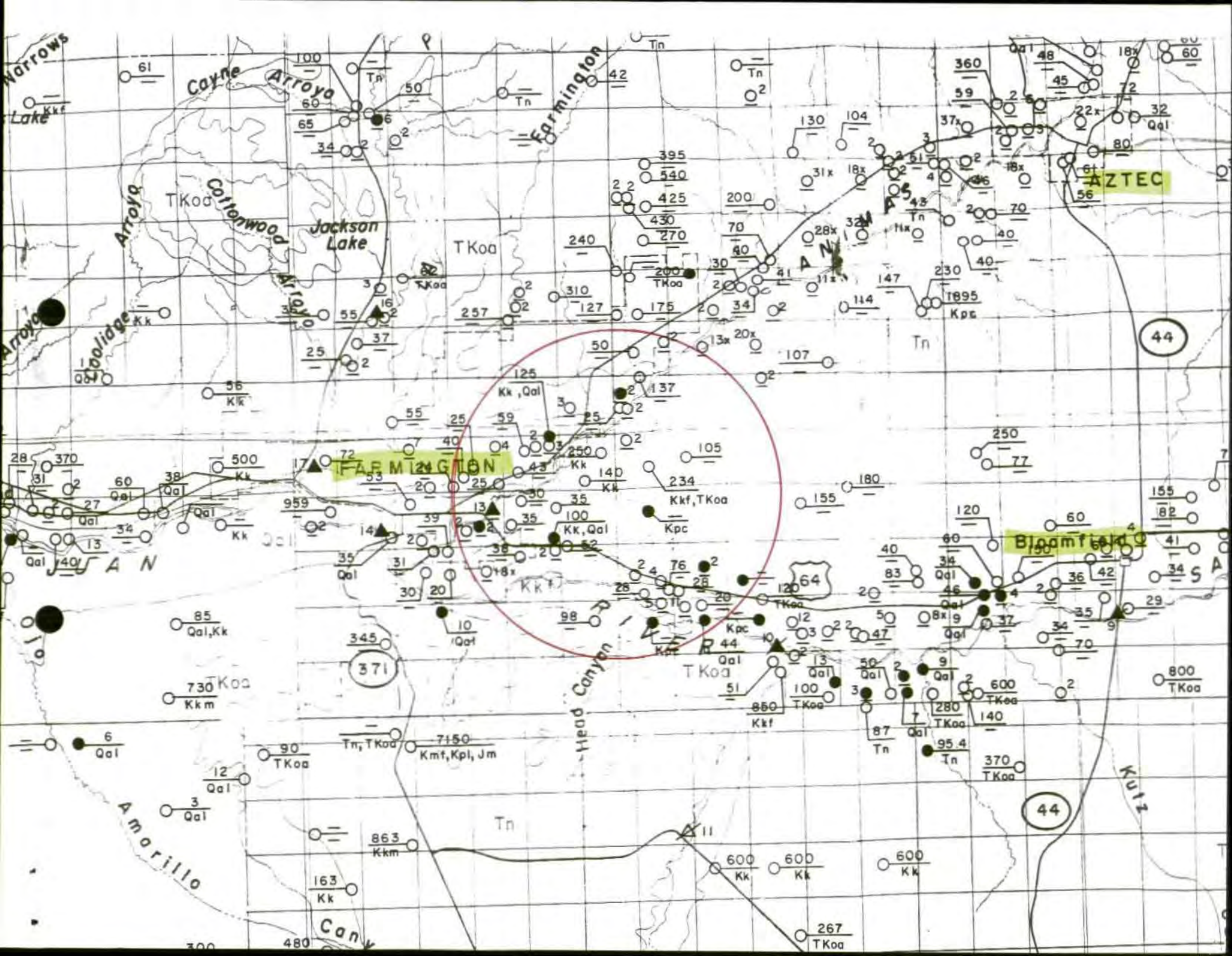
AVAILABILITY OF HYDROLOGIC DATA IN SAN JUAN COUNTY, NEW MEXICO



U.S. GEOLOGICAL SURVEY

Open-File Report 84-608

Prepared in cooperation with
SAN JUAN COUNTY COMMISSION, NEW MEXICO



Narrows
Lake
Cayne Arroyo
Farmington
Cottonwood Arroyo
Jackson Lake
Coolidge
Arroyo
AZTEC
ANIMAS
FARMINGTON
Bloomfield
SAN JUAN RIVER
Head Canyon
Amarillo
Kutz
44
64
371
TKoa
Tn
Kkf
Kk
Qal
Kpc

WALTERS Drilling Located at 29.12.19.11

Table 1.--Records of water wells and springs in San Juan County prior to 1978 - Continued

Location	Latitude-Longitude	Number or name	Depth (feet)	Altitude (feet)	Depth to Water (feet)	Date	Producing interval (feet)	Principal water-bearing unit(s)	Specific conductance (umhos at 25°C)	Date	Logs available	Reference	Drawdown (feet)	Discharge (gal/min)	Duration (hours)	Remarks
29.11.25.132	364158 1075653	Bur. Rec. #39	10M	5,470	1.8	04-16-68	-	Tn	6,300	04-16-68	-	-	-	-	-	-
29.11.30.211	364212 1080152	Narciso Archibeque	46	5,465	43	-	-	Qal	748 *	04-09-68	-	-	-	-	-	-
29.11.30.233	364152 1080152	Delbert Blake	9M	5,390	8.8	04-09-68	-	Qal	886 *	04-09-68	-	-	-	-	-	-
29.11.31.3321	364043 1080217	-	1,720	5,437	-	-	-	Kpc	-	-	TOP	-	-	-	-	Converted to water.
29.11.31.3342	364037 1080214	Edgar Lund	600	5,458	29.1	10-09-74	300	TKoa	-	-	-	-	-	-	-	Oil test plugged back.
29.11.31.3424	364042 1080158	Richard Sego	326	5,480	-	-	-	TKoa	-	-	-	-	-	-	-	"Not fit to drink".
29.11.34.4144	364046 1075827	-	800	5,640	-	-	-	TKoa	-	-	TOP	-	-	-	-	Source for H_2O injected; plugged back from TD of 1,355 feet.
29.12.06.133	364521 1080847	George McColm	16	5,440	6	11-24-53	-	Qal	2,250 *	11-24-53	-	m	-	10	-	-
29.12.07.4133	364417 1080817	7th Day Avent Church	234	5,600	170.5	10-08-74	-	Kkf, TKoa	2,300	10-08-74	-	-	-	-	-	-
29.12.18	-	Pan Am Pet.	-	-	-	-	1,435-1,448	Kpc	-	* 04-30-59	-	m	-	-	-	TDS = 29,800 mg/L, 1959.
29.12.19.3211	364242 1080833	Thomas F. Kirby	62	5,360	45.4	04-05-68	-	Qal	2,100	04-05-68	-	-	-	-	-	-
29.12.19.3231	364235 1080837	Thomas F. Kirby	44	5,330	32.1	04-05-68	-	Qal	900	04-05-68	-	-	-	-	-	-
29.12.20	-	-	-	-	-	-	1,550	Kpc	-	* - -59Q	-	m	-	-	-	Analysis only. TDS = 30,200 mg/L, 1959.
29.12.20	-	Pan Am Pet.	1,415	5,457	-	-	1,378-1,388	Kpc	59,200 *	02-22-59	-	-	-	-	-	Gas well, sample from pit.
29.12.21.3	-	-	-	-	-	-	-	-	4,090 **	03-15-74	-	-	-	-	-	Analysis only.
29.12.28	-	Pan Am	-	-	-	-	-	Kpc	-	* 04-30-59	-	-	-	-	-	Gas well; TDS 37,800 mg/
29.12.28.2111	364215 1080609	D. H. Brownlee	120	5,392	18.8	11-07-74	-	TKoa	-	-	-	-	-	-	-	Unused.
29.12.29	-	Pan Am	44	-	-	-	-	Qal	-	* 04-30-59	-	m	-	-	-	Reported casing depth; TDS = 2,210 mg/L.
29.12.30	-	-	-	-	-	-	1,240	Kpc	-	* - -59	-	m	-	-	-	WBF depth = 1,240 ft; TDS = 45,600 mg/L.
29.12.33.2411	364111 1080553	-	850	5,360	F	10-21-74	-	Kkf	12,250	10-21-74	-	-	-	5E	-	Hammond Canal Well.
29.12.34.421	364056 1080450	Bureau of Reclamation	13M	5,370	5.3	04-17-68	-	Qal	2,950 *	04-17-68	-	-	-	-	-	Stovepipe casing.
29.12.34.4341	364036 1080500	Chas. Christianson	100	5,480	65.5	10-21-74	-	TKoa	-	-	-	-	-	-	-	-
29.12.35.342	364042 1080410	Bureau of Reclamation #26	6M	5,380	3.6	04-18-68	-	Qal	4,620 *	04-18-68	-	-	-	-	-	Stovepipe casing.

TDS (TOTAL DISSOLVED SOLIDS) = 0.75 × Specific Conductance (umhos @ 25°C)

$TDS = 0.75 \times \left(\frac{2100 + 900}{2}\right) \Rightarrow TDS = 1125\ [mg/l]$

DEPTH to Groundwater $\approx \frac{62 + 44}{2} \approx 53'$

Table 2.—Records of water wells in San Juan County, 1978-83 - Continued

LOCATION	NAME	WELL NUMBER	USE	DEPTH	PERFORATIONS	AQUIFER
29.12.14.11	Trantham, Teddy O.	SJ-0548	dom, stk	180		
29.12.15.143	Kennedy, George L.	SJ-1510	dom	155	135-155	
29.12.19.344	Horvath, Robert T.	SJ-0567	dom	28		
29.12.19.414	Brainard, Lee	SJ-0657	dom	85		
29.12.19.431	James, Truett C.	SJ-1070	dom, stk	38		
29.12.19.44	Hanson, Gale	SJ-0953	dom	76		
29.12.20.333	Hammond, Bob	SJ-0338	dom, stk	28		
29.12.24.32	Murphy, John L.	SJ-1597	dom	40		
29.12.24.34	Thomason, James W.	SJ-0400	dom, stk	83	60-83	
29.12.25.12	Sutherlen	SJ-0938	dom	80		
29.12.25.14	Cross, Frankie J.	SJ-0706	dom	49		
29.12.25.14	Kirby, Richard L.	SJ-0652	dom	42		
29.12.25.14	Runyan, Roy A.	SJ-1322	dom	42		
29.12.25.143	Palmer, Andrew L.	SJ-0617	dom	47		
29.12.25.24	Sierra, Raymond M.	SJ-1466	dom, stk	27		
29.12.25.31	Bradley, Davis	SJ-0570	dom	36		
29.12.25.43	Jacob, Lawrence	SJ-0763	dom	60	20-60	
29.12.26.21	Roquemore, Dean	SJ-0777	dom	47		
29.12.26.211	Dufur, Ralph L.	SJ-1109	dom	100		
29.12.26.24	Nunn, Ewing H.	SJ-1194	dom	38		
29.12.26.34	Durrett, James M.	SJ-0112	dom,stk	47		
29.12.26.42	Fielder, Charles E.	SJ-1802	dom	70	59-69	
29.12.26.42	Osburn, Lewis R.	SJ-1326	dom	50		
29.12.26.422	Buck, Lee A.	SJ-1469	dom, stk	45		
29.12.26.422	Lozon, Lawrence J.	SJ-0399	dom	45		
29.12.27.13	Bustos, Daniel	SJ-1590	dom	63		
29.12.27.131	Reynolds, Ronald	SJ-0726	dom	50		
29.12.27.133	Chacon, Alfonso J.	SJ-0827	dom	55		
29.12.27.133	Kaiser, Charles	SJ-1008	dom	51		
29.12.27.134	Torres, Richard	SJ-0666	dom	35		
29.12.27.31	Bencomo, Joe	SJ-0572	dom	35		
29.12.27.31	Harmon, Douglas A.	SJ-1700	dom	87		
29.12.27.31	Palmer, Charlie W.	SJ-1728	dom	25		
29.12.27.311	Clark, Doris	SJ-1690	dom	25		
29.12.27.311	Orellano, Reynaldo W	SJ-0904	dom, stk	32		
29.12.27.313	Brewer, Gerald A.	SJ-0901	dom, stk	32		

WALTERS Drilling Located @ 29.12.19.11

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan application has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(GW-220)- Walters Drilling, Inc., Mr. Gary S. Brink, (505)-327-5218, 5424 U.S. Highway 64, Farmington, NM, 87401 has submitted a Discharge plan application for their Farmington facility located in the NW/4 NW/4, Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. All effluents that may be generated at the facility will be collected in a closed top tank and transported offsite for disposal at an OCD approved facility; Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 53 feet with a total dissolved solids concentration of approximately 1125 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 23rd day of August, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

S E A L

WILLIAM J. LEMAY, Director

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 8/17/95.

or cash received on 8/29/95 in the amount of $ 50.00

from Walters Drilling

for Farmington Service Facility (Facility Name) GW-220 (DP No.)

Submitted by: _____ Date: _____

Submitted to ASD by: Roger K. Anderson Date: 9/1/95

Received in ASD by: Angie Aire Date: 9/1/95

Filing Fee X New Facility ___ Renewal ___

Modification ___ Other ___ (Specify)

Organization Code 521.07 Applicable FY 96

To be deposited in the Water Quality Management Fund.

Full Payment ___ or Annual Increment ___

[redacted]

Walters DRILLING INC.
P.O. BOX 717
FARMINGTON, NEW MEXICO 87499

CITIZENS BANK
FARMINGTON, NM 87401
85-207-1022

PAY		DATE	CHECK NO.	CHECK AMOUNT
	WALTERS DRILLING CO. 50 DOLS 00 CTS	08/17/95	12547	$50.00

TO THE ORDER OF NMED Water Quality Management

WALTERS DRILLING INC.

[redacted]

WALTERS DRILLING INC.

[redacted] VENDOR NO. [redacted] VENDOR NAME [redacted]

TRANSACTION DATE	REFERENCE	GROSS AMOUNT	DEDUCTION	NET AMOUNT
		Discharge Plan Application GW-220		$50.00

CHECK DATE	CHECK NO.	TOTAL GROSS	TOTAL DEDUCTION	CHECK AMOUNT

District I - (505) 393-6161
P. O. Box 1940
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88211-0719
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

RECEIVED
AUG 23 1995
Environmental Bureau
Oil Conservation Division

Revised 4/18/95

Submit Original Plus 1 Copy to Santa Fe
1 Copy to appropriate District Office

DISCHARGE PLAN APPLICATION FOR OILFIELD SERVICE FACILITIES

(Refer to the OCD Guidelines for assistance in completing the application)

GW-220

☒ New ☐ Renewal ☐ Modification

1. Type: Oil and gas well drilling contractor
2. Operator: Walters Drilling, Inc.

   Address: 5424 U.S. Highway 64, Farmington, NM 87401

   Contact Person: Gary Brink Phone: 505-327-5218
3. Location: NW 1 /4 NW 1 /4 Section 19 Township 29N Range 12W

   Submit large scale typographic map showing exact location.
   Attached with part 5.
4. Attach the name and address of the landowner of the facility site.
   HW Partnership P. O. Box 717, Farmington, NM 87499
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   Attached
6. Attach a description of all materials stored or used at the facility.
   Attached
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   Attached
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
   Attached
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   Attached
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    Attached
11. Attach a contringency plan for reporting and clean-up of spills or releases.
    Attached
12. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact fresh water. Depth to and quality of ground water must be included.
    Attached
13. Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
    Attached
14. CERTIFICATION

