

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

Form C-101
Revised June 10, 2003

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

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OCD-ARTESIA

Submit to appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address Preston Exploration, LLC P. O. Box 7520 The Woodlands, TX 77387		² OGRID Number 212226
		³ API Number 30-015-33244
³ Property Code	⁵ Property Name Roughneck Red "19"	⁶ Well No. 1

⁷ Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	17S	26E		990	South	660	East	Eddy

⁸ Proposed Bottom Hole Location If Diff						
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North
⁹ Proposed Pool 1 Eagle Creek, East Atoka - Morrow						Cement to cover all oil, gas and water bearing zones. B6A

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3416
¹⁶ Multiple No	¹⁷ Proposed Depth 8,800'	¹⁸ Formation Morrow (or Atoka)	¹⁹ Contractor Unknown	²⁰ Spud Date February 2, 2003

²¹ Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2	13-3/8	48	400	250	Surface
12-1/4	9-5/8	36	1,400	450	Surface
8-1/2	5-1/2	17	8,800	400	5,000'

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Drill, Case and complete well in the Morrow (Primary objective) or Atoka (Secondary objective) formation.

- BOP's include: 1) Hydrill double Ram 13-5/8" x 3000 psi
2) Double Ram 13-5/8" x 3000 psi
3) Choke Manifold 4" x 3000 psi
4) Five Station accumulator closing unit with remote control

H₂S contingency plan will be prepared by Midland Safety and Health (432-520-3838) prior to commencement of drilling operations.

Mud Program attached.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Sandra Nobles</i> Printed name: Sandra Nobles Title: Consultant E-mail Address: Sandra@rkford.com Date: January 19, 2004		OIL CONSERVATION DIVISION Approved by: <i>[Signature]</i> Title: SUPERVISOR, DISTRICT II Approval Date: FEB 16 2004 Expiration Date: FEB 16 2005 Conditions of Approval: Attached ☐	
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NOTIFY OCD SPUD & TIME
TO WITNESS 8 5/8" CASING

5' 13 3/8" casing

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name ROUGHNECK RED "19"	Well Number #1
OGRID No.	Operator Name PRESTON EXPLORATION, LLC	Elevation 3416

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	17 S	26 E		990	SOUTH	660	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

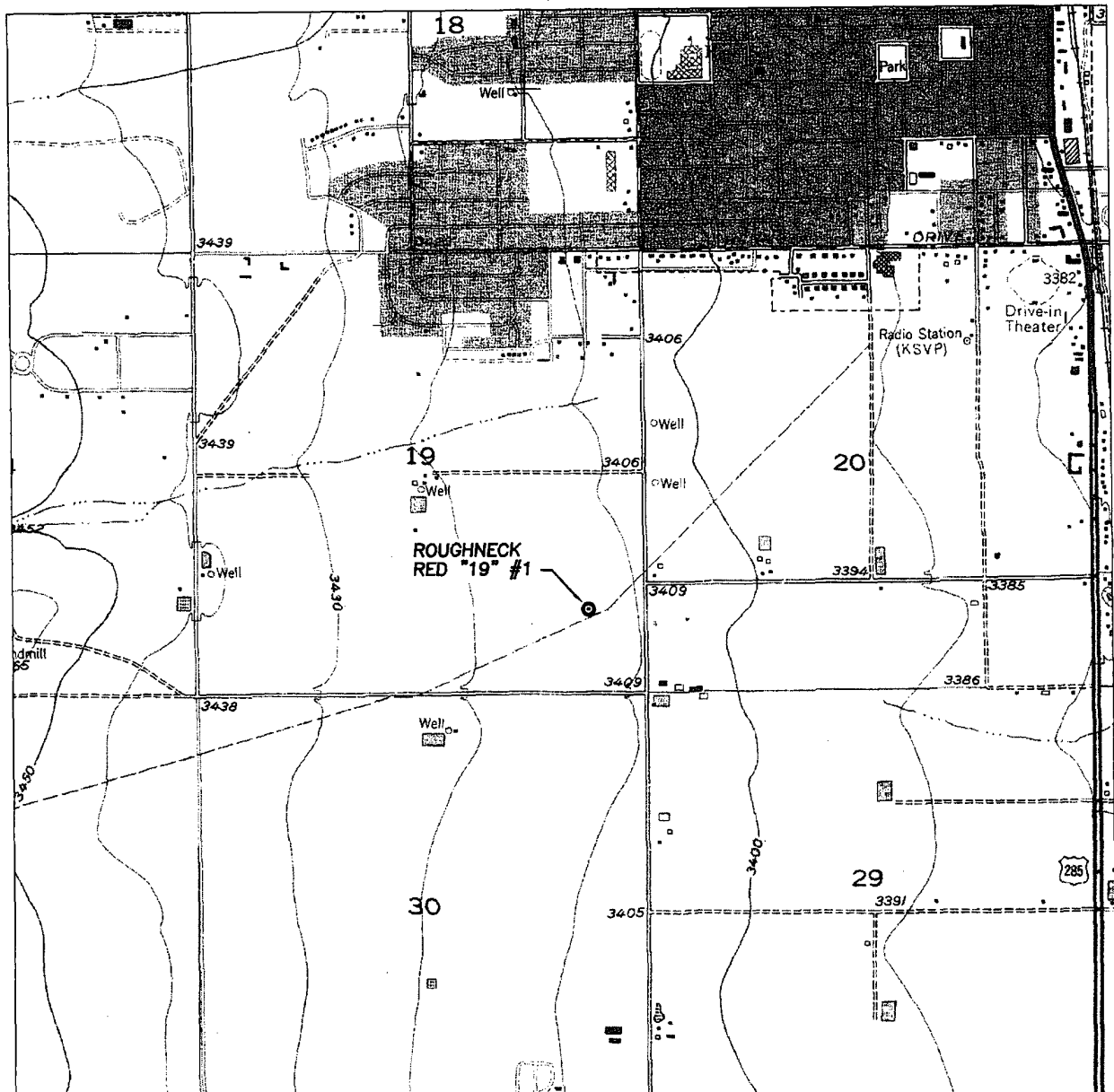
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Randell K. Ford Printed Name Agent Title 12-22-03 Date
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. December 17, 2003 Date Surveyed Signature & Seal of Professional Surveyor W.O. Num. 2003-1011 Certificate No. MACON McDONALD N.M. P.L.S. No.

[illegible]

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LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL = 10'

SEC. 19 TWP. 17-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 990' FSL & 660' FEL

ELEVATION 3416

OPERATOR PRESTON EXPLORATION, LLC

LEASE ROUGHNECK RED "19" #1

U.S.G.S. TOPOGRAPHIC MAP

ARTESIA, N.M.



WEST COMPANY
of Midland, Inc.

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701

(432) 687-0865 - (432) 687-0868 FAX

Driving Directions to the

PRESTON EXPLORATION, LLC

ROUGHNECK RED 19 #1 WELL

Located 990 Ft. FSL and 660 Ft. FEL, Section 19, T-17-S, R-26-E,
NMPM, Eddy County, New Mexico

From the intersection of US Highway 82 and US Highway 285 in Artesia, New Mexico,

Go South on US Highway 285 for 1.72 miles to road intersection with Castleberry Road,

Turn Right and go West on Castleberry Road for 1.0 miles to intersection with 13th Street,

Turn Left and go South on 13th Street for 0.06 miles to a point from which the well is located West approximately 700 feet.



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

Mud Program Summary

<u>Depth</u>	<u>Casing</u>	<u>Hole Size</u>	<u>Mud Wt.</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>pH</u>
0' - 420'	13-3/8"	17-1/2"	8.6-8.7	34-36	N/C	N/C
420' - 1,400'	9-5/8"	12-1/4"	8.4-8.5	28-29	N/C	9-10
1,400' - 6,000'	-	8-1/2"	8.4-8.5	28-29	N/C	9-10
6,000' - 7,200'	-	8-1/2"	8.4-9.0	28-29	N/C	9-10
7,200' - 8,460'	5-1/2"	8-1/2"	9.0-9.4	32-38	12-8	9-10



CONTINGENCY PLAN

THIS CONTINGENCY PLAN WAS WRITTEN SPECIFICALLY FOR:

**PRESTON EXPLORATION, LLC
THE WOODLANDS TEXAS**

ACTION PLAN FOR ACCIDENTAL RELEASE OF HYDROGEN SULFIDE GAS (H₂S)

FOR

Roughneck Red "19" # 1

**SECTION 19 TOWNSHIP 17S
EDDY COUNTY NEW MEXICO**

THIS PLAN IS SUBJECT TO UPDATING



LIST OF APPENDICES

APPENDIX	I		LOCATION LAYOUT
APPENDIX	II		SAFETY EQUIPMENT
APPENDIX	III		OPERATING CONDITIONS
APPENDIX	IV		EMERGENCY PROCEDURES
APPENDIX	V		EMERGENCY NOTIFICATIONS PLATS AND MAPS

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LOCATION LAYOUT

A. DESCRIPTION

- 1) The drilling rig should be situated on location such that the prevailing winds blow out towards the reserve pits on south side. At the first site of any emergency due to gasses, the Department of Public Safety must be notified.
- 2) The entrance to the location will be designated so that it can be barricaded if Hydrogen Sulfide emergency conditions arise. An Auxiliary exit (or entrance) should be available so that in case of a catastrophe, a shift in wind direction would not preclude escape from the location.
- 3) A minimum of two **BRIEFING AREAS** will be established not less than 200 feet or as practical from the well head and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated **BRIEFING AREA** for instructions and account for all site personnel.
- 4) A **SAFETY EQUIPMENT TRAILER** will be stationed on location as a briefing area. The trailer will consist of a cascade air supply of 6 air cylinders, low pressure air line hose, three low pressure manifolds, five air line masks with escape cylinders, two 30-minute self-contained units, first aid kit, stretcher, fire extinguisher, resuscitator, flare gun, and hand pump with current dated gas detection tubes.
- 5) An **H2S detector**, with a light and siren, will be installed with heads that will be located at the bell nipple, one on the shale shaker, and one on the rig floor, and one at flare and pit area.
- 6) The mud logging trailer will be located away from the shale shaker mud tank and as far as possible from the wellbore.
- 7) Shale shaker mud tanks will be located so as to minimize the danger from H2S that breaks out of the drilling fluid.
- 8) Electric power plant(s) will be located as far from the wellbore as practical so that it may be used under conditions where it would otherwise be shut down.
- 9) All windbreakers and rig curtains will be removed from around the derrick floor and monkey board, when any Hydrogen Sulfide (H2S) reaches the surface.
- 10) Appropriate smoking areas will be designated and smoking will be prohibited elsewhere.

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- 11) Emergency phone numbers will be posted on the rig bulletin board and also in the **SAFETY EQUIPMENT TRAILER**.
- 12) Reliable 24-hour radio and/or telephone communications will be available at the rig.
- 13) Safety equipment will be located at the following areas:
 - A) Four Escape Units will be placed on the rig floor for the convenience of normal drilling operations and for emergency situations.
 - B) Five Work and Escape Units will be located in the safety trailer with hose lines and manifolds. (Some Work Units with pressured hoses may be located on rig floor for wells that are considered "Wildcats")
 - C) One SCBA at Briefing Area #1
 - D) One SCBA at Briefing Area #2
 - E) Windssocks will be at the appropriate locations for visibility:
 - 1) Out the V-door
 - 2) In-between the mud hoppers and generating plant.
 - 3) All four corners of the location

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SAFETY EQUIPMENT LIST

1. Hydrogen Sulfide trailer complete with:
 - A. 6-300 cu. Ft. grade D/E breathing air cylinders
 - B. Five Scott Ska-packs w/escape cylinders (work units)
 - C. Two Scott SCBA's w/stands
 - D. Bendix hand pump with detector tubes
 - E. Stainless steel flexible cut proof high pressure line and all necessary pigtails and tee blocks.
 - F. Hi/lo pressure regulators
 - G. Three and five man outlets or manifolds
 - H. High pressure refill hose
 - I. Low pressure rubber hoses for use with the work units
 - J. Flare pistol w/flares
 - K. Condition sign with appropriate flags, no smoking, authorized personnel only, and briefing area signs.
 - L. Two windsocks or streamers
 - M. First Aid station
 - N. Emergency eye wash station
 - O. Fire extinguisher

Note: More equipment will be available if the well condition becomes unstable.