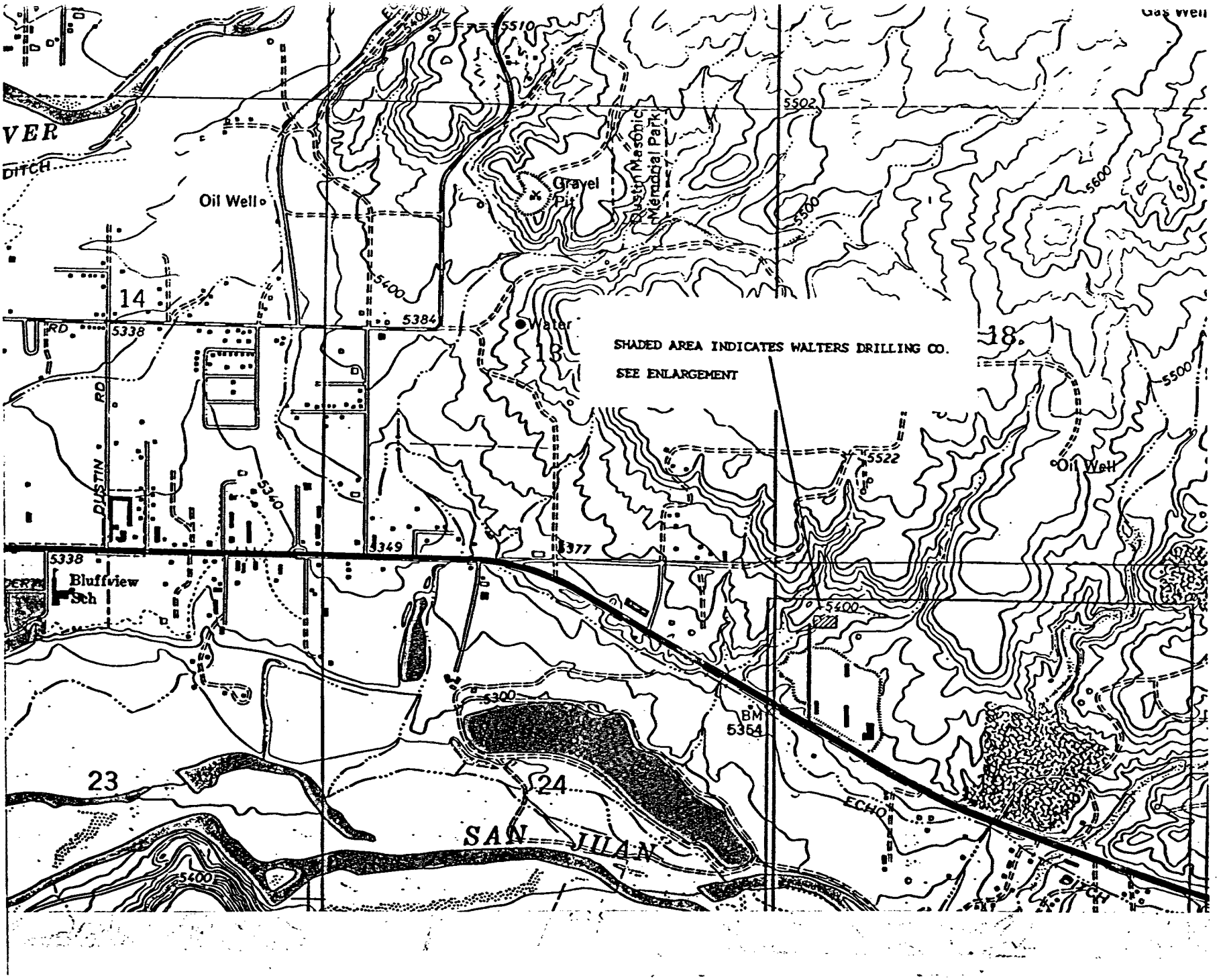
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Gary S. Brink Title: Controlled/Vice-President

Signature: Gary S. Brink Date: August 17, 1995

Walters
DRILLING INC.
P. O. BOX 717
FARMINGTON, NEW MEXICO 87499
(505) 327-5218

V. Facility Description: A cyclone fence completely surrounds tracts one, two, three, and four. There are no pits, tanks, or berms on the facility. Waste oil is stored in a small tank at the rear of the main building. Motor oil, 90 weight oil, Tellus, solvent and grease are stored in 55 gallon drums in the middle of the main building. Lead based thread dope is stored in the main building. There are no other stored items on the facility and there are no discharges or processing facilities.


SHADED AREA INDICATES WALTERS DRILLING CO.
SEE ENLARGEMENT
Oil Well
Gravel Pit
Justin Masonic Memorial Park
Water
Bluffview Sch
DUSTIN RD
DITCH
ECHO
SAN JUAN
BM 5364
14
18
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5502
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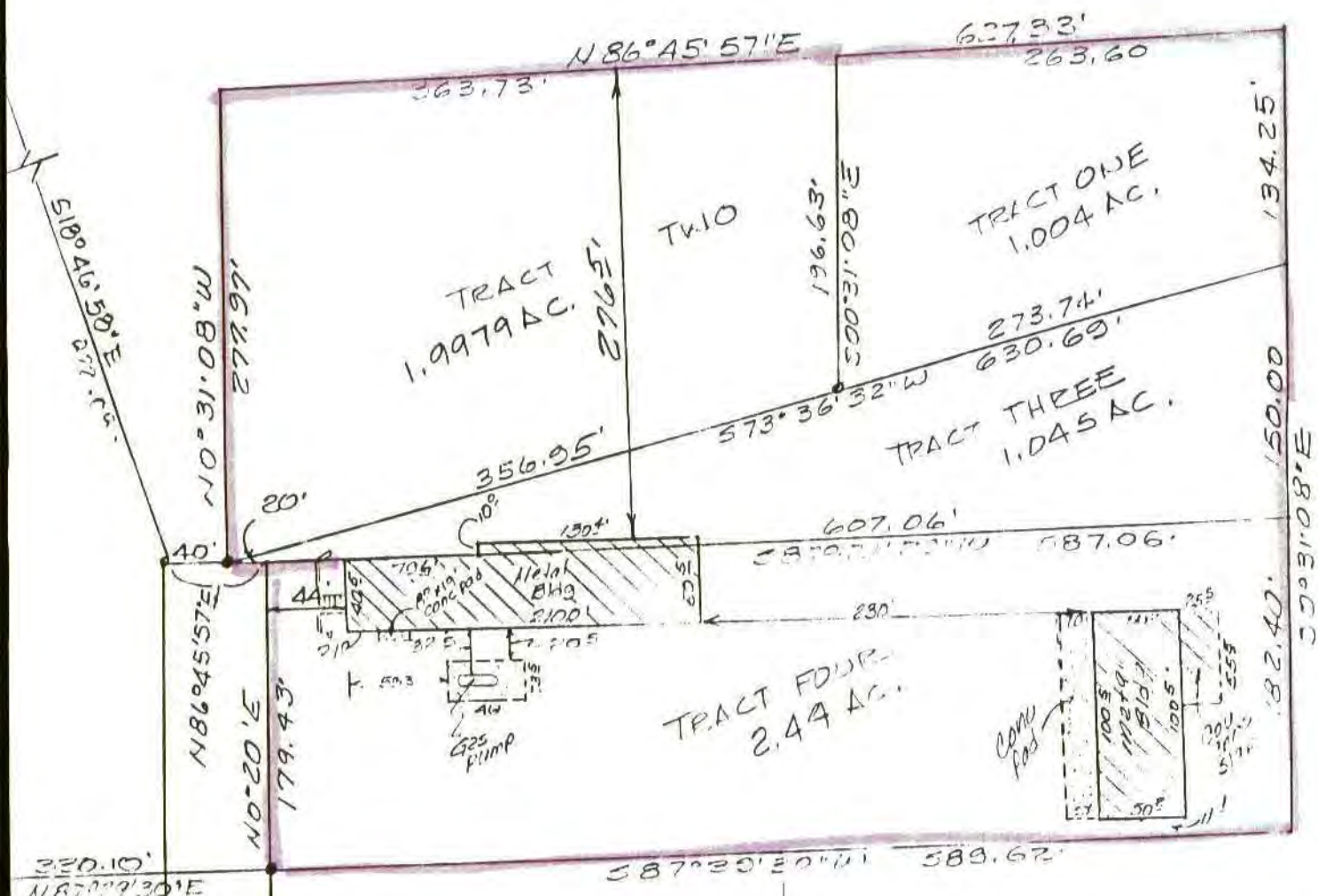
5400
WALTERS DRILLING CO.
approx. previous tank locations
BM
354
ECHO
Dix

N CORNER SEC. 19
29N, R12W N.M.P.M.
SAN JUAN CO.

THENCE: N86°45'57"E, 263.60 feet;
THENCE: S00°31'08"E, 134.25 feet;
THENCE: S73°36'32"W, 273.74 feet to the point of beginn



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DESCRIPTION - TRACT 4

2.44 acres, more or less, being
Quarter of the Northwest Quarte
T29N, R12W, N.M.P.M., San Juan
described as follows:
BEGINNING at a point which is
feet N87°39'30"E from the North
THENCE: N00°20'E, 179.43 feet;
THENCE: N87°21'29"E, 587.06 fe
THENCE: S00°31'08"E, 182.40 fe
THENCE: S87°39'30"W, 589.62 fe

DESCRIPTION - TRACT 5 ACCESS

1.239 acres, more or less, bei
west Quarter of the Northwest
T29N, R12W, N.M.P.M., San Juan
being described as follows:
BEGINNING at a point which i
the Northwest Corner of said

Facility Description

DISCHARGE PLAN APPLICATION

Part VI. Materials Stored or Used at the Facility:

Name	General Makeup/ Brand Name	Solids/ Liquids	Type of Container	Est. Vol. Stored	Location
1. Drilling Fluids					
2. Brines					
3. Acids/Caustics					
4. Detergents/Soaps	Roughneck Rig Wash	S	Drum	400 LBS	Shop
5. Solvents/Degreasers	Kermac Solvent	L	Drum	55 Gals	Shop
6. Paraffin Treatment/ Emulsion Breakers					
7. Biocides					
8. Others	Shell Spirax Gear Oil	L	Drum	55 Gals	Shop
	Shell Rimula Oil 10W	L	Drum	55 Gals	Shop
	Shellzone Antifreeze	L	Drum	55 Gals	Shop
	Shell Avinia Grease	S	Drum	120 LBS	Shop

DISCHARGE PLAN APPLICATION

Part VII. Sources and Quantities of Effluent and Waste Solids Generated at the Facility:

Waste Type	General Composition and Source	Volumn per Month	Major Additives
1. Truck Wastes			
2. Truck, Tank and Drum Washing			
3. Steam Cleaning of Parts, Equip, Tanks			
4. Solvent/Degreaser Use	Solvents from small parts	2 Gals	Naphtha
5. Spent acids, Caustics or Completion fluids			
6. Waste Slop Oil	Waste oil from rig	100 Gals	
7. Waste Lubrication and Motor Oils	Change oil	50 Gals	
8. Oil Filters		5 Gals	
9. Solids and Sludges From Tanks			
10. Painting Wastes			
11. Sewage			
12. Other Waste Liquids			
13. Other Waste Solids	Used oil drums	5	Empty oil drums

DISCHARGE PLAN APPLICATION

Part VIII. Summary Description of Existing Liquid and Solids Waste Collection and Disposal:

Waste Type	Tank/ Drum	Floor Drain/ Sump	Pits- Lined or Unlined	Onsite Injection Well	Leach Field	Offsite Disposal
1. Truck Wastes						
2. Truck, Tank and Drum Washing						
3. Steam Cleaning of Parts, Equipment, Tanks						
4. Solvent/Degreaser Use						
5. Spent Acids, Caustics, or Completion Fluids						
6. Waste Slop Oil						
7. Waste Lubrication and Motor Oils	T					D&D Oil Recycling Bloomfield NM
8. Oil Filters	D					Belt Salvage Cortez CO
9. Solids and Sludges from Tanks						
10. Painting Wastes						
11. Sewage						
12. Other Waste Liquids						
13. Other Waste Solids	Used oil drums					Salvage Plus Kirtland NM

Walters
DRILLING INC.
P. O. BOX 717
FARMINGTON, NEW MEXICO 87499
(505) 327-5218

VII. Solvent is used in a separate tank for the cleaning of small parts. The solvent is used over and over.

VIII. Waste oil is stored in 55 gallon drums and a 450 gallon storage tank. The drums are drained into the tank and the oil from the tank is transferred to an oil recycling center (D&D oil).

All oil filters are drained and crushed by Belt Salvage and recycled through their recycling program.

All empty 55 gallon drums are drained and trucked to Salvage Plus for disposal in their recycling center.

IX. The 450 gallon storage tank has been placed in a drip pan ($\frac{1}{4}$" x 5' x 5') to catch any drips or splashes. The tank is sitting on cement and now has stairs on one end to facilitate draining of the drums.

X. A visual inspection of the storage tank will be done daily. Maintenance will be done as needed or at least semi-annually on the valves.

Spillage will be contained in the storage area by the drip pan. This fluid would be removed by suctioning and transported to a proper disposal site.

XI. Any spill or leakage would occur at the 450 gallon storage tank. If an overflow of the drip pan were to happen absorbent socks would be used to contain the spill, and a vacuum truck would be used to suction up the spillage. This would be done after notification of the local OCD Director. This notification would be immediate upon detection of any spill.

Leak detection would be done by visual inspections being done daily. In the event of any significant leaks, immediate nitification of the local OCD Director would be made. Vacuum trucks will be used disposal and any materials suctioned up would be disposed of at a proper disposal site during the daylight hours of 8:00AM to 5:00PM.

XII. Walters Drilling Inc. attempted to drill two (2) water wells on this site in 1978. The wells were drilled to a depth of approximately 100 feet with no water being found.

The nearest surface water way is the San Juan River which is located approximately 1 (one) mile away. It is not known if there are any ground water discharge sites or water wells within 1 (one) mile of this facility.

XII. (continued)

Soil types for this facility are sand clay mixture with a sandstone base being encountered between 10' and 12' depending on the area of the facility in which work is being done.

We have no information regarding an aquifer.

XIII. In compliance with your letter dated April 24, 1995 regarding the inspection of our facility, the following information is submitted:

1. The use of lead base thread dope will be discontinued as soon as we have used up our present stock. We estimate that this will be about September 30, 1995.

2. All empty drums have been removed from the facility. We bring waste oil from the rig to the yard and drain it into our storage tank. When five or six drums (a pickup load) are accumulated, they are trucked to Salvage Plus for recycling.

3. All small oil spills have been raked and the entire yard will be dragged to loosen the topsoil and allow aeration.

4. We are requiring all employees who work in the yard to be aware of the importance of maintaining a clean and safe work area.

5. All drilling muds and chemicals have been removed from the facility. We will no longer store any type of fluid additives in the yard.

6. Bulk storage of oils, antifreezes, and greases will be labelled as well as the oil storage tank.

7. Used oil drums brought in from the rig will be labelled as waste oil and empty drums from bulk storage will be marked the same.

8. All painting at the facility has been discouraged. If there comes a need to paint, the empty cans will be left to dry before disposal.

9. An MSDS for shop solvent has been obtained and the tank will be marked as solvent.

10. The empty drums that had accumulated rainwater were drained into a plastic lined pit and allowed to evaporate. The empty drums were then trucked to Salvage Plus for recycling.

11. We have no sumps on the facility and certainly do not intend to install any in the future.

12. No new construction is being planned, however, all guidlines will be followed should these plans change.

KERR-McGEE REFINING CORPORATION AND SUBSIDIARIES
POST OFFICE BOX 3367 • HOUSTON, TEXAS 77253 • TELEPHONE (713) 638-4700

MATERIAL SAFETY DATA SHEET October 16, 1993

MSDS NUMBER CV - 1473

EMERGENCY TELEPHONE NUMBERS	COMPANY	CHEMTREC
	713/638-4700	800/424-9300

I. PRODUCT IDENTIFICATION

PRODUCT	CHEMICAL NAME AND SYNONYMS
KERMAC 142 Flash Naphtha, Rule 66	Medium Aliphatic Solvent Naphtha
CHEMICAL FAMILY	**FORMULA**
Petroleum Hydrocarbon Naphtha	C10 - C14

National Fire Protection Association Hazard Rating Codes	HEALTH CODE	FIRE CODE	REACTIVITY CODE
Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4	0	2	0

II. SUMMARY OF HAZARDS

CAUTION! COMBUSTIBLE LIQUID AND VAPOR. HARMFUL IF INHALED AND MAY CAUSE DELAYEDLUNG INJURY. CAN CAUSE NERVOUS SYSTEM DEPRESSION. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Keep away from heat and flame. Avoid breathing vapor. Use ventilation adequate to keep vapor below recommended exposure limits. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

DOT Hazardous Material	DOT SHIPPING NAME AND NUMBER	DOT HAZARD CLASS
YES	Naphtha, combustible liquid, UN1256, III	(Combustible Liquid)

III. HAZARDOUS COMPONENTS

INGREDIENT	% RANGE	PEL/TLV	HAZARD
Medium Aliphatic Solvent Naphtha (CAS # 64742-88-7)	100	Stoddard Solvent TWA - 100 ppm	Combustible Acute Health Chronic Health

IV. HEALTH INFORMATION

EXPOSURE BY ROUTE OF ENTRY	EXPOSURE CHARACTERISTICS AND FIRST AID	
INHALATION	EFFECTS	Acute: Headache, nasal and respiratory irritation, nausea, drowsiness, breathlessness, fatigue, central nervous system depression, convulsions, and loss of consciousness.
	FIRST AID	Move exposed person to fresh air. If breathing has stopped, perform artificial respiration. Get medical attention as soon as possible.
SKIN	EFFECTS	Acute: irritation Chronic: dermatitis
	FIRST AID	If clothing soaked, immediately remove clothing and wash skin with soap and water. Launder clothing before wearing. Get medical attention promplty.
EYES	EFFECTS	Acute: irritation
	FIRST AID	Immediately flush eyes with water for a minimum of 15 minutes, occasionally lifting the lower and upper lids. Get medical attention promptly.
SWALLOWING INGESTION	EFFECTS	Acute: aspiration hazard, headache, nausea, drowsiness, fatigue, pneumonitis, pulmonary edema, central nervous system depression, convulsions and loss of consciousness.
	FIRST AID	Call a physician immediately, ONLY induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person

Medical conditions Generally Agravated by Exposure: N/AV

LISTED AS POTENTIAL CARCINOGEN OR CARCINOGEN	NOT LISTED X	NATIONAL TOXICOLOGY PROGRAM ____
	INTERNATIONAL Agency for Research on Cancer ____	OSHA ____

V. EMPLOYEE PROTECTION

RESPIRATORY PROTECTION (NIOSH APPROVED RESPIRATORS SEE OSHA STD. 1910.134)

Up to 1000 ppm, half-mask organic vapor respirator. Up to 5000 ppm, full-face organic vapor respirator or full-face supplied air respirator. Greater than 5000 ppm, fire fighting, or unknown concentration, self-contained breathing apparatus with positive pressure.