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SAFETY EQUIPMENT

A. TYPE OF EQUIPMENT

1. Self-Contained breathing apparatus (S.C.B.A.)
 - a. Location discussed in previous section
 - b. List of equipment in safety trailer

B. MAINTENANCE RESPONSIBILITIES

1. MIDLAND SAFETY & HEALTH sales & service, shall and will be responsible for cleaning and maintaining the personal protective equipment on a weekly basis.
2. The drill crew can clean S.C.B.A mask with warm soapy water if necessary.

C. PREVENTOR STACK ARRANGEMENT

1. All BOP equipment shall meet API specifications as to materials acceptable for H₂S service.

D. OTHER EQUIPMENT

1. Flare stack
2. Flow sensor
3. PVT System
4. De-gasser
5. De-Silter
6. Mud-Gas separator

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HYDROGEN SULFIDE

A potential hazard to those people employed in the petroleum industry, this gas can paralyze kill quickly. At least part of the answer lies in the proper education of the hazards, symptoms, characteristics, safe practices, treatment and the proper use of personal protective equipment. (PPE)

HYDROGEN SULFIDE HAZARDS

The principal hazard to personnel is asphyxiation or poisoning by inhalation. Hydrogen sulfide is a colorless, flammable gas having an offensive odor and a sweetish taste. It is highly toxic and doubly hazardous because it is heavier than air (specific gravity 1.19) Its offensive odor , like that of a rotten egg, has been used as an indicator by many old timers in the oil fields, but this is not a reliable warning of the presence of gas in a dangerous concentration because people differ greatly in their ability to detect smells. Where high concentrations are encountered , the olfactory nerves are rapidly paralyzed losing the sense of smell as a warning indicator. A concentration of a few hundredths of one percent higher than that causing irritation , can cause asphyxia and or death. In other words, there is a narrow margin between consciousness and unconsciousness, and between unconsciousness and DEATH!!!

Where high concentration can cause respiratory paralysis, spontaneous breathing does not return unless artificial respiration is applied. Although breathing is paralyzed, the heart may continue to beat for minutes after the initial attack.

PHYSIOLOGICAL SYMPTOMS

Acute: Results in almost instantaneous asphyxia, along with respiratory paralysis. Acute poisoning, or strangulation, may occur after even a few seconds of inhalation at high concentration and results in panting respiration, pallor, cramps, paralysis and almost immediate loss of consciousness with loss of speech, and no other warning than a cry. Death may soon follow due from respiratory and cardiac paralysis. One breath of a sufficiently high concentration may have this result.

Subacute: Results in irritation, principally of the eyes, persistent cough, tightening or burning in the chest and skin irritation followed by depression of the central nervous system. The eye irritation ranges in severity from mild conjunctivitis to swelling and bulging of the conjunctiva, photophobia (abnormal intolerance of light) and temporary blindness.

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TREATMENT

1. Victim should be removed to fresh air immediately by rescuers wearing respiratory protective equipment. Protect yourself while attempting a rescue.
2. If the victim is not breathing, begin immediately to apply artificial respiration. If a resuscitator is available, let another employee get it and prepare for use.
3. Treat the victim for shock, keep warm and dry.
4. Call EMS in all cases, victims poisoning should be examined by a physician.

CHARACTERISTICS OF H₂S

1. Extremely toxic (refer to chart for toxicity hydrogen sulfide)
2. Heavier than air. Specific gravity 1.19
3. Colorless, has odor of rotten eggs.
4. Burns with a blue flame and produces Sulphur dioxide (SO₂) GAS which is very irritating to eyes and lungs. The SO₂ is also toxic and can cause serious injury.
5. H₂S forms explosive mixture, with air between 4.3% and 46% by volume
6. H₂S is almost as toxic as hydrogen cyanide
7. Between 5 and 6 times as toxic as hydrogen cyanide
8. Produces irritation to eyes, throat and respiratory tract
9. Threshold Limit Value (TLV) maximum of eight hours exposure without protective respiratory equipment - 10 ppm

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SAFE PRACTICES

If you are faced with an H₂S problem in your operations, the following safe practices are recommended:

1. Be sure all concerned personnel are familiar with the hazards concerning H₂S and how to avoid it.
2. All employees should know how to operate and maintain a resuscitor, and respiration equipment.
3. Be able to give and demonstrate artificial respiration .
4. Post areas where there is poisonous gas with suitable warning signs.
5. Be sure all new employees are thoroughly schooled before they are sent to the field-tomorrow may be too late.
6. Teach men to avoid gas whenever possible - work on the upwind side, and have a fresh air mask available.
7. Do Not let bad judgement guide you - wear respiratory equipment when gauging tanks, etc. Do not try to hold your breath in order to enter a contaminated atmosphere.
8. In areas of high concentration, or when levels are above the Immediate Danger to Life and Health (I.D.L.H.) 100 PPM . A two man operation is mandatory.
9. Never enter a tank, cellar or other enclosed place where gas can accumulate without proper respiratory protective equipment and a full body harness secured to a lifeline held by another person outside.
10. Always check out danger areas first with an H₂S detector before allowing anyone to enter the area. Do not try to determine the presence of gas by its odor.
11. Wear proper respiratory equipment for the job on hand. Never take a chance with equipment with which you are unfamiliar. If in doubt, consult with your supervisor.
12. Carry out practice drills every month with emergency and maintenance equipment. Telling or showing a group how to operate the equipment is not satisfactory, make them show you.
13. Maximum care should be taken to prevent the escape of fumes into the air of working places by leaks, etc..
14. Communications such as radios and telephones should be provided for those people employed where H₂S may be present. Not in potential L.E.L areas, they are not intrinsically safe.

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TABLE I**TOXICITY OF VARIOUS GASES**

COMMON NAME	CHEMICAL FORMULA	SPECIFIC GRAVITY	THRESHOLD LIMIT	HAZARDOUS LIMIT	LETHAL CONCENTRATION
Hydrogen Cyanide	HCN	0.94	10 PPM	150 PPM/HR.	300 PPM
Hydrogen Sulfide	H ₂ S	1.19	10 PPM	250 PPM/HR.	600 PPM
Sulfur Dioxide	SO ₂	2.21	5 PPM		1000 PPM
Chlorine	CL ₂	2.45	1 PPM	4 PPM/HR	1000PPM
Carbon Monoxide	CO	0.97	50 PPM	400 PPM/HR	1000 PPM
Carbon Dioxide	CO ₂	1.52	5000 PPM	5%	10%
Methane	CH ₄	0.55	90,000 PPM	Combustible above 5% in air	

1. Threshold - Concentration at which it is believed that all workers may be repeatedly exposed, day after day, without adverse effect.
2. Hazardous - Concentration that may cause death.
3. Lethal - Concentration that will cause death with short-term exposure.

PROPERTIES OF GASES

The produced gas will probably be a mixture of carbon dioxide, hydrogen sulfide, and methane.

Carbon dioxide (CO₂) is usually considered inert and is commonly used to extinguish fires. It is heavier than air (1.5 x) and CO₂ will concentrate in low areas of calm air. Humans cannot breathe air containing more than 10% CO₂ without losing consciousness. Air containing 5% CO₂ will cause disorientation if breathed for 30 minutes or more and air containing 10% CO₂ will cause disorientation if a few minutes. Continued exposure to CO₂ after being affected will cause convulsions, coma, and respiratory failure.

The Threshold Limit Value of CO₂ is 5,000 ppm. Short - term exposure to 50,000 ppm (5%) is reasonable. This gas is colorless and odorless and can be tolerated in relatively high concentrations.

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TABLE II

PHYSICAL EFFECTS OF HYDROGEN SULFIDE

%	PPM	GR/100 SCK	EFFECTS
0.001	10	0.65	Obvious and unpleasant odor Safe for 8 hours exposure
0.01	100	6.48	I.D.L.H. Kills smell in 3 to 15 minutes, may sting eyes and throat
0.02	200	12.96	Kills smell shortly, stings eyes and throat
0.05	500	32.96	Dizziness, breathing ceases in a few minutes, needs prompt artificial respiration
0.07	700	45.36	Unconscious quickly, death will result if not rescued quickly
0.10	1000	64.8	Unconscious at once, followed by death within minutes
1	10,000		

Hydrogen Sulfide (H₂S) itself is a colorless and transparent gas and is flammable. It is heavier than air and hence, may accumulate in low places

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THE USE OF BREATHING AIR EQUIPMENT

1. Procedures shall be reviewed covering safe use of respirators in dangerous atmospheres which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available respirators. Fit testing shall be required.
2. Respirators shall be inspected frequently at random to insure that they are properly cleaned and maintained.
3. Anyone who is to use a respirator shall be trained in how to insure a proper face seal. Respirators shall be tested in normal air before entering toxic atmosphere. Note: Such items as facial hair (beard or sideburns) and eyeglasses with temple pieces will not allow a proper seal. Anyone that may be reasonably expected to wear respirators should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses. Contact lenses should not be allowed.
4. Maintenance and care of respirators:
 - a. A program for maintenance and care of respirators shall include the following:
 - 1) Inspection for defects, including leak checks
 - 2) Cleaning and disinfecting
 - 3) Repair
 - 4) Storage
 - b. Inspection: Self-Contained breathing apparatus for emergency use shall be inspected monthly for the following and a permanent record kept of these inspections.
 1. Fully charged cylinders
 2. Regulator and warning device operation
 3. Condition of face piece and connections
 4. Elastomer or rubber parts shall be stretched or massaged to keep them pliable and prevent deterioration
 - c. Routinely used respirators shall be collected, cleaned and disinfected as frequently as necessary to insure proper protection is provided.

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- MIDLAND SAFETY & HEALTH, sales & service**

OPERATING PROCEDURES

A. BLOWOUT PREVENTION DRILLS

1. Blowout prevention drills should be held with each crew until they are proficient in closing the well in. Drills should be held on a regular basis with at least one drill per crew each week continuously from 1,000 feet above the expected H₂S formation to T.D.

B. BLOWOUT PREVENTOR TESTING

1. BOP equipment will be tested at 1,000 ft. prior to the H₂S zone at a 5,000 PSI working pressure on initial installation and routinely thereafter, not to exceed two week period and at any time a seal has been broken.

C SAFETY TRAINING

1. H₂S safety training will be given to all personnel at 1,000 feet above the expected H₂S formation unless employees have already been trained. The training sessions will cover, but will not be limited to the following:

- a. General information on H₂S and SO₂ gas
- b. Hazards of these gases
- c. Safety equipment on location
- d. Proper use and care of personal protective equipment
- e. Operational procedures in dealing with H₂S gas
- f. Evacuation procedures
- g. First aid, reviving and H₂S victim, toxicity, etc.
- h. Buddy system (working in pairs)
- i. Designated safe briefing area (S.B.A.)

2. When an alarm is activated:

- a. Mask up
- b. Raise tool joint above rotary table and shut down pump
- c. close in hydril
- d. Go to briefing area that is upwind
- e. Designate someone to mask up and scout the area for persons in distress, then sample for H₂S

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D. OUTSIDE PERSONNEL RESPONSIBILITIES

1. All outside personnel, service companies, sub-contractors, etc. will be notified by an on site company representative, of the potential of H2S gas on location. All outside personnel will have H2S protective equipment and H2S training.

E. MUD PROGRAM AND TREATING

1. It is of utmost importance that the mud be closely monitored for detection of H2S and reliability of the H2S treating chemicals.
2. Identification and analysis of sulfides in the mud and mud filtrate will be carried out regularly.

3. The mud system will be pre-treated with H2S treating chemicals prior to drilling into the H2S bearing formation. Continue maintaining residual concentration of 2 to 3 PPM by monitoring. Increase residual concentration, if needed to control larger influxes of H2S. Mud PH will be held at 10 or above 1,000 feet prior to the same.

OPERATING CONDITIONS

A. EMERGENCY PROCEDURES AND DEFINITION OF WARNING FLAGS

1. Condition:

- POTENTIAL DANGER, CAUTION (LESS THAN 10 PPM)

a. Cause for condition:

- 1) Circulating up drilling breaks
- 2) Trip gas after trip
- 3) Circulating out gas on choke
- 4) Poisonous gas present, but below threshold concentrations

b. Safety actions:

- 1) Check safety equipment and keep it with you
- 2) Be alert for change in condition
- 3) Follow instructions

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2. Condition:
ORANGE - MODERATE DANGER (GREATER THAN 10 PPM)

a. Cause for condition:

1. Circulating up drilling breaks
2. Trip gas after trip
3. Circulating out gas on choke
4. Poisonous gas present, but above threshold concentrations

b. Safety action:

1. Check safety equipment and keep it with you, wear mask if on floor
2. Be alert for a change in condition
3. Follow instructions

3. Condition:

RED - EXTREME DANGER (GREATER THAN 100 PPM, I.D.L.H.)

a. Cause for condition:

1. Mask up, all personnel will have protective breathing equipment with them. All personnel will stay in safe briefing area unless instructed otherwise.