EYE	Safety glasses, chemical goggles or face shield as appropriate.
SKIN	Gloves: Nitrile, neoprene or other material resistant to naphtha.

VENTILATION

Maintain local or dilution ventilation to keep air concentration below 100 ppm. Loading, unloading, tank gauging, etc., remain upwind. Request assistance of safety and industrial hygiene personnel to determine air concentrations.

VI. FIRE PROTECTION INFORMATION

FLASH POINT AND METHOD	AUTOIGNITION TEMPERATURE ESTIMATED	FLAMMABLE LIMITS % VOLUME IN AIR ESTIMATED	LOWER	UPPER
Tag Closed Cup 142 ' F	450 'F		0.7	6

EXTINGUISHING MEDIA

Carbon dioxide, dry chemical, or foam. Water stream may spread fire, use water spray only to cool containers exposed to fire. If leak or spill has not ignited, use water spray to disperse the vapors.

HAZARDOUS DECOMPOSITION PRODUCTS

Incomplete combustion can yield carbon monoxide and various hydrocarbons.

FIRE AND EXPLOSION HAZARDS

Can form combustible mixtures with air when heated.

STORAGE

Do not store with strong oxidizers. Store as OSHA Class IIIA combustible liquid.

HAZARDOUS POLYMERIZATION			STABILITY		
WILL NOT OCCUR	X	MAY OCCUR _____	STABLE	X	UNSTABLE _____

VII. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT	Reid VAPOR PRESSURE (RVP) at 100 'F	EVAPORATION (ETHYL ETHER = 1)
350 - 415 'F	ESTIMATED 0.1 pounds	ESTIMATED 8 times slower
PERCENT VOLATILE BY VOLUME	AVG. MOLECULAR WEIGHT	APPEARANCE
(% 100	170	Clear Liquid
ODOR	DROP POINT	ESTIMATED VAPOR DENSITY (AIR = 1)
Petroleum Naphtha	N/A	6
SPECIFIC GRAVITY	VISCOSITY	SOLUBILITY (G/100g WATER AT 20° C)
0.78	1.3 cs at 100 'F	Negligible

VIII. ENVIRONMENTAL PROTECTION

SPILLS	Notify emergency response personnel. Evacuate area and remove ignition sources. Build dike to contain flow. Remove free liquid, do not flush to sewer or open water. Pick up with inert absorbent and place in closed container for disposal.
WASTE DISPOSAL	Utilize licensed waste disposal company. Consider recycling or incineration. Utilize permitted hazardous waste disposal site or industrial waste disposal site as appropriate.

ADDITIONAL INFORMATION

PREPARED BY	DATE PREPARED
KEITH W. BUNSELMEYER	October 16,1993

DISCLAIMER

The information and recommendations contained in this publication have been compiled from sources beleived to be reliable and to represent the best current opinion on the subject at the time of publication. Since we cannot anticipate or control the many different conditions under which this information or our products may be used, we make no gurantee that the recommendations will be adequate for all individuals or situations. Each user of the product described herein should determine the suitability of the described product for his particular purpose and should comply with all federal and state rules and regulations concerning the described product.

ABBREVIATIONS

CAS #	Chemical Abstracts Service Number
N/A	Not Applicable
N/AV	Not Available
ppm	Parts per million
PEL	Permissible Exposure Limit
TLV	Threshold Limit Value Both the OSHA PEL and the American Conference of Governmental Industrial Hygienists TLV were reviewed. Where a difference existed, the more restrictive of the two was selected.
STEL	Short Term Exposure Limit
TWA	Time-Weighted Average

KERR-McGEE REFINING CORPORATION

BRAND NAME: KERMAC 142 Flash Naphtha - Rule 66

PRODUCT CODE: 1426

REFINERY CODE:

EFFECTIVE DATE: September 1, 1993

CURRENT DATE:

REFINED PRODUCT SPECIFICATION —SOLVENTS

PROPERTY		TEST METHOD	SHIPPING CONTROLS	TYPICAL TESTS	MARKETING SPECIFICATIONS
GRAVITY:	API @ 60°F	D-287		51	49-52
	SPECIFIC 60/60 °F	D-1250		.775	
	lbs/gal @ 60°F	D-1250		6.5	
FLASH POINT:	CLOSED CUP (TCC) °F (°C)	D-56		144	142 Min
	CLOSED CUP (PM) °F (°C)	D-93			
	OPEN CUP (COC) °F (°C)	D-92			
FIRE POINT:	OPEN CUP (COC) °F	D-92			
DISTILLATION:	IBP (Initial boiling point °F (°C)	D-86		364	356 Min
	5				
	10				
	20				
	30				
	40				
	50			383	
	60				
	70				
	80				
	90				
	95				
	DP [(Dry Point °F (°C)]			408	415 Max
	EP [(End Point °F (°C)]				
ACIDITY OF DISTILLATION RESIDUE:		D-1093			
CORROSION:	3 Hours @ 212 °F (100°C)	D-130		1a	1 Max
	½ Hour @ Boiling Point	D-235			
COLOR:	Saybolt	D-156		30	28 Min
	Acid Wash	D-848			
POUR POINT: °F		D-97			
VISCOSITY:	Saybolt (SUS) @ 100°F, Seconds	D-2161			
	@ Seconds				
	@ 0°F Seconds	D-2161			
	Kinematic @ 100°F Centistokes	D-445		1.3	
	@ Centistokes				
	@ 0°F Centistokes	D-445			
SOLVENCY:	Kauri-Butenol Value	D-1133		30	
	Aniline Point °F	D-611		162	
	Mixed Aniline Point °F	D-611			
	Dilution Ratio	D-1720			
CHEMICAL PROPERTIES:	Sulfur Wt. %	D-4045		Below 50	
	Doctor Test	D-484		Neg	Neg
	Saturates Vol. %	D-1319			
	Paraffins Vol. %	D-2159			
	Naphthenes Vol. %	D-2159			
	Olefins Vol. %	D-1319			
	Aromatics Vol. %	D-1319		7.4	Below 8

CONTINUED

KERR-McGEE REFINING CORP.

BRAND NAME: KERMAC 142 High Flash Naphtha - Rule 66

PRODUCT CODE: 1426

REFINERY CODE:

EFFECTIVE DATE: September 1, 1993

CURRENT DATE:

REFINED PRODUCT SPECIFICATION — SOLVENTS (CONTINUED)

PROPERTY		TEST METHOD	SHIPPING CONTROLS	TYPICAL TESTS	MARKETING SPECIFICATIONS
CHEMICAL PROPERTIES (Cont'd):					
BENZENE	VOL. %	Gas Chrom.		Nil	Less Than 0.01
ETHYL BENZENE	VOL. %	Gas Chrom.			
TOLUENE	VOL. %	Gas Chrom.			
O XYLENE	VOL. %	Gas Chrom.			
M XYLENE	VOL. %	Gas Chrom.			
P XYLENE	VOL. %	Gas Chrom.			
SULFURIC ACID ABSORPTION,	VOL. %	D-484			
BROMINE NUMBER, mg/grm		D-1159			
UNSULFONATED RESIDUE,	VOL. %	D-483			
ODOR: BULK					
RESIDUAL					
PHENOL NUMBER	mg/100 ml				
APPEARANCE: CLEAR AND BRIGHT					
HAZE					
OTHER PROPERTIES:					
VAPOR PRESSURE					
VAPOR DENSITY					
FLAMMABLE LIMITS					
Lower					
Upper					
REFRACTIVE INDEX @ 20 °C		D-1218		1.43	
INTERFACIAL TENSION °/cm		D-971			
DIELECTRIC BREAKDOWN VOLTAGE		D-877			
AUTO IGNITION TEMPO °F		D-2155			
U O P CHARACTERIZATION FACTOR					
BUREAU OF MINES CORRELATION INDEX					
EXISTENT GUM					
NON-VOLATILE RESIDUE		D-1353			
Average Molecular Weight				159	

REMARKS & NOTES

Meets ASTM D-235 Standard Specifications for Mineral Spirits, Type II, High Flash Point Mineral Spirits.

Meets Federal Specification PD680A, Type II, Dry Cleaning & Degreasing Solvent.

THE VALUES SHOWN ARE A BRIEF DESCRIPTION OF THE PRODUCT IN PRODUCTION ON THE EFFECTIVE DATE OF THE SPECIFICATIONS AND SERVE TO ASSIST IN DETERMINING PRODUCT SUITABILITY. NO CHANGE IN MATERIAL OR METHOD OF MANUFACTURE SHALL BE MADE WITHOUT NEW APPROVALS.

SUPERSEDES SPECIFICATION FOR | PRODUCT CODE | DATE

APPROVAL — INITIAL AND DATE

ORIGINATOR	DATE	REFINERY MGR	DATE	V P MARKETING	DATE	EXEC V P REFIN	DATE
[signature]	9/24/93	[signature]	9-17-93	[signature]	9/21/93	[signature]	9-27-93
MANAGER, QUALITY CONTROL	DATE		DATE		DATE		
[signature]	9-1-93						

MATERIAL SAFETY DATA SHEET

Date - 08-01-91

Emergency Phone No. 1-800-255-3924

Product Code 306

HARRISBURG INC.

ISION NO: 002

REVISION DATE: 01-02-92

SECTION I - SOURCE AND NOMENCLATURE

Manufacture's Name

GALAXIE INTERNATIONAL, INC.

Address

902 MIDDLE STREET, HOUSTON, TEXAS 77003

Information Telephone No.

713/225-4179

HMIS CODES: H F R P

4 1 0

Chemical Family

PETROLEUM GREASE & ADDITIVES

Trade Name and Synonyms

WOOLLEY BOOGER
THREAD BOSS - 60
DRILL COLLAR COMPOUND
Harrisburg, Inc.

Chemical Name and Synonyms

PROPRIETARY MIXTURE

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIM TLV	OTHER	WEIGHT %
*Powdered Lead	CAS #7439-92-1	0.05 MG/M3	0.05 MG/M3		60.0%

* Indicates toxic chemical/s subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372.
IN CASE OF EMERGENCY, CONTACT CHEM-TEL, INC. 1-800-255-3924.
Not listed as a carcinogen by NTP, OSHA, ACGIH; IARC classifies "lead and its compounds" as a Group 2B carcinogen (possibly carcinogenic to humans).

SECTION III - PHYSICAL DATA

Boiling Point N/A Vapor Pressure N/A Vapor Density N/A

Melting Point N/A Evaporation Rate N/A Volatile N/A

Specific Gravity 2.2 Approx.

Solubility in Water Negligible <1%

Appearance/Odor

Black, Buttery, Semi-Solid Mild Petroleum/Oil Odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point >450 F

FLAMMABLE LIMITS

Upper N/A Lower 0.7%

Method:

CLEVELAND OPEN CUP

Extinguishing Media:

DRY CHEMICAL OR CARBON DIOXIDE. DO NOT SPRAY WATER ON BURNING MATERIAL.

Special Fire Fighting Procedures:

USE SELF-CONTAINED BREATHING APPARATUS, FULL BODY PROTECTIVE CLOTHING, AND FULL FACE PIECE.

Unusual Fire and Explosion Hazards:

AVOID FUMES OF BURNING PRODUCT. VAPOR MAY BE TOXIC AND RESPIRATORY IRRITANT.

SECTION V - REACTIVITY DATA

Conditions Contributing to Instability:

STABLE PRODUCT - AVOID MOISTURE, HIGH HUMIDITY, AND EXTREME HEAT.

Conditions Contributing to Hazardous Polymerization:

NONE. WILL NOT OCCUR.

Incompatibility (MATERIALS TO AVOID):

STRONG OXIDIZERS AND ACIDS.

Hazardous Decomposition of Product:

FUMES, SMOKE, AND/OR CARBON MONOXIDE.

SECTION VI - HEALTH HAZARD AND EMERGENCY FIRST AID DATA

Threshold Limit Value: - COMPLEX MIXTURE - NOT ESTABLISHED.

Ingestion:

CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA. IF INGESTED, INDUCE VOMITING AND GIVE LARGE QUANTITIES OF WATER. NEVER INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

Eye Contact:

FLUSH WITH COPIOUS AMOUNTS OF WATER. IF IRRITATION PERSISTS, CONTACT A PHYSICIAN. SYMPTOMS INCLUDE TEARING, REDNESS, BLURRED VISION, AND IRRITATION.

Skin Absorption:

REMOVE ANY CONTAMINATED CLOTHING AND WASH CONTACT AREAS WITH SOAP AND WATER. IF RASH OR IRRITATION PERSISTS CONSULT A PHYSICIAN. ACCIDENTAL HIGH PRESSURE INJECTION, THROUGH THE SKIN, REQUIRES IMMEDIATE MEDICAL ATTENTION.

Inhalation Health Risks:

VAPOR PRESSURE IS VERY LOW. VAPOR INHALATION UNDER AMBIENT CONDITIONS IS NORMALLY NOT A PROBLEM. OVER EXPOSURE MAY RESULT IN DIZZINESS, HEADACHE, LOSS OF COORDINATION OR BREATHING DIFFICULTY. IF OVERCOME FROM VAPOR, REMOVE FROM EXPOSURE AND CALL PHYSICIAN. IF NECESSARY, PROVIDE RESPIRATORY SUPPORT.

Carcinogenicity: NTP? NO. IARC MONOGRAPHS? ZB OSHA REGULATED? NO.

Health Hazards (Acute and Chronic):

PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION AND DERMATITIS. BASED ON AVAILABLE TOXICOLOGICAL DATA, THIS PRODUCT IS JUDGED TO BE NEITHER A "CORROSIVE" NOR AN "IRRITANT" BY OSHA CRITERIA. NO CHRONIC HEALTH EFFECTS.

Emergency and First Aid Procedures

EYE CONTACT: FLUSH WITH WATER FOR 15 MINUTES. IF IRRITATION PERSISTS, CALL A PHYSICIAN.
SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND WASH SKIN WITH WATER. IF IRRITATION OCCURS CONSULT A PHYSICIAN.
INGESTION: INDUCE VOMITING AND GIVE 1 OR 2 GLASSES OF WATER UNLESS VICTIM IS UNCONSCIOUS. CONTACT A PHYSICIAN.
INHALATION: IF OVERCOME, REMOVE FROM EXPOSURE AND CALL A PHYSICIAN. IF NECESSARY, PROVIDE RESPIRATORY SUPPORT.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

RECOVER FREE PRODUCT. ADD SAND OR OTHER SUITABLE ABSORBENT. KEEP PRODUCT OUT OF SEWERS AND WATER COURSES BY DIKING. NOTIFY AUTHORITIES IF PRODUCT HAS ENTERED SEWERS OR WATER COURSES.

Waste Disposal:

DISPOSE OF IN ACCORDANCE WITH PREVAILING LOCAL, STATE, AND FEDERAL REGULATIONS.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation Requirements:

NO SPECIAL REQUIREMENTS UNDER NORMAL CONDITIONS WITH ADEQUATE VENTILATION.

Protective Equipment:

Eye

WEAR SPLASH GOGGLES OR OTHER APPROPRIATE EYE PROTECTION.

Protective Gloves

WEAR CHEMICAL PROTECTIVE GLOVES TO PREVENT REPEATED OR PROLONGED CONTACT.

Respiratory Protection

AS SPECIFIED BY 29CFR 1910.134 OF FEDERAL OCCUPATIONAL SAFETY, AND HEALTH STANDARDS.

Other Protective Clothing or Equipment

NO SPECIAL EQUIPMENT DEEMED NECESSARY UNDER NORMAL USAGE.

Work/Hygienic Practices:

GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storage:

STORE IN A DRY, COOL AREA AND KEEP CONTAINERS TIGHTLY SEALED. DO NOT APPLY HEAT OR FLAME. STORE BELOW 150 F.

These data are offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

Reviewed by: NORMAN G. DOW Date: 01-02-92

Date - 08-01-91

Emergency Phone No. 1-800-255-3924

Product Code 304

HARRISBURG, INC.

REVISION NO: 002

REVISION DATE: 01-02-92

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Manufacture's Name

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PETROLEUM GREASE & ADDITIVES

Trade Name and Synonyms

WOOLLEY BOOGER
COPPER COVER PREMIUM COMPOUND
COPPER THREAD LUBRICANT
Harrisburg, Inc.

Chemical Name and Synonyms

PROPRIETARY MIXTURE

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIM TLV	OTHER	WEIGHT %
Copper Flake	CAS #7440-50-8	1.0 MG/C.M.	1.0 MG/C.M.	2MG/C.M.	
*Zinc Dust	CAS #7440-66-6	5.0 MG/M3	5.0 MG/M3		6.0%
*Antimony Dialkyldithiocacarbamate		0.5 MG/M3	0.5 MG.M3		1.0%

* Indicates toxic chemical/s subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372.
IN CASE OF EMERGENCY, CONTACT CHEM-TEL, INC. 1-800-255-3924.

SECTION III - PHYSICAL DATA

Boiling Point N/A Vapor Pressure N/A Vapor Density N/A
Melting Point N/A Evaporation Rate N/A Volatile N/A
Specific Gravity 1.2 Approx.
Solubility in Water Negligible <1%
Appearance/Odor
Metallic Copper, Buttery, Semi-Solid Slight Petroleum/Oil Odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point >450 F

FLAMMABLE LIMITS
Upper N/A Lower 0.7%

Method:
CLEVELAND OPEN CUP

Extinguishing Media:
DRY CHEMICAL OR CARBON DIOXIDE. DO NOT SPRAY WATER ON BURNING MATERIAL.

Special Fire Fighting Procedures:
USE SELF-CONTAINED BREATHING APPARATUS, FULL BODY PROTECTIVE CLOTHING, AND FULL FACE PIECE.

Unusual Fire and Explosion Hazards:
AVOID FUMES OF BURNING PRODUCT. VAPOR MAY BE TOXIC AND RESPIRATORY IRRITANT.

SECTION V - REACTIVITY DATA

Conditions Contributing to Instability:
STABLE PRODUCT - AVOID MOISTURE, HIGH HUMIDITY, AND EXTREME HEAT.

Conditions Contributing to Hazardous Polymerization:
NONE. WILL NOT OCCUR.

Incompatibility (MATERIALS TO AVOID):
STRONG OXIDIZERS AND ACIDS.

Hazardous Decomposition of Product:
FUMES, SMOKE, AND/OR CARBON MONOXIDE.

SECTION VI - HEALTH HAZARD AND EMERGENCY FIRST AID DATA

Threshold Limit Value: - COMPLEX MIXTURE - NOT ESTABLISHED.

Ingestion:

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Skin Absorption:

REMOVE ANY CONTAMINATED CLOTHING AND WASH CONTACT AREAS WITH SOAP AND WATER. IF RASH OR IRRITATION PERSISTS CONSULT A PHYSICIAN. ACCIDENTAL HIGH PRESSURE INJECTION, THROUGH THE SKIN, REQUIRES IMMEDIATE MEDICAL ATTENTION.

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Carcinogenicity: NTP? NO. IARC MONOGRAPHS? NO. OSHA REGULATED? NO.

Health Hazards (Acute and Chronic):

PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION AND DERMATITIS. BASED ON AVAILABLE TOXICOLOGICAL DATA, THIS PRODUCT IS JUDGED TO BE NEITHER A "CORROSIVE" NOR AN "IRRITANT" BY OSHA CRITERIA. NO CHRONIC HEALTH EFFECTS.

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INHALATION: IF OVERCOME, REMOVE FROM EXPOSURE AND CALL A PHYSICIAN. IF NECESSARY, PROVIDE RESPIRATORY SUPPORT.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

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Waste Disposal:

DISPOSE OF IN ACCORDANCE WITH PREVAILING LOCAL, STATE, AND FEDERAL REGULATIONS.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation Requirements:

NO SPECIAL REQUIREMENTS UNDER NORMAL CONDITIONS WITH ADEQUATE VENTILATION.

Protective Equipment:

Eye

WEAR SPLASH GOGGLES OR OTHER APPROPRIATE EYE PROTECTION.

Protective Gloves

WEAR CHEMICAL PROTECTIVE GLOVES TO PREVENT REPEATED OR PROLONGED CONTACT.

Respiratory Protection

AS SPECIFIED BY 29CFR 1910.134 OF FEDERAL OCCUPATIONAL SAFETY, AND HEALTH STANDARDS.

Other Protective Clothing or Equipment

NO SPECIAL EQUIPMENT DEEMED NECESSARY UNDER NORMAL USAGE.

Work/Hygienic Practices:

GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storage:

STORE IN A DRY, COOL AREA AND KEEP CONTAINERS TIGHTLY SEALED. DO NOT APPLY HEAT OR FLAME. STORE BELOW 150 F.

These data are offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

Reviewed by: NORMAN G. DOW Date: 01-02-92

Ki8 #4 ; 5

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 864,040-5 PAGE 1

37367 (4-88)

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
SHELL: 713-473-9461 CHEMTREC: 800-424-9300	SHELL: 713-241-4819

ACUTE HEALTH *	FIRE	REACTIVITY	HAZARD RATING ▶
1	1	0	LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4

*For acute and chronic health effects refer to the discussion in Section III

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION ... AND PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)

SECTION I	NAME
PRODUCT ▶	SHELL SPIRAX(R) HEAVY DUTY GEAR OIL 85W/140
CHEMICAL NAME ▶	MIXTURE (SEE SEC. IIA)
CHEMICAL FAMILY ▶	PETROLEUM HYDROCARBON; GEAR OIL
SHELL CODE ▶	59212

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL SPIRAX HEAVY DUTY GEAR OIL 85W/140	MIXTURE	100
1	SOLVENT REFINED, HYDROTREATED RESIDUAL OIL	64742-57-0	75-80
2	SOL. REF., HYDROTREATED, ACID TREATED HEAVY NAPHTHENIC DIST.	64742-18-3	0-15
3	SEVERELY HYDROTREATED HEAVY NAPHTHENIC DIST.	64742-52-5	0-20
4	ADDITIVE PACKAGE	MIXTURE	<10

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	NOT AVAILABLE		

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
BASED ON COMPONENT INFORMATION PRODUCT IS NO MORE THAN MINIMALLY IRRITATING TO THE EYES.

SKIN CONTACT
BASED ON COMPONENT INFORMATION PRODUCT IS NO MORE THAN MILDLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT CAN RESULT IN VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, FOLLICULITIS OR OIL ACNE.

INHALATION
INHALATION OF VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL MIST FROM THIS PRODUCT MAY CAUSE MINOR IRRITATION OF THE MUCOUS MEMBRANES OF THE UPPER RESPIRATORY TRACT.

INGESTION
BASED ON COMPONENT INFORMATION THIS PRODUCT IS NO MORE THAN SLIGHTLY TOXIC IF SWALLOWED.

SIGNS AND SYMPTOMS
IRRITATION AS NOTED ABOVE.

AGGRAVATED MEDICAL CONDITIONS
PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

	OSHA		ACGIH		OTHER
NO.	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
P	5 MG/M3*	NONE	5 MG/M3*	10 MG/M3*	NONE

*OIL MIST, MINERAL

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT
REMOVE CONTAMINATED CLOTHING AND WIPE EXCESS OFF. WASH WITH SOAP AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION
DO NOT INDUCE VOMITING. IN GENERAL NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE.

NOTE TO PHYSICIAN
IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND GREASES.

SECTION VI SUPPLEMENTAL HEALTH INFORMATION

NONE IDENTIFIED.

SECTION VII PHYSICAL DATA

BOILING POINT: NOT AVAILABLE (DEG F)

SPECIFIC GRAVITY: 0.9094 (H2O=1)

VAPOR PRESSURE: NOT AVAILABLE (MM HG)

MELTING POINT: 5 (POUR POINT) (DEG F)

SOLUBILITY: NEGLIGIBLE (IN WATER)

VAPOR DENSITY: NOT AVAILABLE (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE

VISCOSITY: 370 (CS @ 40 DEG C)

APPEARANCE AND ODOR:
BROWN LIQUID. SLIGHT HYDROCARBON ODOR.

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
356 DEG F (COC)

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: N/AV UPPER: N/AV

EXTINGUISHING MEDIA
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

SECTION IX REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
AVOID HEAT, OPEN FLAMES AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION
IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS AND PARTICULATES.

PROTECTIVE CLOTHING
WEAR CHEMICAL RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. WEAR SAFETY GOGGLES TO AVOID EYE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES
MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACCUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED. STORE IN A COOL, DRY PLACE WITH ADEQUATE

VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV STATE REGULATORY INFORMATION

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

STATE LISTED COMPONENT	PERCENT	STATE CODE
SOL. REF., HYDROTREATED, ACID TREATED HEAVY NAPHTHENIC DIST. (CAS NO: 64742-18-3)	0-15	MA

CA = CALIFORNIA HAZ. SUBST. LIST; CA65 = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.

SECTION XVI SPECIAL NOTES

REVISIONS IN SECTIONS II, VII, VIII, XV, AND EDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: MAY 23, 1991

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

J. C. WILLETT

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

ENVIRONMENTAL DATA SHEET

EDS NUMBER ▶ 864,040-3 PAGE 1

97449 (5-87)

PRODUCT ▶	SHELL SPIRAX(R) HEAVY DUTY GEAR OIL 85W/140
PRODUCT CODE ▶	59212

SECTION I PRODUCT/COMPOSITION

NO.	COMPONENT	CAS NUMBER	PERCENT
P	SHELL SPIRAX HEAVY DUTY GEAR OIL 85W/140	MIXTURE	100
1	SOLVENT REFINED, HYDROTREATED RESIDUAL OIL	64742-57-0	75-80
2	SOL. REF., HYDROTREATED, ACID TREATED HEAVY NAPHTHENIC DIST.	64742-18-3	0-15
3	SEVERELY HYDRDTREATED HEAVY NAPHTHENIC DIST.	64742-52-5	0-20
4	ADDITIVE PACKAGE	MIXTURE	<10

SECTION II SARA TITLE III INFORMATION

NO.	EHS RQ (LBS) (*1)	EHS TPQ (LBS) (*2)	SEC 313 (*3)	313 CATEGORY (*4)	311/312 CATEGORIES (*5)

BASED ON THE DATA AVAILABLE TO SHELL THIS PRODUCT IS NOT REGULATED BY SARA, TITLE III

FOOTNOTES

*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC.302
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*3 = TOXIC CHEMICAL, SEC 313
*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C). MUST BE USED ON TOXIC RELEASE INVENTORY FORM
*5 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING
HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL P-3 = FIRE HAZARD P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

SECTION III ENVIRONMENTAL RELEASE INFORMATION

THIS PRODUCT IS CLASSIFIED AS AN OIL UNDER SECTION 311 OF THE CLEAN WATER ACT. SPILLS ENTERING (A) SURFACE WATERS OR (B) ANY WATER COURSES OR SEWERS ENTERING/LEADING TO SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER. 800-424-8802.

SECTION IV RCRA INFORMATION

PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: MAY 23, 1991

SHELL OIL COMPANY
CORPORATE ENVIRONMENTAL AFFAIRS
P. O. BOX 4320
HOUSTON, TX 77210

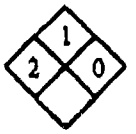
FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL
(713) 241-2252

FOR EMERGENCY ASSISTANCE PLEASE CALL
SHELL: (713) 473-9461
CHEMTREC: (800) 424-9300

MATERIAL SAFETY DATA SHEET

VENDEE AND THIRD PERSONS ASSUME THE RISK OF INJURY PROXIMATELY CAUSED BY THIS PRODUCT IF REASONABLE SAFETY PROCEDURES ARE NOT FOLLOWED AS PROVIDED FOR IN THE DATA SHEET, AND VENDOR SHALL NOT BE LIABLE FOR SUCH INJURY. FURTHERMORE, VENDOR SHALL NOT BE LIABLE FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY ANY ABNORMAL USE OF THIS PRODUCT EVEN IF REASONABLE SAFETY PROCEDURES ARE FOLLOWED.
ALL PERSONS USING THIS PRODUCT, ALL PERSONS WORKING IN AN AREA WHERE THIS PRODUCT IS USED, AND ALL PERSONS HANDLING THIS PRODUCT SHOULD BE FAMILIAR WITH THE CONTENTS OF THIS DATA SHEET. POSTING THIS DOCUMENT FOR EMPLOYEE NOTIFICATION IS RECOMMENDED BY THE VENDOR.

N. F. P. A.



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAMES Copper Joint "Lead Free"

SYNONYMS Not Applicable **INTENDED USE** Industrial

MANUFACTURER'S NAME Bestolife Corporation, an RSR Corporation **TELEPHONE #** (214)631-6070

ADDRESS 2777 Stemmons Freeway Suite 1800, Dallas, Texas 75207 **TRANSP. EMERGENCY #** (800)424-9300

PREPARED BY Environmental Services Department, RSR Corporation **DATE** May-95 Revised

2. COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL OR COMPONENT	WEIGHT	OSHA		ACGIH		Other
(CAS#)	%	PEL/TWA	Ceiling	TLV/TWA	TLV/STEL	
Grease (CAS# 64742-52-5, 64754-95-6, 66071-82-7, 64741-95-3, Mixture)	35-50	5mg/m³**	None	5mg/m³**	None	Not Applicable
Petroleum Oil (CAS# 64742-52-5)	15-25	5mg/m³**	None	5mg/m³**	None	Not Applicable
Copper (CAS# 7440-50-8)	7-13	0.1mg/m³***	None	0.2mg/m³***	None	Not Applicable
Lime (CAS# 1305-78-8)	1-5	5mg/m³	None	2mg/m³	None	Not Applicable
Talc (CAS# 14807-96-6)	5-10	2mg/m³*	None	2mg/m³*	None	Not Applicable
Additives	under 1					
Additives; OSHA- Trade Secret; WHMIS- Non-Hazardous	10-20	2.5mg/m³*	None	2.5mg/m³*	None	Not Applicable

*Respirable Dust **Oil Mist, Mineral ***Fume

3. HAZARDS IDENTIFICATION

Routes of Exposure for Users

Skin Contact	May cause irritation.
Skin Absorption	Organic compounds contained herein may be absorbed through the skin.
Eye Contact	May cause irritation.
Ingestion	This product may be absorbed by the digestive system. Ingestion can result in both acute and chronic overexposure.
Inhalation	If the grease base has been removed, i.e. by volatile solvents, heat, etc., the remaining powders and metallics can pose an inhalation hazard resulting in both acute and chronic overexposure as well as lung irritation, lung injury, or other health effects.

Effects of Overexposure

Acute	Product may cause irritation to the eyes and/or skin. Ingestion of the product may cause gastrointestinal irritation and upset.
Chronic	Prolonged and repeated contact with the product may cause a defatting of the skin, dermatitis, folliculitis and/or oil acne.

Signs and Symptoms of Exposure Skin or eye irritation; see effects of overexposure described above.

Aggravated Medical Conditions Chronic forms of kidney, liver, and hematopoietic diseases; preexisting respiratory and cardiovascular disorders may be aggravated by ingestion or inhalation of large doses. Preexisting eye or skin disorders may be aggravated by prolonged contact with this product.

Notes to Physician The hydrocarbons contained in this product are mild irritants of the eyes and mucous membranes, central nervous system depressants, and primary chemical irritants of the skin. Prolonged or repeated skin contact, especially with poor personal hygiene, may cause skin disorders. For combustion product effects see Hazardous Combustion Products in Section 5. Fire Fighting Measures.

4. FIRST AID MEASURES

Eyes	Flush with copious amounts of water. Get immediate medical attention.
Skin	Wash thoroughly with soap and water after use. If irritation occurs, get medical attention.
Ingestion	Get immediate medical attention. DO NOT INDUCE VOMITING!
Inhalation	Remove from exposure. Get medical attention if experiencing cough, irritation or difficult breathing.

5. FIRE FIGHTING MEASURES

Flash Point Minimum 385°F (196°C) **Test Method:** ASTM D 92, C.O.C.

Flammable Limits in Air (% by volume, estimated) Lower: Not Available Upper: Not Available

Auto-ignition Temperature Not Available

Hazardous Combustion Products Combustion products are highly dependent on the combustion conditions. CO, CO_2, CaO, oxygenates, and unidentified organic compounds may be formed during combustion. High temperatures may produce metal fume, vapor, and/or dust. Combustion products may cause effects of overexposure as noted in Section 3. Hazards Identification. They may also cause headache; dizziness; coma; convulsion; weakness; drowsiness; tachypnea; nausea; paresthesias; dyspnea; asphyxiation; mild to severe eye, skin or respiratory tract irritation; metal fume fever; metallic taste in mouth; cough; pneumonia; pneumoconiosis; ulceration or perforation of the nasal septum and/or lung damage. Other unidentified health effects may occur.

Conditions Contributing to Flammability High temperatures; open flame; combining with strong oxidizer or acid

Extinguishing Media Dry chemical, water fog, foam, or carbon dioxide may be suitable for extinguishing fires involving this product. Do not spray water directly on burning material. Observe caution when using water or foam as frothing may occur.

Special Fire Fighting Procedures Use full-body protection and full-face, self-contained breathing apparatus operated in a positive-pressure mode. Use water spray (fog) to cool containers and disperse vapors.

Unusual Fire and Explosion Hazards Product fume and/or vapor may be irritating or toxic if inhaled. The product, or its dust, can react vigorously with strong oxidizing agents.

Sensitivity to Impact Not Applicable **Sensitivity to Static Discharge** Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled Clean area with an appropriate cleanser. Assure conformity with applicable governmental regulations.

Neutralizing Chemicals Not Applicable

7. HANDLING AND STORAGE

The two major means of metal absorption are inhalation and ingestion. After use, always wash hands before smoking, eating, or drinking. Smoking, eating, and drinking should be confined to uncontaminated areas.

Work clothes and equipment should remain in designated areas. Before reuse, launder contaminated clothing separate from personal clothing.

Avoid skin contact. Wash with soap and water after use. Prolonged and repeated contact can cause defatting action of the skin and may cause disorders such as dermatitis, folliculitis, and oil acne.

This product is intended for industrial use only. KEEP OUT OF REACH OF CHILDREN.