2. The decision to ignite the well is the responsibility of the company representative and should be made only as a last resort, when it is clear that:

- * Human life is endangered

- * There is no hope of controlling the well under prevailing conditions

3. The Oil Conservation Division Office shall be notified as follows if the contingency plan is activated.

- * 12 Hours in advance of an intentional release or as soon as decision is made to release if such decision could not reasonably have been made more than 12 hours prior to the release

- * Immediately in the case of an accident release.

- * As soon as possible before or after an unplanned intentional release made in an emergency situation to prevent a possible uncontrolled release.

- * The retention of the contingency plan shall be as follows:

- * The plan shall be available for Oil Conservation inspection at the location indicated on the certificate of compliance.

- * Releases of, and accidents related to hydrogen sulfide. The operator shall furnish a written report to the district office with 10 days of any accidental release of hydrogen sulfide gas of sufficient volume to present a hazard and of any hydrogen sulfide related accident, whether if be from an accidental or intentional release.

4. Order evacuation of local people with the danger zone. Request help from local authorities, State Police Sheriff's Department, District RRC, and Service Representative.

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B. CIRCULATING OUT KICK

1. If it is suspected that H₂S is present with the gas, whenever a kick is taken, the driller's method of eliminating gas and raising the mud will be followed.
2. The driller's method is maintaining sufficient back pressure on the annulus to keep any additional gas from coming into the hole while circulating the gas up.
3. After the gas is eliminated, raise the mud weight and circulate around, maintaining back pressure on the annulus until the well is dead.
4. If a kick has occurred, the standard blowout procedure will be followed and the driller's method will be used to kill the well. When the well has been put on the choke and circulation has been established, the following safety procedure must be established.
 - a. Determine when gas is anticipated to reach the surface.
 - b. All non-essential personnel must be moved to safe briefing area.
 - c. All remaining personnel will check out and keep with them their protective breathing apparatus.
 - d. Mud man will see that the proper amount of H₂S scavenging chemical is in the mud and record times checked.
 - e. Make sure ignition flare is burning and valves are open to designated flare stacks.
 - f. Should anything develop where additional personnel are required, the on site representative will immediately proceed to a safe briefing area to assist the crew with donning on their breathing

C. CORING OPERATIONS IN H₂S BEARING ZONES

Personnel protective breathing apparatus will be worn from 1 to 20 stands in advance of retrieving the core barrel. Cores to be transported should be sealed and marked for the presence of H₂S equipment.

D. DRILL STEM TEST

1. (SHOULD A DECISION BE MADE TO HAVE A DRILL STEM TEST, AN APPROPRIATE DRILLING PROGNOSIS WILL BE APPLIED AND THE FOLLOWING WILL APPLY!)
Drill Stem Testing of Hydrogen Sulfide zones will be permitted in daylight hours only

MIDLAND SAFETY & HEALTH, sales & service

2. The necessary authorities will be notified of the intention to conduct a drill stem test of a formation suspected of, or known, containing Hydrogen Sulfide.
3. All non-essential personnel will be moved to "Safe Briefing Area"
4. Put on air mask before formation fluids are expected to reach the surface and continue "MASK ON" until flares are lighted and work areas test no more than 10 PPM Hydrogen Sulfide and the area has been declared safe.

EMERGENCY TELEPHONE NUMBERS

FOR

PRESTON EXPLORATION

THE WOODLANDS TEXAS
ROUGHNECK RED "19"#1

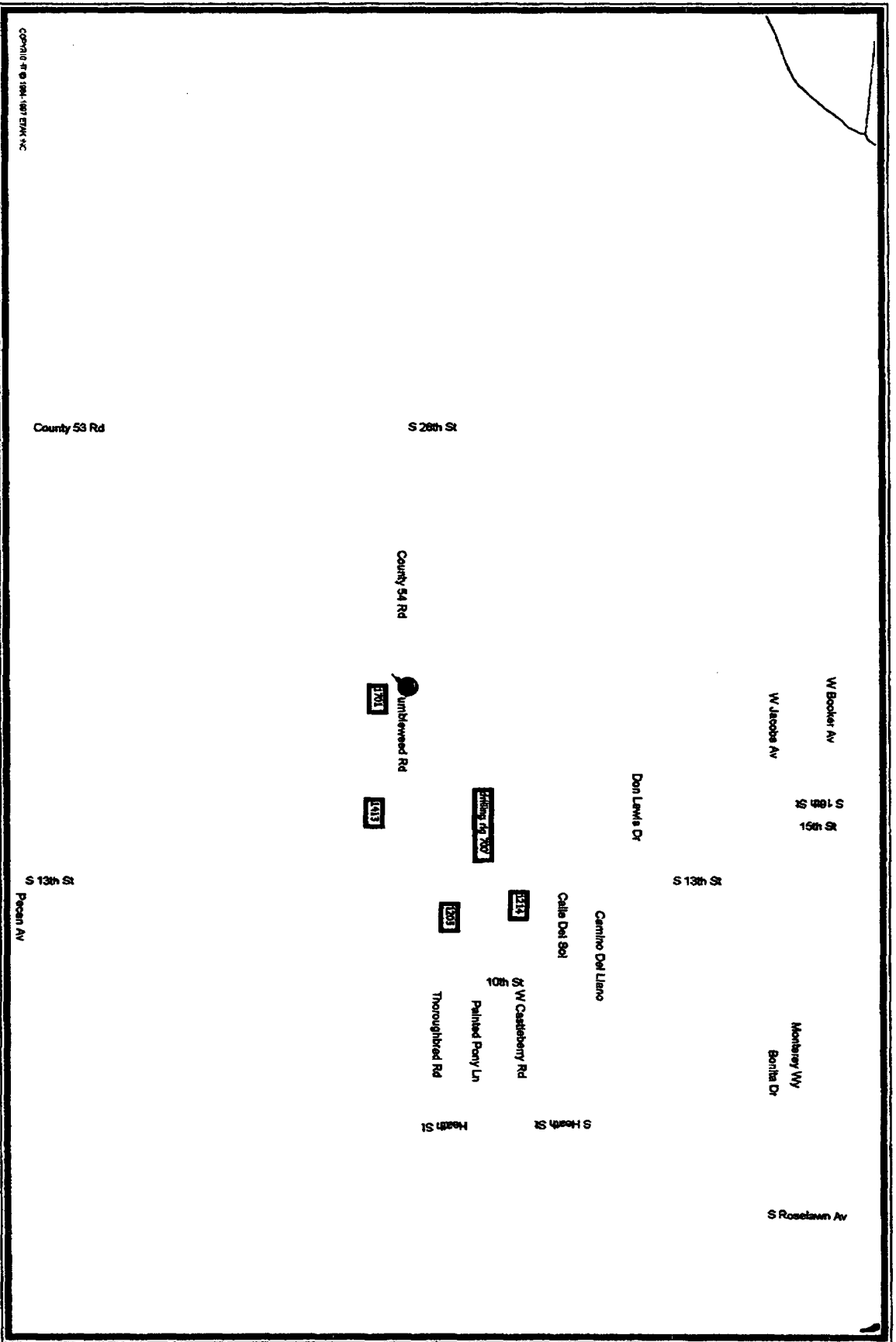
AMBULANCE.....	ARTESIA NM	911 OR 505-746-5050
HOSPITAL.....	ARTESIA NM	911 OR 505-746-2999
FIRE DEPARTMENT.....	ARTESIA NM	911 OR 505-746-5050
SHERIFF'S DEPARTMENT.....	ARTESIA NM	505-746-2704
NEW MEXICO STATE POLICE.....	ARTESIA NM	505-746-2704
FLIGHT FOR LIFE.....	LUBBOCK TX	806-743-9911
AEROCARE.....	LUBBOCK TX	806-747-8923

AGENCIES

STATE OF NEW MEXICO.....	ARTESIA	505-748-1283
ENERGY MINERALS AND NATURAL RESOURCES		
N.M. EMERGENCY RESPONSE CENTER.....	HOBBS	505-827-9222
LOCAL EMERGENCY PLANNING.....	EDDY COUNTY	505-887-9511
OCCUPATIONAL SAFETY & HEALTH ADDM....	LUBBOCK	806-743-7681

MIDLAND SAFETY & HEALTH, SALES & SERVICE

Current Map





Newpark Drilling Fluids, LLC



DRILLING FLUIDS PROGRAM

PREPARED FOR:

Roughneck Red "19" No.1

***Section 19, T-17-S, R-26-E
Eddy County, New Mexico***

RECEIVED

JAN 30 2004

OCD-ARTESIA

SUBMITTED TO:

Mr. Randy Ford

***Preston Exploration, LLC
410 W. Wall
Suite 1700
Midland, Texas 79701***

PREPARED BY:

Ken Anthony



Newpark Drilling Fluids, LLC



December 23, 2003

Mr. Randy Ford
Preston Exploration, LLC
410 W. Wall
Suite 1700
Midland, Texas 79701

Dear Mr. Ford:

Enclosed are our drilling fluids recommendations for your Roughneck Red "19" No. 1 in section 19, T-17-S, R-26-E, Eddy County, New Mexico. They are derived from information from your office, offset well data, and our knowledge of the area.

Estimated mud cost is \$ 25,138.86 based on 17 total days with ideal conditions.

Material	\$ 28,045.04
Discount	-5,609.01
Drayage	1,279.87
Tax	<u>1,422.95</u>
Total	\$ 25,138.86

For questions or comments call (800) 592-4627 or (432) 697-8661. Both are 24-hour numbers.

Sincerely,

Ken Anthony



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1

Section 19, T-17-S, R-26-E

Eddy County, New Mexico

Anticipated Formation Tops

San Andres	825'
Glorietta	2,250'
Tubb	3,640'
Abo	4,190'
Wolfcamp	5,585'
Upper Cisco	6,590'
Lower Cisco	6,760'
Canyon	7,255'
Strawn	7,720'
Atoka	7,960'
Morrow	8,110'
Barnett Shale	8,350'
Chester	8,400'



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1

Section 19, T-17-S, R-26-E

Eddy County, New Mexico

Mud Program Summary

<u>Depth</u>	<u>Casing</u>	<u>Hole Size</u>	<u>Mud Wt.</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>pH</u>
0' - 420'	13-3/8"	17-1/2"	8.6-8.7	34-36	N/C	N/C
420' - 1,400'	9-5/8"	12-1/4"	8.4-8.5	28-29	N/C	9-10
1,400' - 6,000'	-	8-1/2"	8.4-8.5	28-29	N/C	9-10
6,000' - 7,200'	-	8-1/2"	8.4-9.0	28-29	N/C	9-10
7,200' - 8,460'	5-1/2"	8-1/2"	9.0-9.4	32-38	12-8	9-10

Potential Problems

Surface Interval 0 - 350'

- Severe lost circulation.
- Losses may require dry drilling.
- Poorly consolidated formations, may require higher than normal viscosity.

Intermediate Interval 400' - 1,400'

- Severe seepage.
- Severe lost circulation.

1st Open Hole Interval 1,400' - 6,000'

- Moderate/severe seepage.
- Abnormal pressure possible in Wolfcamp.

2nd Open Hole Interval 6,000' - 7,200'

- Moderate seepage.
- Sensitive shales.

Production Hole Interval 7,200' - 8,460'

- Moderate/severe seepage.
- Abnormal pressure possible in Atoka and Morrow.
- Water Sensitive sands in Morrow.



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1

Section 19, T-17-S, R-26-E

Eddy County, New Mexico

Surface Interval

Interval: 0 – 400'
Hole Size: 17-1/2"
Casing Size: 13-3/8"
Total Days: 1
Mud Type: New Gel/Lime
Properties:
 Weight: 8.6 – 8.7 ppg
 Viscosity: 34 – 36 sec/1000cc
 Filtrate: N/C
 pH: N/C

Interval Discussion:

Spud with a conventional New Gel/Lime "spud mud". Use NewGel and native solids to maintain a sufficient viscosity to keep the hole clean. Compound pumps to provide adequate volume to produce required annular velocity to clean hole. Mix Paper as needed to control seepage loss. Run fresh water at flowline for dilution and volume. Severe losses may require dry drilling to casing point.