This product may separate. Stir well before use. The flash point of this product depends on the degree of separation. Store in a cool, dry area where accidental contact with acids is not possible. Keep storage containers closed when not in use. Do not store or handle near high temperature or open flame.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Ventilation Requirements No special requirements under conditions of normal use.

Specific Personal Protection Equipment

RESPIRATORY *None required for normal use. Dry residue may be created by high downhole temperatures; if the residue is removed without a solvent or other means of controlling dust, workers should wear air-purifying respirators.*

EYE Vented goggles or safety glasses with side shields should be worn when using this product.

GLOVE Oil-resistant gloves should be worn when handling this product.

OTHER CLOTHING AND EQUIPMENT As appropriate for the industrial environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT @ 760 mm Hg	550°F (288°C) Approx. IBP	**MELTING POINT**	320-350°F (160-177°C) dropping point of grease
SPECIFIC GRAVITY (H_2O = 1)	1.2	**VAPOR PRESSURE (Reference Temperature)**	Not Available
VAPOR DENSITY (Air = 1)	Greater than 1	**SOLUBILITY IN H_2O (% by wt.)**	Negligible
% VOLATILE BY VOLUME	Not Available	**EVAPORATION RATE (Butyl Acetate = 1)**	Less than 1
COEFF. OIL/WATER DISTRIBUTION	Not Available	**pH**	Not Available
FREEZING POINT	Not Available	**ODOR THRESHOLD**	Not Available
APPEARANCE AND ODOR	Copper-colored semisolid, oil/grease odor, noncombustible, nonvolatile under normal use		

10. STABILITY AND REACTIVITY

Conditions Contributing to Instability Not Applicable **Reactivity** Not Applicable

Incompatibility Strong oxidizers or acids combined with this product may liberate hydrogen gas.

Hazardous Decomposition Products Under normal temperatures this product will not decompose.

Conditions Contributing to Hazardous Polymerization Not Applicable

11. TOXICOLOGICAL INFORMATION

Toxicity, Mutagenic, Teratogenic, Synergistic and Sensitization Information

LD_{50} and LC_{50} information on the oil and grease is not available. LD_{50} and LC_{50} information on other components is not available. Rare cases of allergic contact dermatitis have been reported in people working with copper dust.

Carcinogenicity

None of the product ingredients are carcinogenic according to the OSHA Hazard Communication Standard.

12. ECOLOGICAL INFORMATION

A 96-hour LC50 of 11,997ppm SPP on mysid shrimp (*Mysidopsis bahia*) was found using Draft Methodology: Drilling Fluid Toxicity Test (EPA, 1985,1991).

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Discard in accordance with local, state, and federal regulations. Empty containers are exempt from RCRA Subtitle C if they contain no more than 2.5 cm of their original contents in the bottom of the container or less than 3% of the original net weight (less than 0.3% by weight for containers over 110 gallons), or if the residue is analyzed and demonstrated to be nonhazardous.

"Empty" Container Warning

"Empty" containers retain residue and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY AND/OR DEATH. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner.

14. TRANSPORT INFORMATION

U.S. Department of Transportation This product is not considered a Hazardous Material for shipping under U.S. DOT.

Canadian Transportation of Dangerous Goods This product is not considered a Hazardous Material for shipping under Canadian Transportation of Dangerous Goods.

15. REGULATORY INFORMATION

Toxic Chemical Release Reporting, EPA Regulation 40 C.F.R. §372 (SARA Section 313)

Reportable chemicals in product: 7-13% copper (CAS #7440-50-8)

Toxic Substances Control Act (TSCA), EPA Regulation 40 C.F.R. §710

The product is a mixture as defined by TSCA. The chemical ingredients in this product are in the Section 8(b) Chemical Substance Inventory (40 C.F.R. §710) and/or are otherwise in compliance with TSCA. In the case of ingredients obtained from other manufacturers, this company relies on the assurance of responsible third parties in providing this statement.

Canadian Workplace Hazardous Materials Information System

This product is considered controlled in Canada and has been placed in WHMIS Subdivision B of Division 2 of Class D due to copper content. This MSDS has been prepared to meet WHMIS and OSHA requirements using the ANSI 16 heading MSDS format.

16. OTHER INFORMATION

Not Applicable

SAFETY DATA SHEET
FOR

D322 - Rigwash

Date Prepared 8/1/91

CAP CITY PRODUCTS COMPANY
125 SANFORD AVE.
KEARNY, NJ 07032
PHONE: (201)955-2929

Chemical Name:
Chemical Family: Detergents
Trade Name:
Reg. Number: NA
C.A.S. #: NA
ECOIN # : NA

1. HAZARDOUS INGREDIENTS

NONE

Solvents:

2. PHYSICAL DATA

Evaporation Rate:	
Percent Volatile:	2.0 to 6.0
Boiling Point (@760mm Hg):	NA
Vapor Pressure (mmHg.):	NA
Vapor Density (Air=1):	NA
Specific Gravity (H_2O=1)	Density = 0.10 to 0.30 g/cm^3
Solubility in Water:	Complete
Appearance and Odor	White free flowing powder with clear odor

3. FIRE AND EXPLOSION HAZARD DATA

Flash Point (^oF) COC - A.O.C.S.	NA
Extinguishing Media:	Non-Flamable
Special Fire Fighting Procedures:	
Unusual Fire and Explosion Hazards:	

4. HEALTH HAZARD DATA

Threshold Limit Value	Not determined
Effects of Overexposure	May irritate eyes

ergency and First Air Procedures:

Skin - Rinse with water.
Eyes - Flush with water. Call Physician
Ingestion - Drink milk. Do not induce vomitting
Call Physician

5. REACTIVITY DATA

Stability: Stable

Conditions to Avoid:

Incompatibility (Material to Avoid): Strong Acids

Hazardous Decomposition Products: NA

Hazardous Polymerization: Will not occur

Conditions to Avoid:

6. SPILL OR LEAK PROCEDURES

Steps to be taken in case Rigwash is spilled.
Sweep up powder. If necessary flush to sanitary sewer with water.
Rinse area well to avoid slippery condition.

Waste disposal Method (As permitted by Local law):
Discard with trash collection

Special Protections Information

Respiratory Protection (Specify Type): None required but dust mask recommended

Ventilation - Local Exhaust: Recommended

Protective Gloves: Not required but recommended

Eye Protection: Not required but recommended

Other Protective equipment: None

Precautions to be taken in handling and storing: Store in Dry Area

Other Precautions:

NA

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for himself the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

MATERIAL SAFETY DATA SHEET

An explanation of the terms used herein may be found in OSHA 29 CFR 1910.1200, available from OSHA regional or area offices.
(Essentially similar to U.S. Department of Labor Form OSHA-20 and generally accepted in Canada for information purposes)
Do Not Duplicate This Form. Request an Original.

I. PRODUCT IDENTIFICATION

PRODUCT Acetylene

CHEMICAL NAME	Acetylene	**SYNONYMS**	Acetylen, Ethine, Ethyne, Narcylene
FORMULA	C_2H_2	**CHEMICAL FAMILY**	Alkyne
		MOLECULAR WEIGHT	26.038

TRADE NAME Acetylene (This product is intended for welding and cutting use.)

II. HAZARDOUS INGREDIENTS

This section covers the materials from which this product is manufactured. The fumes and gases produced during welding and cutting with the normal use of this product are covered by Section VI. The term "hazardous" should be interpreted as a term required and defined in OSHA 29 CFR 1910.1200 and does not necessarily imply the existance of any hazard.

MATERIAL (CAS NO.)	Vol (%)	1984-1985 ACGIH TLV-TWA (OSHA-PEL)
Acetylene (74-86-2)	100	Simple asphyxiant (None currently established)

III. PHYSICAL DATA

BOILING POINT, 760 mm. Hg	Not Applicable	**SUBLIMATION POINT**	-84 °C (-119.2 °F) @ 760mm Hg
SPECIFIC GRAVITY (H_2O = 1)	Not Applicable	**VAPOR PRESSURE AT 21 °C.**	635 psig
VAPOR DENSITY (air = 1)	0.91	**SOLUBILITY IN WATER, % by wt.**	Slight
PERCENT VOLATILES BY VOLUME	100	**EVAPORATION RATE (Butyl Acetate = 1)**	Not Applicable

APPEARANCE AND ODOR Colorless gas at normal temperature and pressure; garlic-like odor.

EMERGENCY AND FIRST AID INFORMATION

IN CASE OF EMERGENCIES involving this material, further information is available at all times:
In the USA 304 — 744-3487 In Canada 514 — 645-5311
For routine information contact your local supplier

Union Carbide requests the users of this product to study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

UNION CARBIDE CORPORATION ▯ LINDE DIVISION
UNION CARBIDE CANADA LIMITED ▯ LINDE DIVISION

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
The ACGIH 1984-85 recommended limit for welding fume, not otherwise classified (NOC), is 5mg/m^3.
TLV-TWA's should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations. See Section VI for specific fume constituents which may modify this TLV-TWA.

EFFECTS OF OVEREXPOSURE AND EMERGENCY AND FIRST AID PROCEDURES
working with welding and cutting may create one or more of the following health hazards:

FUMES AND GASES can be dangerous to your health and may cause serious lung disease.*

HEAT RAYS *(INFRARED RADIATION* from the flame or hot metal) can injure eyes.

NOISE can damage hearing.

Acetylene is an asphyxiant. Moderate concentrations may cause headache, drowsiness, dizziness and unconsciousness. Lack of oxygen can cause death. Keep your head out of the fumes. Do not breathe fumes and gases caused by the process. Use enough ventilation, local exhaust, or both to keep fumes and gases from your breathing zone and the general area. The type and amount of fumes and gases depend on the equipment and supplies used. Possibly dangerous materials may be found in fluxes, coatings, gases, and metals. Get a Material Safety Data Sheet (MSDS) for every material used. Air samples can be used to find out what respiratory protection is needed.

Wear correct ear, eye, and body protection.

Short term overexposure to fumes may result in discomfort such as dizziness, nausea, or dryness or irritation of nose, throat, or eyes.

MIXTURES: When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

A detailed description of the Health Hazards and their consequences may be found in Linde's free safety booklet L-2035. You may obtain copies from your local supplier, or by writing to Union Carbide Corporation, Linde Division, Communications Department, 39 Old Ridgebury Road, Danbury, Connecticut, 06817-0001.

FIRST AID IN CASE OF EMERGENCY — Call for medical aid. Employ First Aid techniques recommended by the American Red Cross. IF BREATHING IS DIFFICULT give oxygen. Call a physician. IF NOT BREATHING, begin artificial respiration, preferably mouth-to-mouth. If no detectable pulse, begin external heart massage. Immediately call a physician. IN CASE OF EYE BURN call a physician.

***NOTES TO PHYSICIAN:**

Acute — Gases, fumes, and dusts may cause irritation to the eyes, lungs, nose, and throat. Some toxic gases associated with welding and related processes may cause pulmonary edema, asphyxiation, and death. Acute overexposure may include signs and symptoms such as watery eyes, nose and throat irritation, headache, dizziness, difficulty breathing, frequent coughing, or chest pains.

Chronic — Protracted inhalation of air contaminants may lead to their accumulation in the lungs, a condition which may be seen as dense areas on chest x-rays. The severity of change is proportional to the length of exposure. The changes seen are not necessarily associated with symptoms or signs of reduced lung function or disease. In addition, the changes on x-rays may be caused by non-work related factors such as smoking, etc.

V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method)	-17.8°C (0°F) T.C.C.	**AUTOIGNITION TEMPERATURE**	299°C (571°F)
FLAMMABLE LIMITS IN AIR, % by volume	**LOWER** 2.3%	**UPPER**	100%

EXTINGUISHING MEDIA

See paragraphs below.

SPECIAL FIRE FIGHTING PROCEDURES

Refer to CGA pamphlet SB-4, "Handling Acetylene Cylinders in Fire Situations."

Evacuate all personnel from danger area. Immediately cool containers with water spray from maximum distance taking care not to extinguish flames. Remove ignition sources if without risk. If flames are accidentally extinguished, explosive re-ignition may occur. Use self-contained breathing apparatus. Stop flow of gas if without risk while continuing cooling water spray. Remove all containers from area of fire if without risk. Allow fire to burn out. On-site fire brigades must comply with OSHA 29 CFR 1910.156.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Extremely flammable gas. Forms explosive mixtures with air and oxidizing agents. Container may rupture due to heat of fire. Do not extinguish flames due to possibility of explosive re-ignition. Flammable vapors may spread from leak. Explosive atmospheres may linger. Before entering area, especially confined areas, check atmosphere with approved explosion meter. No part of a container should be subjected to a temperature higher than 52°C (approximately 125°F). All containers are provided with a pressure relief device designed to vent contents when they are exposed to elevated temperature. Contact with copper, silver, or mercury or their alloys or halogens can cause explosion.

VI. REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID
UNSTABLE	STABLE	Stable as shipped. Avoid use at pressures above 15 psig.
X		

INCOMPATIBILITY (materials to avoid)
Copper, silver, mercury or their alloys, oxidizing agents, acids, halogens, moisture.

HAZARDOUS DECOMPOSITION PRODUCTS
Thermal decomposition or burning may produce $CO/CO_2/H_2$. The welding and cutting process may form reaction products such as carbon monoxide and carbon dioxide. Other decomposition products of normal operation originate from the volatilization, reaction or oxidation of the material being worked.

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID
May Occur	Will not Occur	Elevated temperature and pressure and/or the presence of a catalyst.
X		

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Forms explosive mixtures with air (See Section V). Immediately evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Remove all sources of ignition if without risk. Reduce vapors with fog or fine water spray. Shut off leak if without risk. Ventilate area of leak or move leaking container to well-ventilated area. Flammable gas may spread from leak. Before entering area, expecially confined areas, check atmosphere with appropriate device.

WASTE DISPOSAL METHOD Prevent waste from contaminating surrounding environment. Keep personnel away. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with Federal, State and local regulations.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) — Use respirable fume respirator or air supplied respirator when working in confined space or where local exhaust or ventilation does not keep exposure below TLV. Select as per OSHA29 CFR1910.134.

VENTILATION	**LOCAL EXHAUST** — Use enough ventilation, local exhaust or both, to keep the fumes and gases below TLV's in the worker's breathing zone and the general area. Train the worker to keep his head out of the fumes.	
	MECHANICAL (general)	ALWAYS WORK WITH ENOUGH VENTILATION
	SPECIAL	Not applicable
	OTHER Depends on specific use conditions, and location. Use adequate ventilation or personal respiratory protection. See Section IX and OSHA29 CFR1910.252.	

PROTECTIVE GLOVES Welding gloves recommended

EYE PROTECTION — Wear goggles with filter lens selected as per ANSI Z49.1. Provide protective screens and goggles, if necessary, to protect others. Select as per OSHA29 CFR1910.133.

OTHER PROTECTIVE EQUIPMENT — As needed, wear hand, head, and body protection which help to prevent injury from radiation, and sparks. See ANSI Z49.1. At a minimum this includes welder's gloves and protective goggles, and may include arm protectors, aprons, hats, shoulder protection, as well as substantial clothing. Train the worker not to touch live electrical parts.

IX. SPECIAL PRECAUTIONS

Fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being worked, the process, procedure and electrodes used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being worked (such as paint, plating, or galvanizing), the number of workers and the volume of the work area, the quality and amount of ventilation, the position of the worker's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities).

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample from inside the worker's helmet if worn or in the worker's breathing zone. See ANSI/AWS F1.1, available from the American Welding Society, 550 N.W. Le Jeune Rd., Miami, FL 33126.

Read and understand the manufacturer's instructions and the precautionary label on the product. See American National Standard Z49.1, "Safety In Welding And Cutting" published by the American Welding Society and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, Washington, D.C. 20402 for more details. For further safety and health information refer to Linde's free safety booklet L-2035.

OTHER HANDLING AND STORAGE CONDITIONS

Heat and sparks during use could be the source of ignition of combustible materials. Prevent fires.
Refer to NFPA 51B "Cutting and Welding Processes" and NFPA 50 "Oxygen-Fuel Gas Systems." Use piping and equipment adequately designed to withstand pressures to be encountered. Gas can cause rapid suffocation due to oxygen deficiency. Store and use with adequate ventilation. Close valve when not in use and when empty. Never work on a pressurized system.

LINDE
UNION CARBIDE

GENERAL OFFICES

IN THE USA:
Union Carbide Corporation
Linde Division
39 Old Ridgebury Road
Danbury, CT 06817-0001

IN CANADA.
Union Carbide Canada Limited
Linde Division
123 Eglinton Avenue East
Toronto, Ontario M4P IJ3

Other offices in principal cities all over the world.