At total depth of interval, mix in pre-mix pit, 200 barrels of fresh water, NewGel for a viscosity of 70 sec/1000cc, add 0.25 ppb of Super Sweep. Pump this pill prior to trip to run surface casing.

Materials Consumption & Cost:

40	sk	New Gel	\$ 345.20
5	sk	Lime	41.30
5	sk	Paper	62.50
2	bx	Super Sweep	<u>402.52</u>
			\$ 851.52



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1

Section 19, T-17-S, R-26-E

Eddy County, New Mexico

Intermediate Hole Interval

Interval: 420' – 1,400'
Hole Size: 12-1/4"
Casing Size: 8-5/8"
Total Days: 2
Mud Type: Fresh Water
Properties:
 Weight: 8.4 – 8.5 ppg
 Viscosity: 28 – 29 sec/1000cc
 Filtrate: N/C
 pH: 9 – 10

Interval Discussion:

Drill out below Surface Casing with Fresh water. Circulate through a controlled portion of the reserve pit for maximum gravitational solids removal. Mix Paper to control seepage losses. Mix Caustic Soda to maintain pH at 9-10. Mix one gallon of New-55 at flowline every 250' to promote solids settling. Sweep hole with 5-lbs of Super Sweep every 500 feet drilled.

If severe losses are encountered, fill pre-mix pit with fresh water, mix NewGel for a 40-50 sec/1000cc viscosity, Maxi-Seal (15-20 ppb) and Mica (5-10 ppb). Pull 5 stands above the loss zone and pump the LCM pill at a reduced rate until returns are gained. Severe losses may require dry drilling to casing point.

At total depth sweep the hole using 100-barrels of system fluid, NewGel for a 70 sec/1000cc viscosity and 0.25 pounds per barrel of Super Sweep.

Materials Consumption & Cost:

40	sk	NewGel	\$ 345.20
20	sk	Paper	250.00
5	sk	Caustic	199.40
1	sk	Super Sweep	201.26
1	cn	New-55	<u>226.96</u>
			\$ 1,222.82



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1

Section 19, T-17-S, R-26-E

Eddy County, New Mexico

1st Open Hole Interval

Interval: 1,400' – 6,000'
Hole Size: 8-1/2"
Casing Size:
Total Days: 8
Mud Type: Fresh Water
Properties:
 Weight: 8.4 – 8.5 ppg
 Viscosity: 28 – 29 sec/1000cc
 Filtrate: N/C
 pH: 9 – 10

Interval Discussion:

Drill out below Intermediate Casing with fresh water. Circulate through the remaining portion of the reserve pit for gravitational solids removal. Use sweeps of Paper to control seepage loss. Use Caustic Soda for pH control. Mix one gallon of New-55 at flowline every 250' to promote solids settling. Sweep hole with 2-lbs of Super Sweep every 500 feet drilled.

Materials Consumption & Cost:

50	sk	Paper	\$ 625.00
20	sk	Caustic	779.80
4	cn	New-55	907.84
2	bx	Super Sweep	<u>402.52</u>
			\$ 2,715.16



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

2nd Open Hole Interval

Interval: 6,000' – 7,200'
Hole Size: 8-1/2"
Casing Size:
Total Days: 2
Mud Type: Fresh Water-3% KCL
Properties:
 Weight: 8.4 – 9.0 ppg
 Viscosity: 28 – 29 sec/1000cc
 Filtrate: N/C
 pH: 9 – 10

Interval Discussion:

At 6,000' add 3% Potassium Chloride (KCL) for inhibition. Continue circulating through the remaining portion of the reserve pit for gravitational solids removal. Use sweeps of Paper to control seepage loss. Use Caustic Soda for pH control. Mix one gallon of New-55 at flowline every 250' to promote solids settling. Sweep hole with 2-lbs of Super Sweep every 500 feet drilled.

Maintain sufficient 10-ppg brine water on location to increase mud weight if pressure is encountered.

Materials Consumption & Cost:

250	sk	KCL	\$ 3,785.00
15	sk	Paper	187.50
8	sk	Caustic	311.92
1	sk	Super Sweep	201.26
1	cn	New-55	<u>226.96</u>
			\$ 4,712.64



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1

Section 19, T-17-S, R-26-E

Eddy County, New Mexico

Production Hole Interval

Interval: 7,200' – 8,460'
Hole Size: 8-1/2"
Casing Size: 5-1/2"
Total Days: 4
Mud Type: Dynazan-Starch
Properties:
 Weight: 9.0 – 9.4 ppg
 Viscosity: 32 – 38 sec/1000cc
 Filtrate: 12 – 8 cc/30min
 pH: 9 – 10

Interval Discussion:

At 7,200' confine circulation to steel pits. Adjust and maintain pH with Caustic Soda. Treat the system with Newcide to prevent bacterial degradation of organic materials. Mix Dynazan for a 32 sec/1000-cc viscosity. Mix Starch to control API filtrate at <12cc.

At 8,000' reduce API filtrate to <8-cc with Starch. Increase the viscosity to 36-38 sec/1000cc with Dyna Zan for hole cleaning and a firm-thin wall cake.

At total depth fill pre-mix pit with 80 barrels of system fluid. Mix Dynazan for a 80 sec/1000cc viscosity. Sweep with 40-barrels and spot the additional 40-barrels on bottom for logging and casing operations.

Materials Consumption & Cost:

40	sk	Dynazan	\$ 14,886.40
75	sk	Starch	1,854.75
15	sk	Caustic	584.85
5	cn	Newcide	<u>1,216.90</u>
			\$ 18,542.90



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

ENGINEER / WAREHOUSE INFORMATION

WELL NAME: Roughneck Red "19" No. 1

LOCATION: Section 19, T-17-S, R-26-E
Eddy County, New Mexico

MUD ENGINEER: Jack Bartlett Carlsbad, New Mexico
Bill Stewart Hobbs, New Mexico
Ron Bailey Hobbs, New Mexico

(800) 592-4627 or (432) 697-8661. Both 24 hours.

WAREHOUSE: Artesia & Lovington, New Mexico

(800) 592-4627 or (432) 697-8661. Both 24 hours.



Newpark Drilling Fluids, LLC



Preston Exploration, LLC

Roughneck Red "19" No.1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

LOST CIRCULATION PROCEDURES

Loss of circulation is a possibility on any well. Although each well is different, there are some basic procedures and drilling practices that can aid in reducing the severity and in some cases prevent lost circulation. Below is a list of several parameters which may prove helpful.

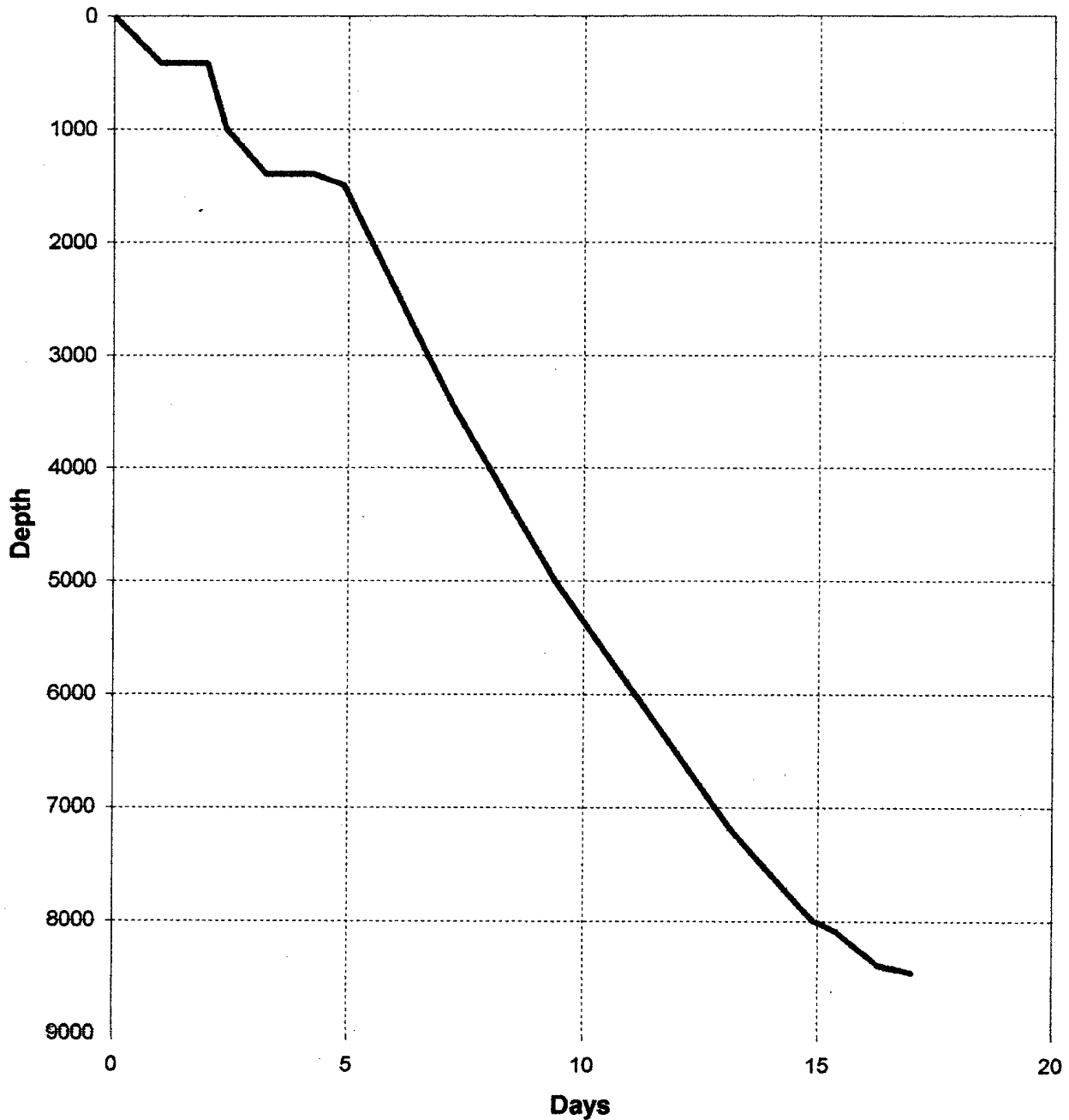
1. Maintain viscosities as low as possible and still clean the hole.
2. Maintain mud weights as low as possible without jeopardizing safety.
3. Use slower tripping speeds to prevent swabbing and surging.
4. Break circulation in stages while tripping in the hole.
5. Rotate pipe while breaking circulation.
6. Use an optimum hydraulics program.

If losses do occur, we recommend pulling enough stands of pipe to get above the loss zone. A viscous pill containing a minimum of 10-20 pounds per barrel of the appropriate lost circulation material should be spotted at the loss zone. The pill should be between 50 and 100 barrels in size and be pumped at a reduced pump rate. Several attempts should be made before considering other alternatives.