Rig # 4 5 S

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 71,550-6 PAGE 1

97367 (4-95)

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
SHELL: 713-473-9461 CHEMTREC: 800-424-9300	SHELL: 713-241-4819

ACUTE HEALTH *	FIRE	REACTIVITY	HAZARD RATING ▶
1	1	0	LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4

*For acute and chronic health effects refer to the discussion in Section III

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION ... AND PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)

SECTION I	NAME
PRODUCT ▶	SHELL RIMULA(R) OIL 10W
CHEMICAL NAME ▶	MIXTURE (SEE SECTION II-A)
CHEMICAL FAMILY ▶	PETROLEUM HYDROCARBON: HEAVY DUTY MOTOR OIL
SHELL CODE ▶	54801

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL RIMULA OIL 10W	MIXTURE	100
1	SOL. REF., HYDROTREATED HEAVY PARAFFINIC DIST.	64742-54-7	>75
2	ADDITIVE PACKAGE	MIXTURE	<25

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	NOT AVAILABLE		

BASED UPON DATA AVAILABLE TO SHELL, COMPONENT 2 IN THIS PRODUCT IS NOT HAZARDOUS UNDER OSHA HAZARD COMMUNICATION (29 CFR 1910.1200).

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN MINIMALLY IRRITATING TO THE EYES.

SKIN CONTACT
LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN MILDLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT MAY RESULT IN VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, FOLLICULITIS OR OIL ACNE.

INHALATION
INHALATION OF VAPOR (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL MIST FROM THIS PRODUCT MAY RESULT IN MILD IRRITATION OF THE UPPER RESPIRATORY TRACT.

INGESTION
LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN SLIGHTLY TOXIC IF SWALLOWED.

SIGNS AND SYMPTOMS
IRRITATION AS NOTED ABOVE.

AGGRAVATED MEDICAL CONDITIONS
PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

OTHER HEALTH EFFECTS
THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER HAS DETERMINED THERE IS SUFFICIENT EVIDENCE FOR THE CARCINOGENICITY IN EXPERIMENTAL ANIMALS OF USED MOTOR OILS. HANDLING PROCEDURES AND SAFETY PRECAUTIONS IN THE MSDS SHOULD BE FOLLOWED TO MINIMIZE EMPLOYEE'S EXPOSURE TO THE USED PRODUCT.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

	OSHA		ACGIH	OTHER
NO.	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL
P	5 MG/M3*	NONE	5 MG/M3*	10 MG/M3*

*OIL MIST, MINERAL

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT
REMOVE CONTAMINATED CLOTHING AND WIPE EXCESS OFF. WASH WITH SOAP AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION
DO NOT INDUCE VOMITING. IN GENERAL NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN
IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND GREASES.

SECTION VI SUPPLEMENTAL HEALTH INFORMATION

NONE IDENTIFIED.

SECTION VII PHYSICAL DATA

BOILING POINT: NOT AVAILABLE (DEG F)	SPECIFIC GRAVITY: 0.8844 (H2O=1)	VAPOR PRESSURE: NOT AVAILABLE (MM HG)
MELTING POINT: -32 (POUR POINT) (DEG F)	SOLUBILITY: NEGLIGIBLE (IN WATER)	VAPOR DENSITY: NOT AVAILABLE (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE

VIS, CS (40 DEG C): 35

APPEARANCE AND ODOR:
DARK AMBER OIL. SLIGHT HYDROCARBON ODOR.

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
205 DEG F (COC)

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: N/AV UPPER: N/AV

EXTINGUISHING MEDIA
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

SECTION IX REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
AVOID HEAT, OPEN FLAMES AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION
IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS AND PARTICULATES.

PROTECTIVE CLOTHING
WEAR CHEMICAL RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. WEAR SAFETY GOGGLES TO AVOID EYE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES
MAY BURN ALTHOUGH NO READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED.

STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV STATE REGULATORY INFORMATION

BASED ON INFORMATION AVAILABLE TO SHELL, THIS PRODUCT DOES NOT CONTAIN ANY CHEMICAL SUBSTANCE LISTED ON A CHEMICAL SPECIFIC STATE LIST.

SECTION XVI SPECIAL NOTES

REVISIONS WERE MADE IN SECTION XV.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: APRIL 01, 1991

J. C. WILLETT

BE SAFE

READ OUR PRODUCT SAFETY INFORMATION ...AND PASS IT ON (PRODUCT LIABILITY LAW REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

ENVIRONMENTAL DATA SHEET

EDS NUMBER ▶ 71,550-1 PAGE 1

97449 (9-87)

PRODUCT ▶	SHELL RIMULA(R) OIL 10W
PRODUCT CODE ▶	54801

SECTION I PRODUCT/COMPOSITION

NO.	COMPONENT	CAS NUMBER	PERCENT
P	SHELL RIMULA OIL 10W	MIXTURE	100
1	SOL. REF., HYDROTREATED HEAVY PARAFFINIC DIST.	64742-54-7	>75
2	ADDITIVE PACKAGE	MIXTURE	<25

SECTION II SARA TITLE III INFORMATION

NO.	EHS RQ (LBS) (*1)	EHS TPQ (LBS) (*2)	SEC 313 (*3)	313 CATEGORY (*4)	311/312 CATEGORIES (*5)

BASED ON THE DATA AVAILABLE TO SHELL THIS PRODUCT IS NOT REGULATED BY SARA, TITLE III.

FOOTNOTES

*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC.302
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*3 = TOXIC CHEMICAL, SEC 313
*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC RELEASE INVENTORY FORM
*5 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING
HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL P-3 = FIRE HAZARD P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

SECTION III ENVIRONMENTAL RELEASE INFORMATION

THIS PRODUCT IS CLASSIFIED AS AN OIL UNDER SECTION 311 OF THE CLEAN WATER ACT. SPILLS ENTERING (A) SURFACE WATERS OR (B) ANY WATER COURSES OR SEWERS ENTERING/LEADING TO SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER. 800-424-8802.

SECTION IV RCRA INFORMATION

PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: APRIL 10, 1990

SHELL OIL COMPANY
CORPORATE ENVIRONMENTAL AFFAIRS
P. O. BOX 4320
HOUSTON, TX 77210

FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL
(713) 241-2252

FOR EMERGENCY ASSISTANCE PLEASE CALL
SHELL: (713) 473-9481
CHEMTREC: (800) 424-9300

MATERIAL SAFETY DATA SHEET

L-4638-A
September 1985

An explanation of the terms used herein may be found in OSHA 29 CFR 1910.1200, available from OSHA regional or area offices.
(Essentially similar to U.S. Department of Labor Form OSHA-20 and generally accepted in Canada for information purposes)
Do Not Duplicate This Form. Request an Original.

I. PRODUCT IDENTIFICATION

PRODUCT Oxygen

CHEMICAL NAME	Oxygen	**SYNONYMS**	Not applicable
FORMULA	O_2	**CHEMICAL FAMILY**	Not applicable
		MOLECULAR WEIGHT	32.00

TRADE NAME Oxygen

II. HAZARDOUS INGREDIENTS

For mixtures of this product request the respective component Material Safety Data Sheets. See Section IX.

MATERIAL (CAS NO.)	Wt (%)	1984-1985 ACGIH TLV-TWA (OSHA-PEL)
Oxygen (7782-44-7)	100	None currently established (None currently established)

III. PHYSICAL DATA

BOILING POINT, 760 mm. Hg	−183°C (−297.4°F)	**FREEZING POINT**	−218.4°C (−361.1°F)
SPECIFIC GRAVITY (H_2O = 1)	Gas	**VAPOR PRESSURE AT 20°C.**	Gas
VAPOR DENSITY (air = 1)	1.105 @ 25°C	**SOLUBILITY IN WATER, % by wt.**	Negligible
PERCENT VOLATILES BY VOLUME	100	**EVAPORATION RATE (Butyl Acetate = 1)**	Not applicable

APPEARANCE AND ODOR Colorless, odorless gas at normal temperature and pressure.

EMERGENCY PHONE NUMBER

IN CASE OF EMERGENCIES involving this material, further information is available at all times:
In the USA 304 — 744-3487 In Canada 514 — 645-5311
For routine information contact your local supplier

Union Carbide requests the users of this product to study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

UNION CARBIDE CORPORATION ☐ LINDE DIVISION
UNION CARBIDE CANADA LIMITED ☐ LINDE DIVISION

L-4638-A

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: None currently established.

EFFECTS OF SINGLE (ACUTE) OVEREXPOSURE:

SWALLOWING — No evidence of adverse effects from available information.

SKIN ABSORPTION — No evidence of adverse effects from available information.

INHALATION — Breathing 80% or more oxygen at atmospheric pressure for more than a few hours may cause nasal stuffiness, cough, sore throat, chest pain and breathing difficulty. Breathing oxygen at higher pressure increases the likelihood of adverse effects within a shorter time period. Breathing pure oxygen under pressure may cause lung damage and also central nervous system effects resulting in dizziness, poor coordination, tingling sensation, visual and hearing disturbances, muscular twitching, unconsciousness and convulsions. Breathing oxygen under pressure may cause prolongation of adaptation to darkness and reduced peripheral vision.

SKIN CONTACT — No evidence of adverse effects from available information.

EYE CONTACT — No evidence of adverse effects from available information.

EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE: No evidence of adverse effects from available information.

OTHER EFFECTS OF OVEREXPOSURE: See "Notes to Physician."

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: See "Notes to Physician."

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION: None currently known.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING — This product is a gas at normal temperature and pressure.

SKIN — No emergency care anticipated.

INHALATION — Remove to fresh air. Give artificial respiration if not breathing. Keep victim warm and at rest. Call a physician.

EYES — No emergency care anticipated.

NOTES TO PHYSICIAN: *Supportive treatment should include immediate sedation, anti-convulsive therapy if needed, and rest. Animal studies suggest that the administration of certain drugs, including phenothiazine drugs and chloroquine, increases the susceptibility to toxicity from oxygen at high concentrations or pressures. Animal studies also indicate that vitamin E deficiency may increase susceptibility to oxygen toxicity.*

Airway obstruction during high oxygen tension may cause alveolar collapse following absorption of the oxygen. Similarly, occlusion of the eustachian tubes may cause retraction of the eardrum and obstruction of the paranasal sinuses may produce "vacuum-type" headache.

Newborn premature infants exposed to high oxygen concentrations may suffer delayed retinal damage which can progress to retinal detachment and blindness (retrolental fibroplasia). Retinal damage can also occur in adults exposed to 100% oxygen under greater than atmospheric pressure, particularly in individuals whose retinal circulation has been previously compromised.

All individuals exposed for long periods to oxygen at high pressure and all who exhibit overt oxygen toxicity should have ophthalmologic examinations.

WHEN USED IN WELDING AND CUTTING: Read and understand the manufacturer's instructions and the precautionary label on the product. See American Standard Z49.1 "Safety In Welding and Cutting" published by the American Welding Society, P.O. Box 351040, Miami, Florida 33135 and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, Washington, D.C. 20402 for more detail. For further SAFETY AND HEALTH information, refer to Linde's free publication, L-52-529, "Precautions and Safe Practices for Electric Welding and Cutting", as well as L-2035, "Precautions and Safe Practices for Gas Welding, Cutting, and Heating." You may obtain copies from your local supplier, or by writing to Union Carbide Corporation, Linde Division, Communications Department, 39 Old Ridgebury Road, Danbury, Connecticut, 06817-0001.

NOTE: *Suitability for use as a component in underwater breathing gas mixtures is to be determined by or under the supervision of personnel experienced in the use of underwater breathing gas mixtures and familiar with the effects, methods, frequency and duration of use, hazards, side effects and precautions to be taken.*

V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method)	Not applicable	**AUTOIGNITION TEMPERATURE**	Not applicable
FLAMMABLE LIMITS IN AIR, % by volume	**LOWER** Not applicable	**UPPER**	Not applicable

EXTINGUISHING MEDIA: Vigorously accelerates combustion. Use media appropriate for surrounding fire. Water (i.e. safety shower) is the preferred extinguishing media for clothing fires.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate all personnel from danger area. Immediately cool containers with water spray from maximum distance until cool, then move containers away from fire area if without risk.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Oxidizing agent, vigorously accelerates combustion. Contact with flammable materials may cause fire or explosion. Container may rupture due to heat of fire. No part of a container should be subjected to a temperature higher than 52°C (approximately 125°F). Most containers are provided with a pressure relief device designed to vent contents when they are exposed to elevated temperature. Smoking, flames and electric sparks in the presence of enriched oxygen atmospheres are potential explosion hazards.

VI. REACTIVITY DATA

STABILITY	
UNSTABLE	**STABLE**
	X

CONDITIONS TO AVOID: See Section IX.

INCOMPATIBILITY (materials to avoid): Combustible materials, asphalt, flammable materials, especially oils and greases.

HAZARDOUS DECOMPOSITION PRODUCTS: None.

HAZARDOUS POLYMERIZATION	
May Occur	**Will not Occur**
	X

CONDITIONS TO AVOID: None currently known.

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Shut off leak if without risk. Ventilate area of leak or move leaking container to well-ventilated area. Remove all flammable materials from vicinity. Oxygen must never be permitted to strike an oily surface, greasy clothes, or other combustible material.

WASTE DISPOSAL METHOD: Slowly release into atmosphere, in an open, outdoors area. Remove all flammable materials from vicinity.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type): Not required.

VENTILATION	**LOCAL EXHAUST** — Not applicable.
	MECHANICAL (general) — Acceptable.
	SPECIAL — Not applicable.
	OTHER — Not applicable.

PROTECTIVE GLOVES: Preferred for cylinder handling.

EYE PROTECTION: Select in accordance with OSHA 29 CFR 1910.133.

OTHER PROTECTIVE EQUIPMENT: Metatarsal shoes for cylinder handling. Select in accordance with OSHA 29 CFR 1910.132 and 1910.133.

IX. SPECIAL PRECAUTIONS

WARNING: High pressure gas. Vigorously accelerates combustion. Avoid contact with oils, greases and other flammable materials. Never use manifolds for oxygen cylinders unless specifically designed for such use. Use only with equipment conditioned for oxygen service. Use piping and equipment adequately designed to withstand pressures to be encountered. Protect container against physical damage. Isolate from combustible gas installations and combustible materials by adequate distance or by gas-tight, fire-resistive barriers. Protect against over-heating. Never use an oxygen jet for cleaning purposes of any sort, especially clothing, as it increases the likelihood of an engulfing fire. Note: Reverse flow into cylinder may cause rupture. Use a check valve or other protective apparatus in any line or piping from the cylinder to prevent reverse flow.

MIXTURES: When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death. Be sure to read and understand all labels and other instructions supplied with all containers of this product.

NOTE: *Compatibility with plastics should be confirmed prior to use. For safety information on general handling of compressed gas cylinders, obtain a copy of pamphlet P-1, "Safe Handling of Compressed Gases in Containers" from the Compressed Gas Association, Inc., 1235 Jefferson Davis Highway, Arlington, VA 22202.*

OTHER HANDLING AND STORAGE CONDITIONS: Never work on a pressurized system. If there is a leak, close the cylinder valve, blow down the system by venting to a safe place, then repair the leak. Never lubricate oxygen valves, regulators, etc., with any combustible substance.

LINDE
UNION CARBIDE

GENERAL OFFICES

IN THE USA:
Union Carbide Corporation
Linde Division
39 Old Ridgebury Road
Danbury, CT 06817-0001

IN CANADA:
Union Carbide Canada Limited
Linde Division
123 Eglinton Avenue East
Toronto, Ontario M4P 1J3

Other offices in principal cities all over the world.

Lithographed in U.S.A.

R/S # 405

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 80,070-8 PAGE 1

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
SHELL: 713-473-9461 CHEMTREC: 800-424-9300	SHELL: 713-241-4819

ACUTE HEALTH *	FIRE	REACTIVITY	HAZARD RATING ▶
3	1	0	LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4

*For acute and chronic health effects refer to the discussion in Section III

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION ... AND PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)

SECTION I	NAME
PRODUCT ▶	SHELLZONE(R) ANTIFREEZE
CHEMICAL NAME ▶	ETHYLENE GLYCOL
CHEMICAL FAMILY ▶	GLYCOL
SHELL CODE ▶	32350 94010 94012

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELLZONE ANTIFREEZE	MIXTURE	100
1	ETHYLENE GLYCOL	107-21-1	84-94
2	DIETHYLENE GLYCOL	111-46-6	0-10
3	WATER	7732-18-5	2-4
4	INORGANIC/ORGANIC SALTS		2-4

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
1	4.0 G/KG - RAT	19.5 G/KG - RABBIT	NONE
1	5.0 G/KG - RABBIT	11.9 G/KG - RABBIT	NONE
2	14.8 G/KG - RAT		

BASED UPON DATA AVAILABLE TO SHELL, COMPONENTS 3 AND 4 IN THIS PRODUCT ARE NOT HAZARDOUS UNDER OSHA HAZARD COMMUNICATION (29 CFR 1910.1200).

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
BASED ON PRESENCE OF COMPONENT 1, PRODUCT IS MODERATELY TO SEVERELY IRRITATING TO THE EYES. VAPORS CAN ALSO CAUSE SEVERE EYE IRRITATION.

SKIN CONTACT
BASED ON PRESENCE OF COMPONENTS 1 AND 2, PRODUCT IS MILDLY IRRITATING TO THE SKIN AND SLIGHTLY TOXIC ON PROLONGED OR REPEATED CONTACT.

INHALATION
VAPORS ARE MILDLY TO MARKEDLY IRRITATING TO THE LUNGS DEPENDING ON THE EXPOSURE LEVEL.