Preston Exploration, LLC
Roughneck Red "19" No. 1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

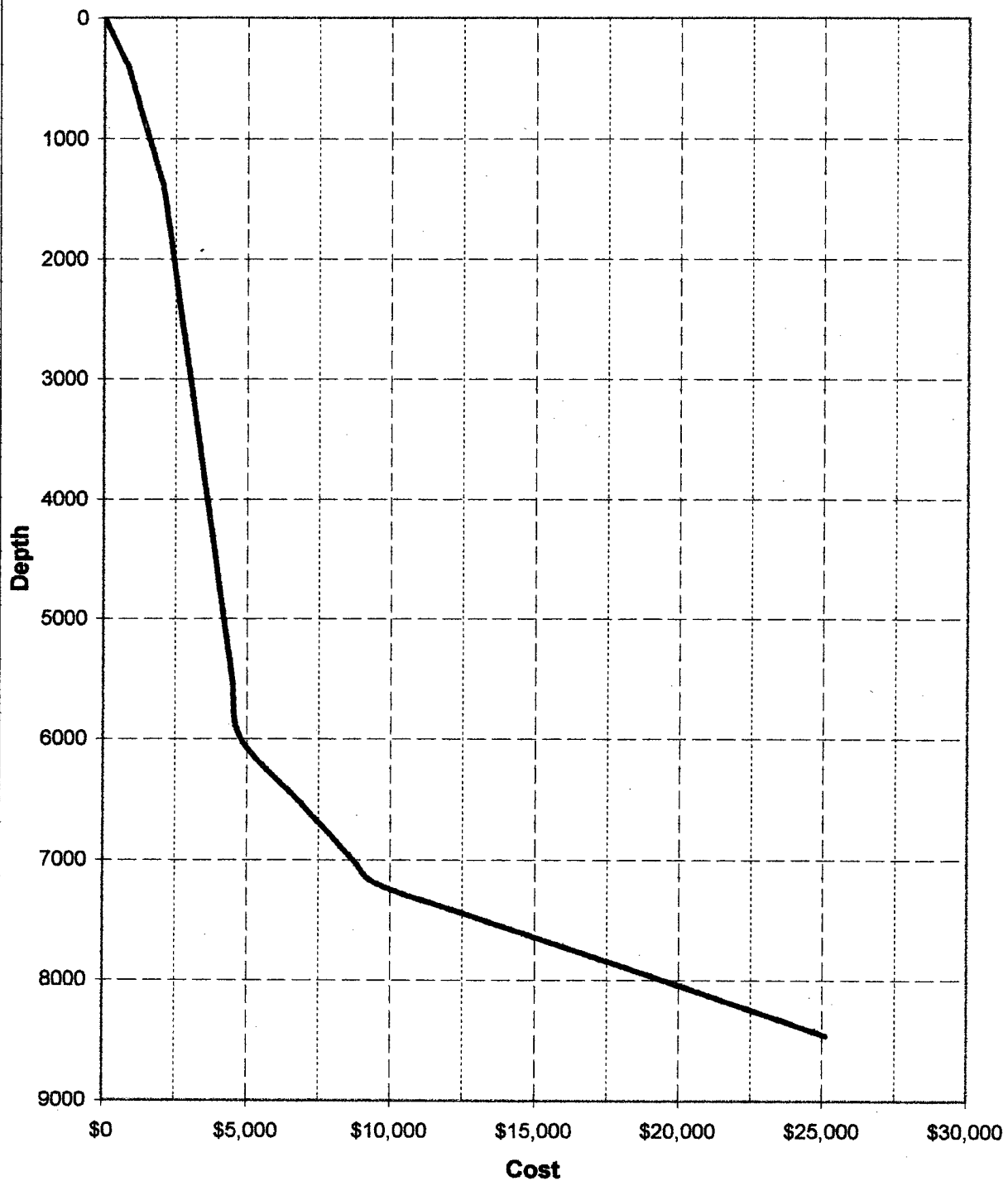
Depth Vs Days





Preston Exploration, LLC
Roughneck Red "19" No. 1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

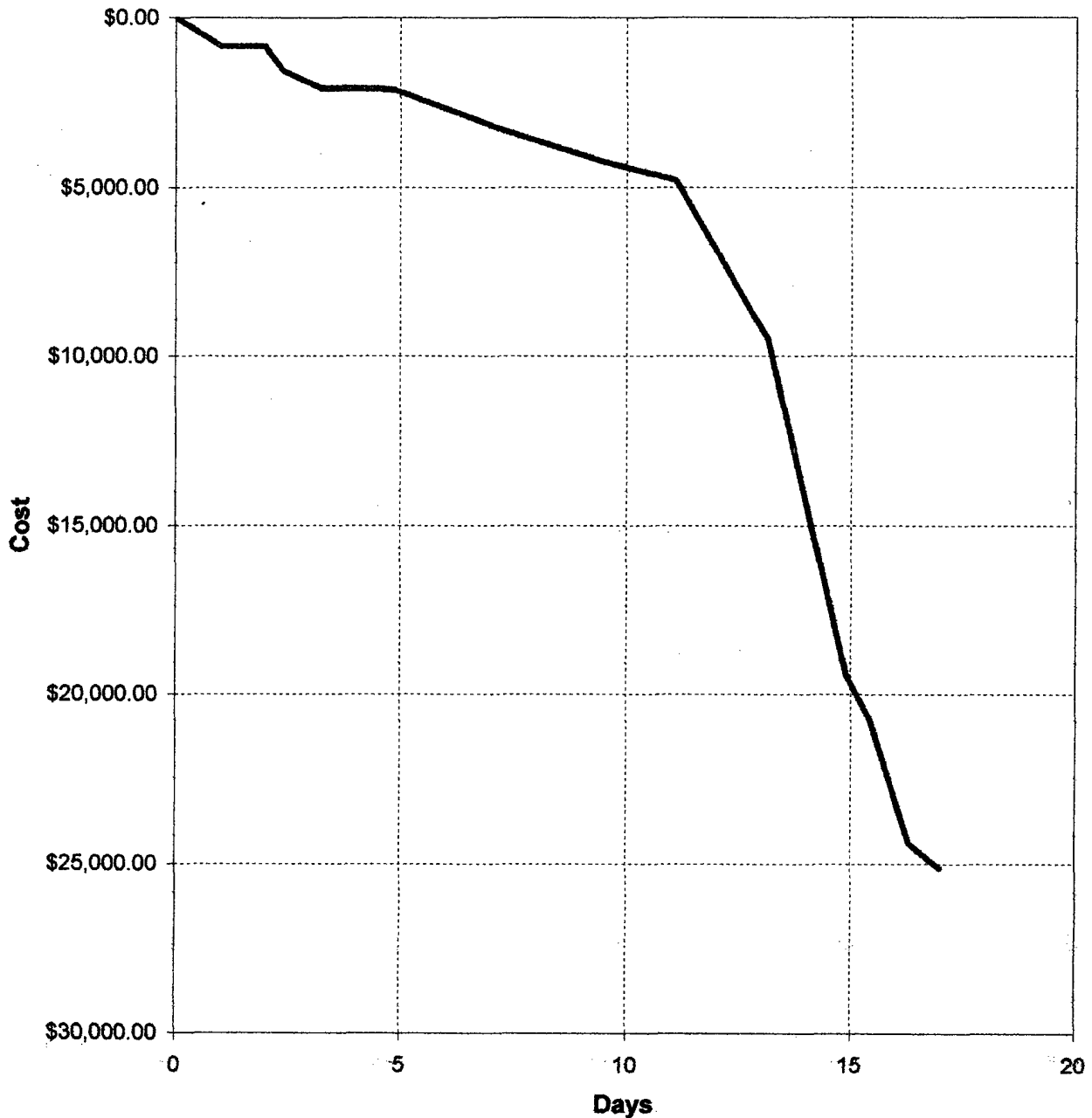
Cost Vs Depth





Preston Exploration, LLC
Roughneck Red "19" No. 1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

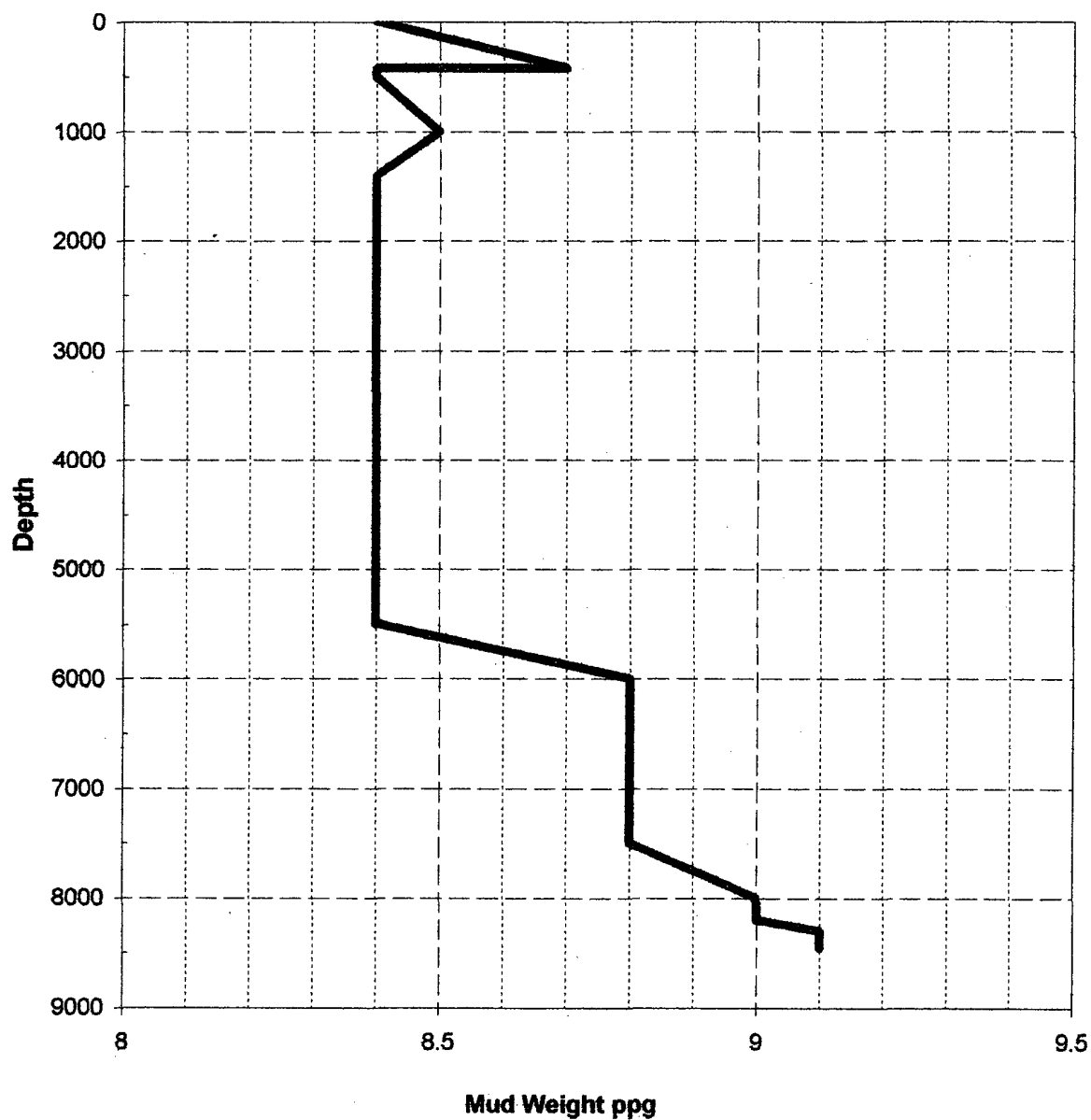
Cost Vs Days





Preston Exploration, LLC
Roughneck Red "19" No. 1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

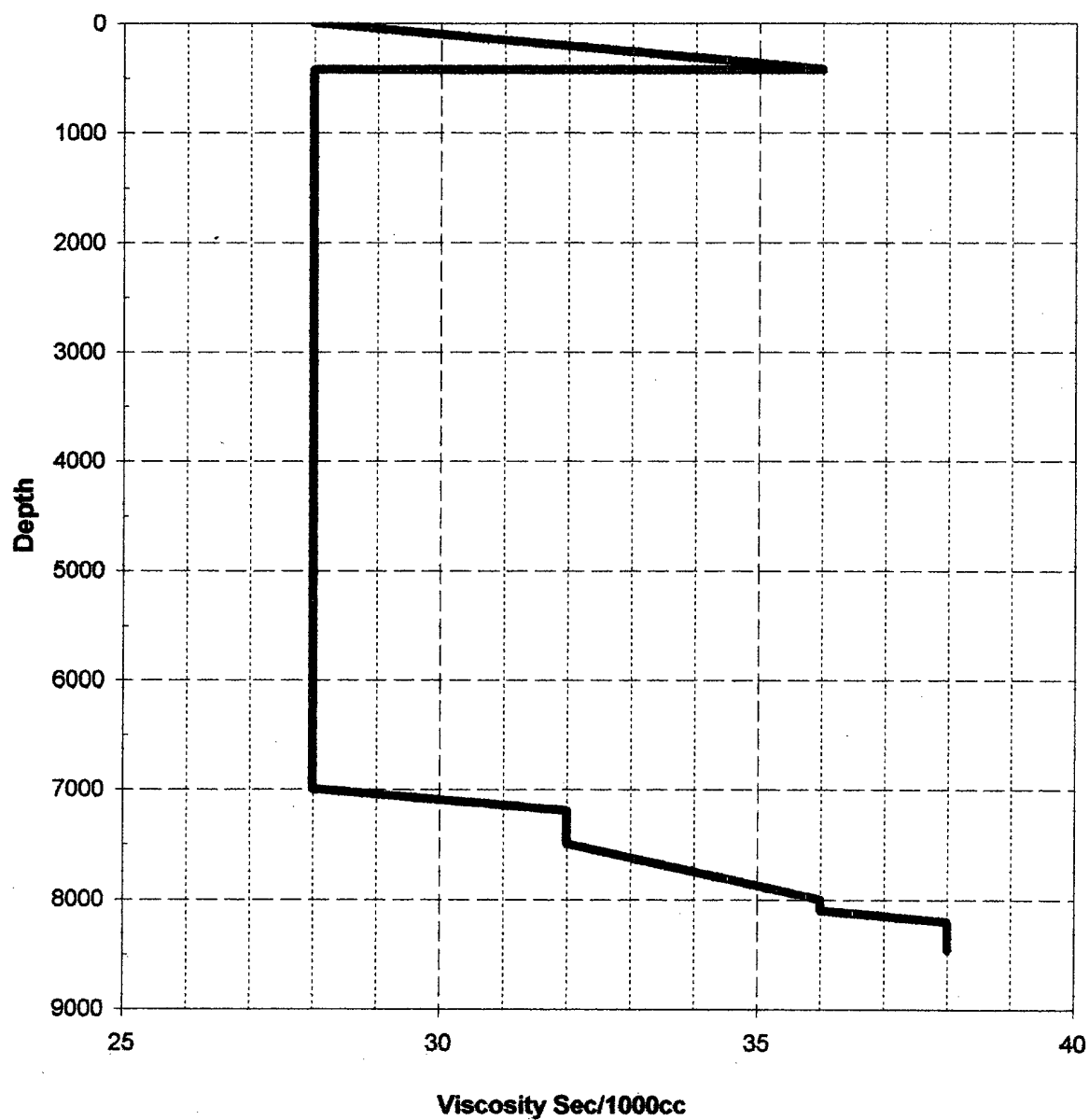
Mud Weight Vs Depth





Preston Exploration, LLC
Roughneck Red "19" No. 1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