INGESTION
PRODUCT MAY BE HARMFUL OR FATAL IF SWALLOWED; MAY PRODUCE CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION AND KIDNEY DAMAGE WHICH MAY BE FATAL. INGESTION OF COMPONENT 2 MAY ALSO PRODUCE LIVER DAMAGE.

SIGNS AND SYMPTOMS
IRRITATION AS NOTED ABOVE EARLY TO MODERATE CNS DEPRESSION MAY BE EVIDENCED BY GIDDINESS, HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. KIDNEY DAMAGE MAY BE EVIDENCED BY CHANGES IN URINE OUTPUT, URINE APPEARANCE OR EDEMA (SWELLING FROM FLUID RETENTION). LIVER DAMAGE MAY BE EVIDENCED BY LOSS OF APPETITE, JAUNDICE (YELLOWISH SKIN COLOR) AND SOMETIMES PAIN IN THE UPPER ABDOMEN ON THE RIGHT SIDE.

AGGRAVATED MEDICAL CONDITIONS
PREEXISTING SKIN, EYE, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. IMPAIRED KIDNEY AND LIVER FUNCTIONS FROM PREEXISTING DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

OTHER HEALTH EFFECTS
INTENTIONAL ABUSE, MISUSE OR OTHER MASSIVE EXPOSURE MAY CAUSE MULTIPLE ORGAN DAMAGE AND/OR DEATH.

SEE SECTION VI FOR ADDITIONAL INFORMATION.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

	OSHA		ACGIH		OTHER
NO.	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
P	NONE ESTABLISHED				
1		50 PPM	50 PPM-CEILING		
1			10 MG/M3	20 MG/M3	

CEILING VALUE IS FOR EG VAPORS, OTHERS ARE FOR EG PARTICULATES.

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT
FLUSH SKIN WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION
DO NOT GIVE LIQUIDS IF VICTIM IS UNCONSCIOUS OR VERY DROWSY. OTHERWISE, GIVE NO MORE THAN 2 GLASSES OF WATER AND INDUCE VOMITING BY GIVING 30CC (2 TABLESPOONS) SYRUP OF IPECAC *. IF IPECAC IS UNAVAILABLE, GIVE 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF VICTIM'S THROAT. KEEP VICTIM'S HEAD BELOW HIPS WHILE VOMITING. GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN
*IF VICTIM IS A CHILD, GIVE NO MORE THAN 1 GLASS OF WATER AND 15CC (1 TABLESPOON) SYRUP OF IPECAC. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE SHOULD BE CONSIDERED FOLLOWING INTUBATION WITH A CUFFED ENDOTRACHEAL TUBE.

SECTION VI SUPPLEMENTAL HEALTH INFORMATION

RARE CASE REPORTS OF ETHYLENE GLYCOL SENSITIZATION (ALLERGY) HAVE BEEN PUBLISHED BUT ALLERGY TO ETHYLENE GLYCOL IS NOT A COMMON PHENOMENON.

IN ONE STUDY, WHEN ETHYLENE GLYCOL WAS ADMINISTERED IN THE DIET AT DAILY DOSES UP TO 1.0 G/KG TO PREGNANT RATS, NO MATERNAL TOXICITY, NO EMBRYOTOXICITY NOR TERATOGENICITY WERE OBSERVED. IN A MORE RECENT STUDY, WHEN ETHYLENE GLYCOL WAS ADMINISTERED BY GAVAGE AT DAILY DOSES OF 1.25 G/KG AND ABOVE TO PREGNANT RATS, OR AT 750 MG/KG AND ABOVE TO PREGNANT MICE, THERE WAS AN INCREASE IN THE NUMBER OF MALFORMED FETUSES AT ALL DOSE LEVELS. EXCEPT AT THE LOWEST DOSE LEVEL IN MICE, THERE WAS ALSO EVIDENCE OF MATERNAL TOXICITY AT ALL DOSE LEVELS.

SECTION VII **PHYSICAL DATA**

BOILING POINT: 330-340 (DEG F)

SPECIFIC GRAVITY: 1.1373 (H2O=1)

VAPOR PRESSURE: N/AV (MM HG)

MELTING POINT: N/AV (DEG F)

SOLUBILITY: COMPLETE (IN WATER)

VAPOR DENSITY: >1 (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): <0.01

POUR POINT = -40 DEG. F

APPEARANCE AND ODOR:
BLUE GREEN, SLIGHTLY VISCOUS LIQUID. MILD ODOR.

SECTION VIII **FIRE AND EXPLOSION HAZARDS**

FLASH POINT AND METHOD:
246 DEG. F SETAFLASH

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: N/AP UPPER: N/AP

EXTINGUISHING MEDIA
USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO2.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

SECTION IX **REACTIVITY**

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
KEEP AWAY FROM STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS
CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION X **EMPLOYEE PROTECTION**

RESPIRATORY PROTECTION
IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING
AVOID CONTACT WITH EYES. WEAR CHEMICAL GOGGLES IF THERE IS LIKELIHOOD OF CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE, NEOPRENE, PVC OR NATURAL RUBBER GLOVES.

ADDITIONAL PROTECTIVE MEASURES
USE VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS. EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES
MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPRDPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII SPECIAL PRECAUTIONS

STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM FLAMES AND HIGH TEMPERATURES.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV STATE REGULATORY INFORMATION

THIS INFORMATION IS BEING SYSTEMATICALLY ADDED TO OUR MSDS. IT HAS PREVIOUSLY BEEN PROVIDED TO YOU IN VARIOUS WAYS, INCLUDING THE MSDS. THE NEW MSDS FORMAT IS INTENDED TO PROVIDE THE USER WITH THE INFORMATION IN A MORE CONVENIENT MANNER.

SECTION XVI SPECIAL NOTES

THE OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) AND/OR THE RESPIRATORY PROTECTION PRECAUTIONS (SECTION X) HAVE BEEN REVISED.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: JUNE 28, 1989

J. C. WILLETT

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

ENVIRONMENTAL DATA SHEET

EDS NUMBER ▶ 80,070

37449 (9-87)

PRODUCT ▶	SHELLZONE(R) ANTIFREEZE
PRODUCT CODE ▶	32350 94010 94012

SECTION I PRODUCT/COMPOSITION

NO.	COMPONENT	CAS NUMBER	PERCENT
P	SHELLZONE ANTIFREEZE	MIXTURE	100
1	ETHYLENE GLYCOL	107-21-1	84-94
2	DIETHYLENE GLYCOL	111-46-6	0-10
3	WATER	7732-18-5	2-4
4	INORGANIC/ORGANIC SALTS	1310-73-2	2-4
4A	SODIUM HYDROXIDE		0.10

SECTION II SARA TITLE III INFORMATION

NO.	EHS RQ (LBS) (*1)	EHS TPQ (LBS) (*2)	SEC 313 (*3)	313 CATEGORY (*4)	311/312 CATEGORIES (*5)
P					H-1, H-2
1			YES		
4A			YES		

FOOTNOTES

*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC.302
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*3 = TOXIC CHEMICAL, SEC 313
*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC RELEASE INVENTORY FORM
*5 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING
HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL P-3 = FIRE HAZARD P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

SECTION III ENVIRONMENTAL RELEASE INFORMATION

KEEP OUT OF SURFACE WATERS, SEWERS, AND WATERWAYS ENTERING OR LEADING TO SURFACE WATERS. NOTIFY AUTHORITIES IF ANY EXPOSURE TO THE GENERAL PUBLIC OR ENVIRONMENT OCCURS OR IS LIKELY TO OCCUR.

SECTION IV RCRA INFORMATION

PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: NOVEMBER 17, 1987

SHELL OIL COMPANY
CORPORATE ENVIRONMENTAL AFFAIRS
P. O. BOX 4320
HOUSTON, TX 77210

FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL
(713) 241-2252

FOR EMERGENCY ASSISTANCE PLEASE CALL
SHELL: (713) 473-9461
CHEMTREC: (800) 424-9300

ELECTRIC

Trade Name: Fleetweld 5P
Sizes: All
Date: September 23, 1985

MATERIAL SAFETY DATA SHEET NO. M10

For U.S. Manufactured Welding Consumables and Related Products

Conforms to Hazard Communication Standard 29CFR 1910.1200 Rev. September 1985

SECTION I — IDENTIFICATION

Manufacturer/Supplier Name	Product Type
The Lincoln Electric Company	Covered electrode
Address: 22801 St. Clair Avenue, Cleveland, Ohio 44117	Classification: E6010
Telephone No.: (216) 481-8100	

SECTION II — HAZARDOUS MATERIALS*

IMPORTANT!

This section covers the materials from which this product is manufactured. The fumes and gases produced during welding with the normal use of this product are covered by Section V; see it for industrial hygiene information.

* The term "hazardous" in "Hazardous Materials" should be interpreted as a term required and defined in the Hazards Communication Standard and does not necessarily imply the existence of any hazard.

Covering or Flux Ingredients	(CAS No.)	Wt %	TLV mg/m³	Supplemental Information
Cellulose and other carbohydrates (65996-61-4)	less than	5	10*	(*)Not listed. Nuisance value maximum is 10 mg/m³.
Silicate binders (1344-09-8)	less than	5	10*	
Titanium dioxides (as Ti) (13463-67-7)	less than	5	10	
Iron (65996-57-0)	less than	5	10*	(**)mppcf - see Section IV below.
Magnesite (1309-42-8)	less than	1	10	
Mineral silicates (1332-58-7)	less than	1	20**	
Manganese and/or manganese alloys (as Mn) (7439-96-5)		1	5	
Iron oxides (as Fe) (65996-74-9)	less than	0.5	5	
Graphite (7782-42-5)	less than	0.5	10	
Limestone and/or calcium carbonate (317-65-3)	less than	0.5	10	
** Number shown is representative for the ingredients listed.				
Every material listed may not be present in all sizes.				

** OSHA PEL (Permissible Exposure Limit) Value limits are the same as TLV unless otherwise listed.

Other	Wt %	TLV mg/m³	
Carbon steel core wire	85	10*	

SECTION III — FIRE AND EXPLOSION HAZARD DATA

Non Flammable; Welding arc and sparks can ignite combustibles and flammable products. See Z49.1 referenced in Section VI.

SECTION IV — HEALTH HAZARD DATA

Threshold Limit Value:

The ACGIH recommended general limit for Welding Fume NOC — (Not Otherwise Classified) is 5 mg/m³. ACGIH-1985 preface states "The TLV-TWA should be used as guides in the control of health hazards and should not be used as fine lines between safe and dangerous concentrations." See Section V for specific fume constituents which may modify this TLV. Threshold Limit Values are figures published by the *American Conference of Government Industrial Hygienists*. Units may be milligrams per cubic meter (mg/m³), millions of particles per cubic foot of air (mppcf), or parts per million of vapor or gas in air (ppm). *(Section IV continued on side two.)*

Product Name: Fleetweld 5P
Sizes: All
Date: September 23, 1985

Signs of Overexposure SECTION IV — HEALTH HAZARD DATA continued

Electric arc welding may create one or more of the following health hazards:

Fumes and Gases can be dangerous to your health. Common entry is by inhalation.

Short-term (acute) overexposure to welding fumes may result in discomfort such as dizziness, nausea, or dryness or irritation of nose, throat, or eyes.

Long-term (chronic) over-exposure to welding fumes can lead to siderosis (iron deposits in lung) and affect pulmonary function.

Arc Rays can injure eyes and burn skin.

Electric Shock can kill.

Emergency and First Aid Procedures: Call for medical aid. Employ first aid techniques recommended by the American Red Cross. IF BREATHING IS DIFFICULT give oxygen. IF NOT BREATHING employ CPR (Cardiopulmonary Resuscitation) techniques. IN CASE OF ELECTRICAL SHOCK, turn off power and follow recommended treatment. In all cases call a physician.

SECTION V — REACTIVITY DATA

Hazardous Decomposition Products

Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and electrodes used.

Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities).

When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section II. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section II, plus those from the base metal and coating, etc., as noted above.

Reasonably expected fume constituents of this product would include: Primarily iron oxide; secondarily complex oxides of manganese, silicon and sodium.

Maximum fume exposure guideline for this product is 5.0 mg/m^3.

Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc.

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample from inside the welder's helmet if worn or in the worker's breathing zone. See ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes," available from the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126.

SECTION VI AND VII — CONTROL MEASURES AND PRECAUTIONS FOR SAFE HANDLING AND USE

Read and understand the manufacturer's instructions and the precautionary label on the product. See American National Standard Z49.1, "Safety in Welding and Cutting" published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida, 33126 and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, Washington, D.C. 20402 for more detail on many of the following:

Ventilation

Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases from the worker's breathing zone and the general area. Train the welder to keep his head out of the fumes.

Respiratory Protection

Use respirable fume respirator or air supplied respirator when welding in confined space or general work area when local exhaust or ventilation does not keep exposure below TLV.

Eye Protection

Wear helmet or use face shield with filter lens shade number 2-14 or darker. Shield others by providing screens and flash goggles.

Protective Clothing

Wear hand, head, and body protection which help to prevent injury from radiation, sparks, and electrical shock. See Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to permit electrically live parts or electrodes to contact skin . . . or clothing or gloves if they are wet. Insulate from work and ground.

Disposal Information

Discard any product, residue, disposable container, or liner as ordinary waste in an environmentally acceptable manner unless otherwise noted.

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 57,052-2 PAGE 1

97367 (4-85)

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
SHELL: 713-473-9461 CHEMTREC: 800-424-9300	SHELL: 713-241-4819

ACUTE HEALTH *	FIRE	REACTIVITY	HAZARD RATING ▶
1	1	0	LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4

*For acute and chronic health effects refer to the discussion in Section III

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION ... AND PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)

SECTION I	NAME
PRODUCT ▶	SHELL ALVANIA(R) EP LF GREASE 2
CHEMICAL NAME ▶	MIXTURE (SEE SECTION II-A)
CHEMICAL FAMILY ▶	HYDROCARBON
SHELL CODE ▶	71125

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL ALVANIA(R) EP LF GREASE 2	MIXTURE	100
1	SEVERELY HYDROTREATED HEAVY NAPHTHENIC DISTILLATE	64742-52-5	65-70
2	SOLVENT REFINED, HYDROTREATED RESIDUAL OIL	64742-57-0	10-15
3	LITHIUM HYDROXY STEARATE	7620-77-1	5-10
4	SULFURIZED LARD OIL	61790-49-6	3-5
5	DIBUTYL CARBAMODITHIOC ACID METHYLENE ESTER	110-25-8	<1
6	ZINC NAPHTHENATE	12001-85-3	<2
7	MINOR ADDITIVES	MIXTURE	<2

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
1	>5.0 G/KG (RAT)*	>2.0 G/KG (RABBIT)	
4	>16,000 MG/KG (RAT)	>2.000 MG/KG (RABBIT)	

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
LUBRICATING GREASES ARE GENERALLY CONSIDERED NO MORE THAN MINIMALLY IRRITATING TO THE EYES.

SKIN CONTACT
LUBRICATING GREASES ARE GENERALLY CONSIDERED NO MORE THAN MILDLY IRRITATING TO THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS. RELEASE DURING HIGH PRESSURE USAGE MAY RESULT IN INJECTION OF GREASE INTO THE SKIN CAUSING LOCAL NECROSIS.

INHALATION
NOT EXPECTED TO BE A RELEVANT ROUTE OF EXPOSURE. HOWEVER, UNDER HIGH TEMPERATURE CONDITIONS, VAPORS IRRITATING TO THE NOSE, THROAT AND UPPER RESPIRATORY TRACT MAY BE PRODUCED.

INGESTION
LUBRICATING GREASES ARE GENERALLY CONSIDERED NO MORE THAN SLIGHTLY TOXIC IF SWALLOWED.

SIGNS AND SYMPTOMS
IRRITATION AS NOTED ABOVE.

AGGRAVATED MEDICAL CONDITIONS
PREEXISTING EYE AND SKIN DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

	OSHA		ACGIH		OTHER
NO.	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
P	NOT ESTABLISHED				

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
FLUSH EYES WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

SKIN CONTACT
REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEOICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.

INHALATION
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION
DO NOT INDUCE VOMITING. IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE.*

NOTE TO PHYSICIAN
*IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND GREASES.

SECTION VI SUPPLEMENTAL HEALTH INFORMATION

NONE IOENTIFIED.

SECTION VII PHYSICAL DATA

BOILING POINT: NOT AVAILABLE (DEG F)	SPECIFIC GRAVITY: <1 (H2O=1)	VAPOR PRESSURE: NOT AVAILABLE (MM HG)
MELTING POINT: 350.6 (DEG F) (DROPPING POINT)	SOLUBILITY: NEGLIGIBLE (IN WATER)	VAPOR DENSITY: NOT AVAILABLE (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE NOT AVAILABLE

APPEARANCE AND ODOR:
DARK TAN TO BROWN SMOOTH GREASE

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
221 DEG. C (PMCC)

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: N/AV UPPER: N/AV

EXTINGUISHING MEDIA
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS
SULFUR OXIDES AND HYDROGEN SULFIDE, BOTH OF WHICH ARE TOXIC, MAY BE RELEASED UPON COMBUSTION.

SECTION IX REACTIVITY

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE, SULFUR OXIDES AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION
USE A NIOSH-APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134, USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING
AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR GLOVES AND DTHER CLOTHING AS REQUIRED TD MINIMIZE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES
MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPRDPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TD REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PRDPERLY.