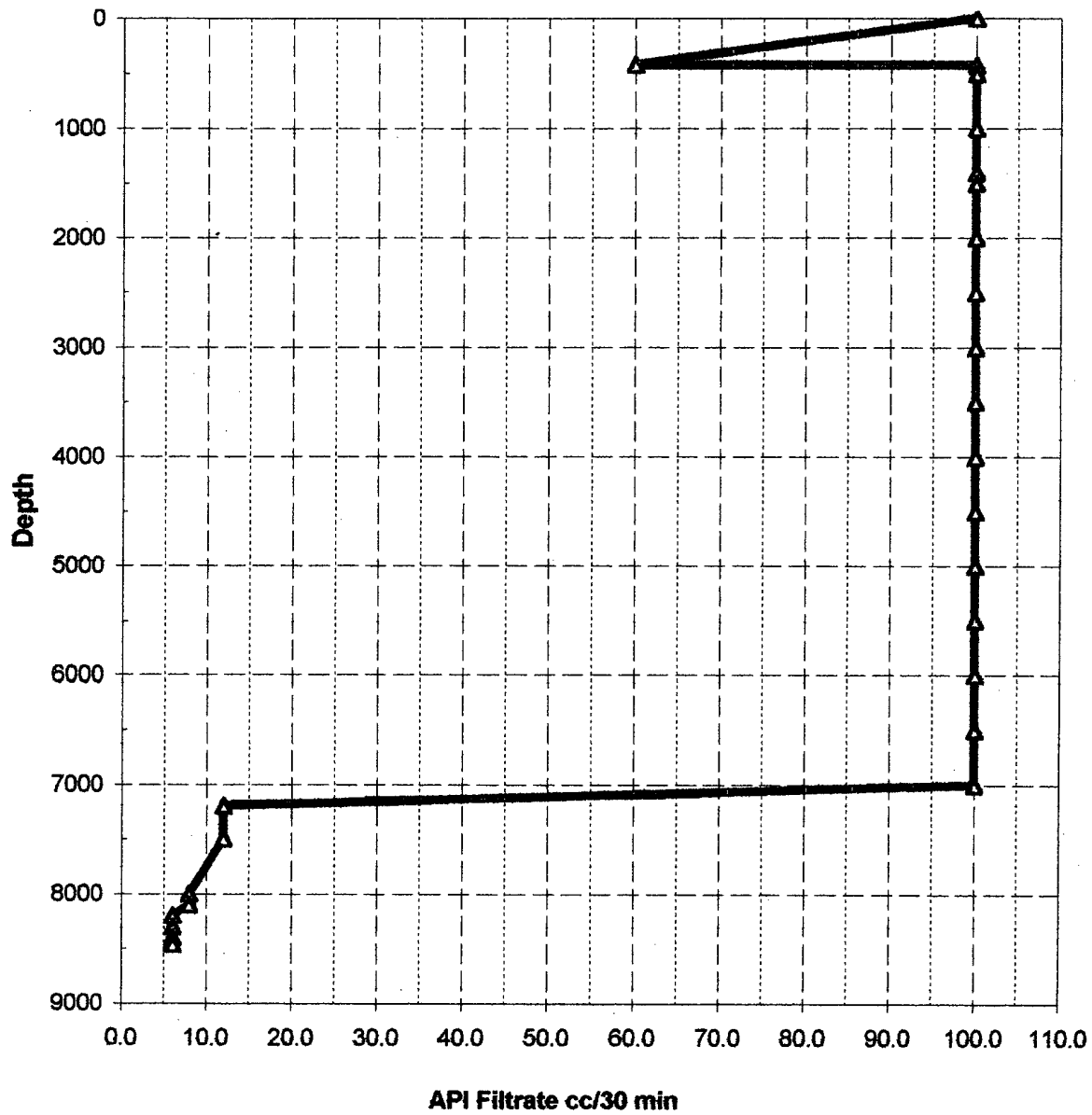
Viscosity Vs Depth

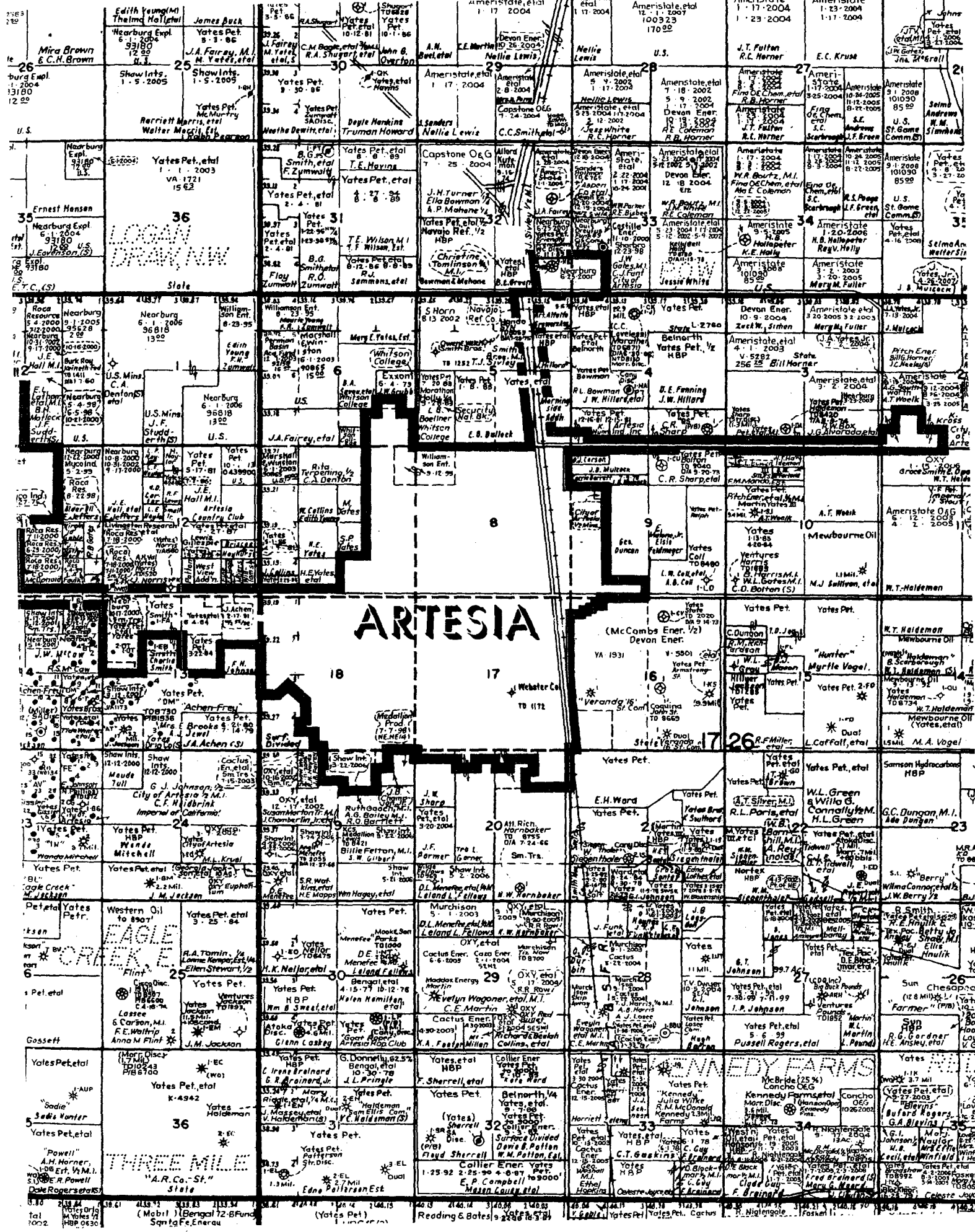




Preston Exploration, LLC
Roughneck Red "19" No. 1
Section 19, T-17-S, R-26-E
Eddy County, New Mexico

API Filtrate Vs Depth





OPERATOR MEWBOURNE OIL	LEGAL DESCRIPTION SECTION 14 T-17-S, R-26-E	TOTAL MUD COST \$13,655.00
WELL HALDEMAN #1		SPUD DATE 03-12-91
CONTRACTOR WEK #2	COUNTY/PARISH EDDY	T.D. DATE 04-07-91
ENGINEER OLIN STEWART	STATE NEW MEXICO	DAYS TO T.D. 27 TOTAL DEPTH 8,733

SOUTHWESTERN

DRILLING FLUIDS

UNIVERSAL
CORP.

DRILLING MUD RECORD

 Post Office Box 11247
 Midland, Texas 79702
 (915) 697-8661
 US WATS 1-800-592-4627

CASING PROGRAM		BITS		TYPE OF MUD SYSTEM		SOLIDS CONTROL		ADDITIONAL INFORMATION	
DEPTH (FT.)	SIZE (in.)	NO.	SIZE (in)	TYPE	INTERVAL	TYPE	INTERVAL	PUMP SPECIFICATIONS	
465	13 3/8"		17 1/2"	FW Gel/Lime/LCM	0-465			5 1/2 x 16	
1,390	8 5/8"		12 1/4"	FW Gel/Lime/LCM	0-1,390			D.P and D.C. 4 1/2" 8" - 6 1/4	
8,733	4 1/2"		7 7/8"	FW Gel/Lime/LCM	0-1,390			OTHER	
				Cut Brine	1,390-7,500				
				XC Polymer/Driscap/Starch	7,500-8,733	Shaker	7,500-8,733		

DATE 1991	TIME	DEPTH	WT.	FV	PV	YP	GELS	pH	FILTRATE			CAKE	ALKALINITY		CL ⁻	Ca	SD	SOL.	OIL	H ₂ O			REMARKS
									API	HTHP	°F		PM	PF/MF									
03-12																							Rig up - Spud ticket
03-13		1,229																					Dry drilling - Pumping sweeps - Lost returns at 841'
03-14		1,390																					Cut 12 1/4" hole to 1,390' - Dry drilled - Could not run 8 5/8" casing past 319' - Sand Artesian Water
03-15		319																					Pulled 8 5/8" - Reamed out to 17 1/2 - set cement plug on sand at 473' - Ran 13 3/8" to 465' and cemented
03-16		745																					Mudded up - Drilling sand and cement - Washed to 1,173' Lost complete returns - Washed to bottom - Ran 8 5/8" - Mud cost \$4,602.00
03-19		1,494	8.4	28				11.0							1800	700	NIL	.7					
03-20		2,213	8.6	29				10.0							3600	1400	Tr.	1.0					
03-21		2,883	8.7	29				9.5							46K	1800	Tr.	.8					

2

PAGE 2 of 2

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SOUTHWESTERN

Post Office Box 11247
Midland, Texas 79702
(915) 687-8661
US WATS 1-800-592-4627

UNIVERSAL
CORP.