SECTION XII SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, APPLYING COSMETICS, OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. CONTAMINATED LEATHER ARTICLES INCLUDING SHOES CANNOT BE DECONTAMINATED AND SHOULD BE DESTROYED TO PREVENT REUSE.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV STATE REGULATORY INFORMATION

THIS INFORMATION IS BEING SYSTEMATICALLY ADDED TO OUR MSDS. IT HAS PREVIOUSLY BEEN PROVIDED TO YOU IN VARIOUS WAYS, INCLUDING THE MSOS. THE NEW MSDS FORMAT IS INTENDED TO PROVIDE THE USER WITH THE INFORMATIDN IN A MORE CONVENIENT MANNER.

SECTION XVI SPECIAL NOTES

REVISIONS WERE MADE IN SECTIONS: I AND III.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: NOVEMBER 14, 1990

G. A. VAN GELDER

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

ENVIRONMENTAL DATA SHEET

EDS NUMBER ▶ 57,052-2

97449 (9-87)

PRODUCT ▶	SHELL ALVANIA(R) EP LF GREASE 2
PRODUCT CODE ▶	71125

SECTION I PRODUCT/COMPOSITION

NO.	COMPONENT	CAS NUMBER	PERCENT
P	SHELL ALVANIA(R) EP LF GREASE 2	MIXTURE	100
1	SEVERELY HYDROTREATED HEAVY NAPHTHENIC DISTILLATE	64742-52-5	65-70
2	SOLVENT REFINED, HYDROTREATED RESIDUAL OIL	64742-57-0	10-15
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4	SULFURIZED LARD OIL	61790-49-6	3-5
5	DIBUTYL CARBAMODITHIOIC ACID METHYLENE ESTER	110-25-8	<1
6	ZINC NAPHTHENATE	12001-85-3	<2
7	MINOR ADDITIVES	MIXTURE	<2

SECTION II SARA TITLE III INFORMATION

NO.	EHS RQ (LBS) (*1)	EHS TPQ (LBS) (*2)	SEC 313 (*3)	313 CATEGORY (*4)	311/312 CATEGORIES (*5)
6			YES	ZINC COMPOUNDS	

BASED ON THE DATA AVAILABLE TO SHELL, THIS PRODUCT CONTAINS NO HAZARDOUS SUBSTANCES AS DEFINED BY SARA, TITLE III, SECTION 311(E).

FOOTNOTES

*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC.302
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZAROOUS SUBSTANCE, SEC 302
*3 = TOXIC CHEMICAL, SEC 313
*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC RELEASE INVENTORY FORM
*5 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING
HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL P-3 = FIRE HAZARD P-4 = SUDDEN RELEASE DF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

SECTION III ENVIRONMENTAL RELEASE INFORMATION

UNDER EPA-CWA, THIS PRODUCT IS CONSIDERED AN OIL UNDER SECTION 311. SPILLS INTO OR LEADING TO SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

SECTION IV RCRA INFORMATION

PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: NOVEMBER 14, 1990

SHELL OIL COMPANY
SAFETY, INDUSTRIAL HYGIENE AND ENVIRONMENT
P. O. BOX 4320
HOUSTON, TX 77210

FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL
(713) 241-2252

FOR EMERGENCY ASSISTANCE PLEASE CALL
SHELL: (713) 473-9461
CHEMTREC: (800) 424-9300

FOR COATINGS, RESINS, AND RELATED MATERIALS
(APPROVED BY THE U.S. DEPARTMENT OF LABOR AS
'ESSENTIALLY SIMILAR' TO FORM OSHA-20)
(MEETS REQUIREMENTS OF CFR 29 PART 1910.1200,
OSHA'S HAZARD COMMUNICATION STANDARD) NPCA 1-84

Y231 SECTION 01 - MANUFACTURER AND PRODUCT INFORMATION

MANUFACTURER: THEMEC COMPANY, INC.
123 WEST 23RD AVENUE
NORTH KANSAS CITY, MO.
64116-3004

DATE PRINTED: 05/27/93
CURRENT FORMULA DATE: 09/14/90
PREVIOUS FORMULA DATE: 11/21/88

EMERGENCY TELEPHONE NO.: 816-474-1425
INFORMATION TELEPHONE NO.: 816-474-3400

TRADE NAME: SERIES F943 DIFFUSED ALUMINUM

MANUFACTURER'S CODE IDENTIFICATION: F943-0038 COLOR: DIFFUSED

PRODUCT CLASS: ALKYD

SECTION 02 - HAZARDOUS INGREDIENTS

INGREDIENT: ALUMINUM FLAKE
PERCENT BY WEIGHT: PROPRIETARY CAS#: 7429-90-5
OCCUPATIONAL EXPOSURE LIMITS:

ACGIH:	TLV - TWA	10.000	MG/M3
ACGIH:	TLV - STEL	.000	NO INFO AVAILABLE
ACGIH:	TLV - C	.000	NO INFO AVAILABLE
OSHA:	PEL - TWA	15.000	MG/M3
OSHA:	PEL - STEL	.000	NO INFO AVAILABLE
OSHA:	PEL - C	.000	NO INFO AVAILABLE
VAPOR PRESSURE:		.000	NOT APPLICABLE

Not applicable

INGREDIENT: MINERAL SPIRITS, AS STODDARD SOLVENT
PERCENT BY VOLUME: 60.990% CAS#: 8052-41-3
OCCUPATIONAL EXPOSURE LIMITS:

ACGIH:	TLV - TWA	100.000	PPM
ACGIH:	TLV - STEL	.000	NO INFO AVAILABLE
ACGIH:	TLV - C	.000	NOT APPLICABLE
OSHA:	PEL - TWA	100.000	PPM
OSHA:	PEL - STEL	.000	NO INFO AVAILABLE
OSHA:	PEL - C	.000	NOT APPLICABLE
VAPOR PRESSURE:		27.000	MMHG AT 20C

The information contained in this section is considered confidential and proprietary and should be used only for safety and health purposes.

INGREDIENT: TOLUENE
PERCENT BY VOLUME: 7.320% CAS#: 108-88-3
OCCUPATIONAL EXPOSURE LIMITS:

ACGIH:	TLV - TWA	100.000	PPM
ACGIH:	TLV - STEL	150.000	PPM
ACGIH:	TLV - C	.000	NO INFO AVAILABLE
OSHA:	PEL - TWA	100.000	PPM
OSHA:	PEL - STEL	150.000	PPM
OSHA:	PEL - C	.000	NO INFO AVAILABLE
VAPOR PRESSURE:		22.000	MMHG AT 20C

-

The information contained in this section is considered confidential and proprietary and should be used only for safety and health purposes.

SECTION 03 - HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE:
ACUTE (SHORT TERM):
INHALATION - OVEREXPOSURE TO SOLVENT VAPORS OR SPRAY MIST MAY CAUSE: Nasal and respiratory irritation, anesthetic effects, dizziness, possible unconsciousness and asphyxiation, stupor, weakness, fatigue, nausea, and headache.
INHALATION - OVEREXPOSURE TO FREE PIGMENT DUST MAY CAUSE: Coughing, wheezing, shortness of breath, restricted nasal passages, lung injury.
INHALATION - OTHER:
Not applicable

SKIN - PROLONGED OR REPEATED CONTACT MAY CAUSE:
Moderate irritation, drying of skin, defatting and possible dermatitis.
EYES - CONTACT MAY RESULT IN:
Redness, tearing, blurred vision.
Severe irritation.
INGESTION MAY RESULT IN:
Gastrointestinal irritation, nausea, vomiting, diarrhea, death, aspiration into the lungs which can be fatal.
CHRONIC (LONG TERM, CUMULATIVE):
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the vapors may be harmful or fatal.
TARGET ORGAN EFFECTS:
ANIMAL AND/OR HUMAN STUDIES OF CERTAIN CHEMICALS IN THIS PRODUCT HAVE SHOWN THE FOLLOWING TARGET ORGAN EFFECTS:
Can cause liver damage.
Can cause kidney damage.
Can cause nervous system effects.
Can cause eye irritation.
Can cause skin irritation.
Can cause respiratory tract irritation.
TOXICITY INFORMATION:
Consult various toxicology references such as NIOSH's "Registry of Toxic Effects of Chemical Substances" or Sax's "Dangerous Properties of Industrial Chemicals" for specific toxicity information regarding hazardous ingredients.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY OVEREXPOSURE:
Not applicable
PRIMARY ROUTES OF ENTRY:
Dermal and Inhalation.
EMERGENCY AND FIRST AID PROCEDURES:
INHALATION:
Remove affected individual to fresh air. Treat symptomatically. If breathing is difficult, administer oxygen. If breathing has stopped give artificial respiration. Consult a physician.
SKIN CONTACT:
Wash affected area with soap and water. Remove contaminated clothing. Dispose of or launder accordingly. Consult a physician if skin irritation persists.
EYE SPLASH:
Flush immediately with large amounts of clean water under low pressure for at least 15 minutes. Consult a physician.
INGESTION:
Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult a physician or poison control center IMMEDIATELY. Treat symptomatically.
PROPOSITION 65:
Pigments and/or other raw materials present in this product contain trace amounts of a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
OTHER:
This product when mixed with other components acquires the hazards of all components.

SECTION 04 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (°F) (SETA FLASH CLOSED CUP): 090
LOWER EXPLOSIVE LIMIT (LEL) : 1.00
FLAMMABILITY CLASSIFICATION:
OSHA:
Flammable liquid - Class IC
DOT:
Flammable liquid
EXTINGUISHING MEDIA:
Foam, carbon dioxide, and dry chemical.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Keep away from heat, open flames, sparks, and areas where static charge may be generated. Do not apply to hot surfaces due to possible fire and explosion risk. For closed containers, pressure build-up and possible explosion might occur due to extreme heat exposure. Solvent vapors are heavier than air and may travel considerable distance to a source of ignition and flash back.
SPECIAL FIRE-FIGHTING PROCEDURES:
Water may be used to cool unopened containers. Wear self-contained breathing apparatus and full protective gear. Operate in pressure-demand or other positive pressure mode to prevent inhalation of hazardous decomposition products. Use appropriate extinguishing

media to control fire. Water may cause violent frothing if sprayed directly into containers of burning liquid.

SECTION 05 - REACTIVITY DATA

STABILITY:
Stable.
INCOMPATIBILITY (MATERIALS TO AVOID):
Strong oxidizing agents.
Bases.
Acids.
Alkalis.
CONDITIONS TO AVOID:
Heat, sparks, open flames.
HAZARDOUS DECOMPOSITION PRODUCTS - FIRE, BURNING OR WELDING OF COATING PRODUCTS MAY FORM:
Carbon monoxide, carbon dioxide, hydrocarbon fragments
HAZARDOUS POLYMERIZATION:
Will not occur.

SECTION 06 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.
WASTE DISPOSAL METHOD:
Dispose of in accordance with federal, state, and local regulations regarding pollution.

SECTION 07 - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION:
Respiratory protective devices must be used when engineering and administration controls are not adequate to maintain Threshold Limit Values (TLV) and Permissible Exposure Limits (PEL) of airborne contaminants below the listed values for those hazardous ingredients identified in Section II of this MSDS. Observe OSHA regulations for respirator use (CFR 29, 1910.134) whenever a respirator is used.
Particulate, chemical cartridge, air purifying half-mask respirators can be used within certain limitations; consult the respirator manufacturer for specific uses and limitations. Where airborne contaminant concentrations are unknown, the use of a NIOSH/MSHA approved fresh-air supplied respirator is mandatory.
VENTILATION:
Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Heavier than air solvent vapors should be removed from lower levels of work area due to potential explosion hazard and all ignition sources (non-explosion proof equipment) should be eliminated if flammable mixtures will be encountered.
PROTECTIVE GLOVES:
Chemical resistant.
EYE PROTECTION:
Use chemical resistant splash type goggles.
OTHER PROTECTIVE EQUIPMENT:
Use chemical resistant coveralls or apron to protect against skin and clothing contamination.
HYGENIC PRACTICES:
Wash hands and other contaminated skin areas with warm soap and water before eating.

SECTION 08 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
tors in dry area. Keep containers closed tight and upright to prevent leakage. Do not store in high temperature areas or near fire or

open flame. Refer to product data sheet for recommended storage temperatures.

OTHER PRECAUTIONS:

Do not use near heat, sparks, or open flame. Use approved grounding procedures. Prevent prolonged breathing of vapor or spray mist. Prevent contact with skin and eyes. Do not take internally. Keep out of reach of children. Do not reuse or alter containers without proper industrial cleaning. Do not weld or flame cut empty, uncleaned containers due to potential fire and explosion hazard. Consult product data sheet for proper application instructions.

SECTION 9 - PHYSICAL DATA

BOILING RANGE (F AT 760 MMHG):	230 - 395
VAPOR DENSITY:	HEAVIER THAN AIR
WEIGHT PER GALLON:	8.14
% VOLATILE BY VOLUME:	65.200
% SOLIDS BY WEIGHT:	48.072
EVAPORATION RATE:	SLOWER - ETHYL ETHER
VOC (LBS/GAL):	4.220

SECTION 10 - OTHER INFORMATION

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of our knowledge, the information contained herein is accurate. However, neither the Inemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

SECTION 11 - RIGHT-TO-KNOW INFORMATION

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS NO.	CHEMICAL NAME	% BY WGT
7429-90-5	ALUMINUM FLAKE	17.710
108-88-3	TOLUENE	2.960

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

April 24, 1995

CERTIFIED MAIL
RETURN RECEIPT NO.Z-765-962-665

Mr. M. Herman Walters
Walters Drilling, Inc.
P.O. BOX 717
Farmington, NM 87499

RE: Discharge Plan Requirement Inspection
Farmington Facility
San Juan County, New Mexico

Dear Mr. Walters:

Outlined below are the observations and findings made by the NMOCD team that recently inspected the Walters Drilling Inc. yard at 5424 U.S. HWY 64 in Farmington, New Mexico.

1. NMOCD discourages the use of lead base thread dope.
2. Store all empty drums on their side with the bungs in place and horizontal to the ground.
3. Remediate all small oil spills with a rake.
4. Overall housekeeping at the facility needs work.
5. Bags and sacks of miscellaneous drilling fluid additives need to be cleaned up.
6. A Containers need to be labelled as well as bulk storage sacks-such as the bags of white material in the main shop.
7. Used oil container needs to be labelled as a "USED OIL" container.
8. Allow all empty paint cans to dry before disposing of to landfill.
9. Shop solvent needs an MSDS and needs to be identified.
10. Empty drums that have accumulated rain water need to be addressed.

11. No sumps were found at the facility - however if any sumps are installed in the future they will be constructed with secondary containment and leak detection.
12. All future construction at the site should consider the discharge plan guidelines.
13. Enclosed please find three handouts to help Walters drilling prepare the Discharge plan.

If you have any further questions please feel free to call me at (505)-827-7156.

Sincerely,

Patricio W. Sanchez
Petroleum Engineer

XC Denny Foust

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

April 21, 1995

CERTIFIED MAIL
RETURN RECEIPT NO.Z-765-962-660

Mr. M. Herman Walters
Walters Drilling, Inc.
P.O. BOX 717
Farmington, NM 87499

RE: Discharge Plan Requirement
Farmington Facility
San Juan County, New Mexico

Dear Mr. Walters:

Under the provision of the Water Quality Control Commission (WQCC) Regulations, Walters Drilling, Inc. is hereby notified that the filing of a discharge plan is required for the Walters Drilling, Inc. facilities located at 5424 U.S. HWY 64 Farmington, New Mexico.

The discharge plan is required pursuant to Section 3-104 and 3-106 of the WQCC regulations. The discharge plan, defined in Section 1.101.Q of the WQCC regulations should cover all discharges of effluent or leachate at the facility site or adjacent to the facility site. Included in the plan should be plans for controlling spills and accidental discharges at the facility, including detection of leaks in buried underground tanks and\or piping.

Pursuant to Section 3-106.A, a discharge plan should be submitted for approval to the OCD Director within 120 days of receipt of this letter. Three copies of the discharge plan should be submitted.

A copy of the regulations and guidelines have been provided to Walters Drilling, Inc. at a recent field inspection by OCD staff. Enclosed Walters Drilling, Inc. will find an application form to be used with the guidelines for the preparation of discharge plans at oil & gas service companies. The guideline addresses berming of tanks, curbing and paving of process areas susceptible to leaks or spills and the disposition of any solid wastes.

The discharge plan is subject to the WQCC Regulation 3-114 discharge plan fee. Every billable facility submitting a discharge plan will be assessed a fee equal to the filing fee of fifty (50) dollars plus the flat rate of one thousand, three hundred and eighty ($1380) dollars for oil & gas service companies. The fifty (50) dollar filing fee is due when the discharge plan is submitted. The flat rate fee is due upon approval of the discharge plan.

Please make all checks payable to: **NMED Water Quality Management** and addressed to the OCD Santa Fe office.

If there are any questions on this matter, please feel free to contact Patricio Sanchez at 827-7156 or Roger Anderson at 827-7152.

Sincerely,

William J. LeMay
Director

WJL/pws

XC: OCD Aztec Office