DRILLING MUD RECORD

OPERATOR	MEWBORNE OIL COMPANY	LEGAL DESCRIPTION	SECTION 14 T-17-S, R-26-E	TOTAL MUD COST	\$13,100.00
WELL	VOGEL #1	COUNTRY/PARTISH	EDDY	SPUD DATE	10-24-90
CONTRACTOR	WEK #1	STATE	NEW MEXICO	T.D. DATE	02-07-90
ENGINEER	STEWART/HOWE	NO. OF DAYS	24	TOTAL DEPTH	8,635

CASING PROGRAM			BITS			TYPE OF MUD SYSTEM			SOLIDS CONTROL			ADDITIONAL INFORMATION		
DEPTH (FT.)	SIZE (in.)	NO.	SIZE (in.)	TYPE	INTERVAL	TYPE	INTERVAL	TYPE	INTERVAL	TYPE	INTERVAL	PUMP SPECIFICATIONS		
1,350	8 5/8"	12 1/4"										5 1/2 X 16		
8,635	4 1/2"	7 7/8										4 1/2 X 4 - D.C. 6 1/4" - 8"		
												OTHER		

DATE	TIME	DEPTH	WT.	FV	PV	YP	GELS	PH	FILTRATE			ALKALINITY			Ca	SD	OIL	H ₂ O	REMARKS
									API	HTHP	°F	PM	PF/MF	CL					
01-15		840	10.1	40	10	21	4/20	9.0						2000	640	13			
01-17		1,350												1500	600	.5			UQC 8 5/8" Casing
01-18		1,765	8.4	28				11.5						1500	600				
01-19		2,508	8.4	28				10.0						1500	720				
01-20		2,934	8.5	28				10.5						1500	720				
01-22		3,692	9.1	28				9.5						65K	2000				Added Brine for 9.1 wt - well kicked at 3,222 w/ 8.4 wt.
																			Had to circulate gas off on trip at 3,222' then go
																			back to bottom and raise wt. to 9.0-9.1 for trip.
01-23		3,975	9.0	29				7.5											
01-25		4,689	9.1	29				10.0						65K	1800				
01-26		5,079	9.1+	29				9.5						78K	2000				
01-28		5,714	9.1	29				10.5						85K	2400				Pumped sweep

SOUTHWESTERN UNIVERSAL CORP. DRILLING MUD RECORD

OPERATOR MEWBOURNE OIL COMPANY

WELL NAME VOGEL #1

PAGE 2 OF 2

[illegible]

Document Number

Tool Pushers BOBBY WARD

**Company
Representatives**

Smith
Representative

DON DISMUKE

BA239440

PAGE 1 of 1

OPERATOR MEDALLION OIL		CONTRACTOR NORTON		RIG NO. 16		BLOCK		SUB-BLOCK		LEASE/WELL NAME LEWIS		WELL # 1		PAGE 1 of 1	
COUNTRY UNITED STATES		STATE/PROVINCE NEW MEXICO		COUNTY/DISTRICT EDDY		QCSQCD 0		SECTION 19		TOWNSHIP 17 S		RANGE 26 E		FIELD E EAGLE CREEK	
LEGAL STR 19 17S - 26E		RIG TYPE LAND		DRILL PIPE 4.5		SIZE (in) 4.5		WT (lbs/ft) 16.6		API WELL # - - - -		WELL DEPTH (ft) / EST DEPTH (ft) 8390 / 9000		SPUD DATE 04-Sep-1995	
INTERACT TYPE OOTAGE		RIG ELEVATION (ft) WATER DEPTH (ft)		WELL DIRECTION VERTICAL		TOOL JOINT XH		SIZE (in) XH		UTM		LAT/LONG 32.820674N / 104.421233W		UNDER SOFT	
STAGE CONTRACT ONSHORE		☐ Tight Hole		WELL TARGET OIL		DRILL COLLAR 0		NO 0		O.D. 0		I.D. 0		LENGTH 0	
TO DEPTH (ft)		☐ ReEntry		WELL TYPE EXPLORATION		DRILL COLLAR 0		NO 0		O.D. 0		I.D. 0		LENGTH 0	
Well Comments: 3 mi NW of ATOKA		COMPLETE Rec.				PUMP NO. 1 GARDNER-DENVER PZ7		MAKE 		MODEL PZ7		LINER 6		INT DATE 	
						PUMP NO. 2 GARDNER-DENVER PZ7		MAKE 		MODEL PZ7		LINER 0		TO DATE 24-Sep-1995	

[illegible]

DEC 16 2003 5:00PM SMITH BITS

DEC. 16. 2003

[illegible]

OPERATOR : DEVON SFS LP
CONTRACTOR : PATTERSON DRLG
RIG : 143

REED Hycalog
A Grant Prideco Company

SECTION : 16
COUNTY : EDDY
WELL NAME : VERANDA 16 ST 1

TOWNSHIP : 17S RANGE : 26E
STATE : NEW MEXICO
AREA : 3J CARLSBAD

API NUMBER : 31139
REED WELL NO : ODE*835-34543
OPERATOR REP : UNK
TOOLPUSHER : ROGER RAMSEY
WELL REMARKS : 01-161. BRINE. MUD CO=NOVA MUD, INC. MISSISSIPPIAN 8700'

REP : JIM SMITH
PHONE NO : (505)397-2494

SURVEY :
FIELD :

ABSTRACT :
WELL PROFILE: Vertical

RIG TYPE :				MUD COMPANY :				SPUD : 21-FEB-01				PIPE : QTY: OD: 4.5 ID: LEN:																		
PUMP1 MAKE/MODEL : CONTINENTAL-EMSCO/D				MUD SYSTEM : N/A				UNDERSURFACE : 23-FEB-01				HW : QTY: OD: 16.6 ID: LEN:																		
PUMP2 MAKE/MODEL : CONTINENTAL-EMSCO/I				CONTRACT TYPE : Daywork				INTERMEDIATE : 26-FEB-01				COLLAR : QTY: 3 OD: 8 ID: 2.75 LEN: 90																		
PUMP3 MAKE/MODEL : /				CONTRACT DEPTH : 8600				TOTAL DEPTH : 15-MAR-01																						
BIT NO	BIT SIZE in	BIT MFG	BIT TYPE	SERIAL NO	JET SIZE or TFA	DEPTH OUT ft	DRILLED ft	HRS RUN	ACC HRS	ROP ft/h	WOB klb	TOTAL RPM	MTR RPM	VERT DEV	PUMP psi	FLOW gpm	MUD					DULL CODES								RUN DATE
																	T	WT	%S	VIS	WL	I	O	MO	LOC	B	G	OD	RP	
1	17.5	SB	DJS	XJ2656	13 13 13 \	350	295	4.5	5	65.6	5 / 40	30 / 80		1.0	350	311	W	8.4	34		2	3	WT	A	2	In	RG	TD	22-FEB-01	
SET 13 3/8 (48#) CASING (BHA=BIT,BS,SS,IBS,DBL PIN,10-8"DC)																														
2	12.25	VAR	ETD29	161061	13 13 13 \		250	4.0		62.5	40 / 40	65 / 65		3.0	500	311	W	8.6	29											
						1425	1075	22.5	27	47.8	45 / 45	70 / 70		4.0	600	311	W	8.6	29		3	3	WT	A	E	In	CT	TD	24-FEB-01	
DO,SH, SET 8 5/8" (32#) CASING (BHA=BIT,NBIB,SDC,IBS,8"DC,IBS,8"DC,IBS,SS,8"DC,XO,15-6"DC)																														
3	7.875	RH	HP62H	M96918	11 11 11 \		175	7.0		25.0	30 / 30	60 / 60		3.5	1325	306	W	8.6	29											
							609	22.0		27.7	30 / 30	60 / 65		2.3	1350	306	W	8.5	29											
							1235	39.5		31.3	60 / 60	60 / 60		1.8	1400	306	W	8.6	29											
							1945	63.0		30.9	60 / 60	60 / 60		0.8	1450	306	W	8.4	29											
						4173	2748	92.5	120	29.7	60 / 60	60 / 60			1450	306	W	9.0	29		8	8	BT	A	E	2	RG	PR	02-MAR-01	
DO,ANHY,(BHA=BIT,BS,2-6 1/2"DC,IBS,6"DC,IBS,30-6"DC=993.04, 27@2128																														
4	7.875	RH	HP62H	Q83611	12 12 12 \		15	.5		30.0	5 / 5	60 / 60			700	321	W	9.0	29											
							387	15.0		25.8	50 / 50	60 / 60		0.8	1500	306	W	9.1	29											
							891	38.0		23.5	50 / 50	60 / 60		1.0	1400	306	W	9.1	29											
							1388	61.5		22.6	50 / 50	60 / 60		1.0	1450	306	W	9.1	29											
							1854	84.5		21.9	50 / 50	60 / 60		1.0	1450	306	W	9.1	29											
							2351	108.0		21.8	50 / 50	60 / 60		1.0	1450	306	W	9.1	29											
							2872	130.5		22.0	50 / 50	60 / 60			1450	306	W	9.1	29											
						7059	2886	131.0	251	22.0	50 / 50	60 / 60		1.3	1450	306	W	9.1	29		4	6	BT	A	E	In	LT	PR	11-MAR-01	
BHA=BIT,NBIB,SDC,IBS,6"DC,IBS,30-6"DC=972.92, ODC=ER,DP, DO 70,SH30,DO 65,SH 35,LM 40,SH 20,DO 40,LM 80,DO 10,SH 10																														
5	7.875	RH	HP62H	Q83016	12 13 13 \		274	16.0		17.1	50 / 50	60 / 60		0.3	1300	306	W	9.2	29											
							721	39.5		18.3	50 / 50	60 / 60		0.5	1350	306	W	9.2	29	8										
							995	59.0		16.9	50 / 50	60 / 60			1350	306	W	9.3	29	8										
						8250	1191	76.0	327	15.7	50 / 50	60 / 60			1450	306	W	9.2	30	8	2	1	BT	M	E	In	ER	PR	14-MAR-01	
SH,DO,LM, BHA=SAME AS ABOVE																														
6	7.875	SB	F47H	MG7297	12 13 13 \		205	16.5		12.4	60 / 60	60 / 60		0.8	1500	306	W	9.6	30	8										
						8600	350	27.0	354	13.0	60 / 60	60 / 60			1500	306	W	9.7	31	7	2	2	WT	A	E	In	NO	TD	15-MAR-01	
SH,LM,SA, BHA=SAME AS ABOVE																														

P.02

4325615533

Reed Hycalog

DEC-17-2003 21:15

OPERATOR : YATES PETROLEUM
 CONTRACTOR : KEY DRILLING
 RIG : 11

REED Hycalog
 A Grant Prideco Company

SECTION : 31
 COUNTY : EDDY
 WELL NAME : PATTERSON "E1" 3

TOWNSHIP : 17S RANGE : 26E
 STATE : NEW MEXICO
 AREA : 3J CARLSBAD

API NUMBER : 30909
 REED WELL NO : ODE*835-37422
 OPERATOR REP : UNK
 TOOLPUSHER : CARL COX
 WELL REMARKS : 00-173

REP : BUTCH BAWCOM
 PHONE NO : 432-620-4850

SURVEY :
 FIELD :

ABSTRACT :
 WELL PROFILE :

BLOCK :

RIG TYPE				MUD COMPANY				SPUD				PIPE: SIZE/TYPE																		
PUMP1 MAKE/MODEL : CONTINENTAL-EMSCO/D				MUD SYSTEM : N/A				UNDERSURFACE : 23-JAN-00				HW PIPE:SIZE/TYPE :				LENGTH:														
PUMP2 MAKE/MODEL : CONTINENTAL-EMSCO/I				CONTRACT TYPE : Footage				INTERMEDIATE : 28-JAN-00				COLLAR 1 :																		
PUMP3 MAKE/MODEL : /				CONTRACT DEPTH :				TOTAL DEPTH : 24-FEB-00				COLLAR 2 :																		
BIT NO	BIT SIZE in	BIT MFG	BIT TYPE	SERIAL NO	JET SIZE or TFA	DEPTH OUT ft	DRILLED ft	HRS RUN	ACC HRS	ROP ft/h	WOB klb	TOTAL RPM	MTR RPM	VERT DEV	PUMP psi	FLOW gpm	MUD					DULL CODES								RUN DATE
																	T	WT	%S	VIS	WL	I	O	MD	LOC	B	G	OD	RP	
1	17.5	SDBS	S33		12 12 12	350	310	4.8	5	65.3	10 / 10	120 / 120		0.8	800	90	U	9.2		55	3	4	FC	A	E	2	WT	TD	21-JAN-00	
RT	RETIP SET 13 3/8 CASG																													
2	12.25	SDBS	S86		12 12 12	1254	904	25.0	30	36.2	50 / 50	75 / 75		1.0	900	84	U	8.5		28	1	2	BT	G	F	In	CI	TQ	25-JAN-00	
RR	RERUN																													
3	12.25	SDBS	M84CF		14 14 14	1298	44	3.5	33	12.6	48 / 48	70 / 70		1.0	900	84	U	8.5		28	1	1	WT	A	E	In	NO	TD	25-JAN-00	
RR	SET 9 5/8 CASG LOST CIRCULATION AROUND 750' SUCKED RESERVE PIT DRY MIX LCM AND PEAGRAVEL																													
4	8.75	RH	HP61	KT2351	12 12 12	1953		30.8			44 / 44	65 / 65		1.3	1200	84	U	8.9		28										
						2390		54.3			45 / 45	65 / 65			1200	84	U	8.9		28										
						2788		77.8			48 / 48	65 / 65		1.5	1200	84	U	8.9		28										
						3150		99.3			48 / 48	65 / 65			1200	84	U	8.9		28										
						3575		127.3			50 / 50	60 / 60			1250	84	U	9.1		28										
						3834	2536	148.3	182	17.1	50 / 50	60 / 60		0.8	1250	84	U	9.2		28	2	3	WT	A	E	In	ER	PR	02-FEB-00	
5	8.75	RH	HP62	MB3399	12 12 13	6597	2763	170.0	352	16.3	55 / 55	65 / 65		0.8	1300	83	U	9.5		29	3	5	BT	A	E	In	CT	PR	12-FEB-00	
6	8.75	RH	HP62		12 12 12	7328	731	55.0	407	13.3	55 / 55	65 / 65		1.0	1300	83	U	9.6		34	8	4	4	WT	A	F	In	FC	TQ	15-FEB-00
RR	RERUN #4																													
7	8.75	RH	HP62	A09742	13 13 14	8023	695	79.0	486	8.8	55 / 55	65 / 65		1.0	1350	83	U	9.7		34	9	3	4	BC	1	E	In	CT	TQ	20-FEB-00
8	8.75	SB	F47H	LX6723	13 13 14	8478	455	51.5	537	8.8	55 / 55	65 / 65		1.3	1350	83	U	9.8		39	14	2	3	CT	A	E	In	NO	PR	22-FEB-00
9	8.75	SB	F47H	LX5276	13 13 14	8800	322	43.5	581	7.4	55 / 55	65 / 65		1.3	1350	83	U	10.0		38	10	1	1	WT	A	E	In	NO	TD	24-FEB-00
	LOGGED AND RAN 5 1/2 CASG.																													

P.03

4325615533

Reed Hycalog

DEC-17-2003 21:16

OPERATOR : DEVON ENERGY CORP.
CONTRACTOR : PATTERSON DRUG
RIG : 143



SECTION : 31
COUNTY : EDDY
WELL NAME : RIVERSIDE "31" FEDERAL COM. #1

TOWNSHIP : 16S RANGE : 27E
STATE : NEW MEXICO
AREA : 3J CARLSBAD

API NUMBER : 31351
REED WELL NO : ODE*5062
OPERATOR REP : UNK
TOOLPUSHER : ROGER RAMSEY
WELL REMARKS : 01-716 SET CONDUCTOR PIPE @ 40

REP : JIM SMITH
PHONE NO : (505)397-2494

SURVEY :
FIELD :
ABSTRACT :
WELL PROFILE: Vertical BLOCK :

RIG TYPE :				MUD COMPANY :				SPUD : 23-APR-01				PIPE : QTY: OD: 4.5 ID: LEN: .																				
PUMP1 MAKE/MODEL : CONTINENTAL-EMSCO/D				MUD SYSTEM : N/A				UNDERSURFACE : 25-APR-01				HW : QTY: OD: 16.6 ID: LEN:																				
PUMP2 MAKE/MODEL : CONTINENTAL-EMSCO/L				CONTRACT TYPE : Daywork				INTERMEDIATE :				COLLAR : QTY: 14 OD: 8 ID: 2.75 LEN: 413																				
PUMP3 MAKE/MODEL : /				CONTRACT DEPTH : 8600				TOTAL DEPTH : 27-MAY-01																								
BIT NO	BIT SIZE in	BIT MFG	BIT TYPE	SERIAL NO	JET SIZE or TFA	DEPTH OUT ft	DRILLED ft	HRS RUN	ACC HRS	ROP ft/h	WOB klb	TOTAL RPM	MTR RPM	VERT DEV	PUMP psi	FLOW gpm	MUD					DULL CODES					RUN DATE					
																	T	WT	%S	VIS	VL	I	O	MD	LOC	B		G	OD	RP		
1	11	VAR	ETD29	158587	11 12 13	494 1310	545 1270	11.0 25.3	25	49.6 50.3	5 / 35 50 / 50	75 / 75 75 / 75		0.3 1.8	500 700	311 311	U U	8.4 8.5		31		3	3	WT	A	E	In	NO TD	24-APR-01			
BHA=BIT COMBO, 8"DC, IBS, DBL PIN, SS, 13-8"DC, XO, 10-6"DC= 742.34' SET 8 5/8" (24#) CSG																																
2	7.875	HC	HR44CH	K36JP	13 13 13	1615 1827 2800 3425 4020 4570 5142	305 517 1490 2115 2710 3260 3832	10.5 18.0 41.5 64.5 88.0 111.5 136.5		29.1 28.7 35.9 32.8 30.8 29.2 28.1	50 / 50 40 / 50 50 / 50 50 / 50 50 / 50 50 / 50 50 / 50	50 / 60 50 / 60 60 / 60 60 / 60 60 / 60 60 / 60 60 / 60			1000 1000 1100 1100 1100 1100 1500	311 311 311 311 311 311 311	U U U U U U U	8.4 8.4 8.4 8.4 8.4 9.3 9.3	29 29 29 29 29 29 29			3	3	WT	A	E	In	TR PR	02-MAY-01			
BHA=BIT COMBO, SDC, IBS, 6"DC, IBS, 6"DC, IBS, 29-6"DC=931.84'																																
3	7.875	HC	HR44C	B99JT	13 13 13	5345 5795 6245 6740 7259 7733	203 653 1103 1598 2117 2591	11.5 35.0 58.5 82.0 105.5 130.0		17.7 18.7 18.9 19.5 20.1 19.9	50 / 50 50 / 50 50 / 50 50 / 50 50 / 50 50 / 50	60 / 60 60 / 60 60 / 60 60 / 60 60 / 60 60 / 50			1200 1300 1200 1200 1200 1200	311 311 311 311 311 311	U U U U U U	9.3 9.3 9.3 9.3 9.3 9.3	28 28 28 28 28 28						4	4	BT	A	E	In	WT PR	08-MAY-01
BHA=BIT COMBO, SDC, IBS, 6"DC, IBS, 6"DC, IBS, 29-6"DC=981.84' WORK STUCK PIPE 5-9-01; JAR ON FISH 5-11-01; CONO MUD; JAR ON FISH 5-12-01; WASH OVER PIPE 5-12-01 THRU 5-16-01 WOKD UNTIL 5-20-01.																																
4	7.875	HC	HR44CH	P81JA	13 13 14	7796 7900 8053 8249 8600	63 167 320 516 867	7.5 22.5 46.5 69.5 120.0		8.4 7.4 6.9 7.4 7.2	50 / 50 50 / 50 50 / 50 50 / 50 50 / 50	60 / 60 60 / 60 60 / 60 60 / 60 60 / 60		1.5 0.3	1500 1500 1500 1500 1500	311 311 311 311 311	U U U U U	10.2 10.2 10.1 10.1 10.1	77 77 65 65 65	7.4 7.4 7.4 7.4 7.4			3	3	WT	A	E	In	BT TD	27-MAY-01		
BHA= BIT, BS, 27-6"DC= 803.12' LOG WELL SET 5 1/2" (17#) CSG.																																

4325615533 P.04

Reed Hycalog

DEC-17-2003 21:16

OPERATOR : OXY USA, INC.
CONTRACTOR : UTI DRLG CO
RIG : 303

REED Hycalog
A Grant Prideco Company

SECTION : 19
COUNTY : EDDY
WELL NAME : EUPHONIUM #1

TOWNSHIP : 17S RANGE : 26E
STATE : NEW MEXICO
AREA : 3J CARLSBAD

API NUMBER : 31599
REED WELL NO : ODE*5071
OPERATOR REP : UNK
TOOLPUSHER : JAMIE LEAL
WELL REMARKS : 01-714 SET CONDUCTOR PIPE @ 40 2 M. S. OF ARTESIA, NM. MUD TYPE: BRINE

SURVEY :
FIELD :

ABSTRACT :
WELL PROFILE: Vertical

REP : JIM SMITH
PHONE NO : (505)397-2494

RIG TYPE				MUD COMPANY				SPUD				PIPE : QTY:				OD: 4.5				ID: LEN:												
PUMP1 MAKE/MODEL : CONTINENTAL-EMSCO/D				MUD SYSTEM : N/A				UNDERSURFACE : 10-APR-01				HW : QTY:				OD: 16.6				ID: LEN:												
PUMP2 MAKE/MODEL : CONTINENTAL-EMSCO/C				CONTRACT TYPE : Daywork				INTERMEDIATE : 13-APR-01																								
PUMP3 MAKE/MODEL : /				CONTRACT DEPTH : 10230				TOTAL DEPTH : 30-APR-01																								
BIT NO	BIT SIZE in	BIT MFG	BIT TYPE	SERIAL NO	JET SIZE or TFA	DEPTH OUT ft	DRILLED ft	HRS RUN	ACC HRS	ROP ft/h	WOB klb	TOTAL RPM	MTR RPM	VERT DEV	PUMP psi	FLOW gpm	MUD					DULL CODES										RUN DATE
																	T	WT	%S	VIS	VAL	I	O	MD	LOC	B	G	OD	RP			
1	17.5	HC	GTGX1		14 14 14	303	236	5.8	6	41.0	5 / 35	120 / 120		0.3	650	301	W	8.6	32		5	5	FC	A	F	In	ER	PR	09-APR-01			
RR																																
2	17.5	VAR	ETD1		12 12 12	420	117	6.0	12	19.5	5 / 35	120 / 120		0.3	1500	301	W	8.8	32		3	3	WT	A	E	In	NO	TD	09-APR-01			
RR																																
BHA=BIT,BS,SS,8"DC,IBS,4-8"DC,7-6 1/2"DC= 385.51' SET 13 3/8" (48") CSG.																																
3	12.25	HC	HR30C		13 13 13	1305	885	18.5	30	47.8	45 / 55	70 / 80		1.0	1200	301	W	8.4	28		2	2	WT	A	E	In	NO	TD	11-APR-01			
RR																																
BHA=BIT,BB,SS,8"DC,IBS,4-8"DC,10-6 1/2"DC																																
4	7.875	HC	HR44C	H30JF	12 12 12	1703	398	11.8		33.9	55 / 55	60 / 60		0.8	1200	301	W	8.4	28													
					2453	1148	35.3			32.6	55 / 55	60 / 60			1200	301	W	8.4	28													
					3740	2435	82.5			29.5	55 / 55	60 / 60		0.5	1200	301	W	8.4	28													
					4294	2989	106.0			28.2	55 / 55	60 / 60		0.8	1200	301	W	9.3	28													
					5250	3945	153.0	183		25.8	55 / 55	60 / 60			1200	301	W	9.3	28			3	3	WT	A	E	In	ER	HR			
BHA=BIT,TRI,6 1/2"DC,IBS,27-6 1/2"DC= 835.78'																																
5	7.875	HC	HR44CH	E20JM	12 12 12	5555	305	15.0		20.3	55 / 55	60 / 60		1.0	1375	301	W	9.2	28													
					6030	780	38.5			20.3	55 / 55	60 / 60			1375	301	W	9.3	28													
					6550	1300	62.0			21.0	55 / 55	60 / 60		0.5	1375	301	W	9.3	28													
					7125	1875	85.5			21.9	55 / 55	60 / 60		0.5	1375	301	W	9.3	28													
					7639	2389	108.8			22.0	55 / 55	60 / 60			1375	301	W	9.3	28													
					7848	2598	124.0			21.0	55 / 55	60 / 60		1.0	1375	301	W	9.8	42	4.8												
					7858	2608	125.5	309		20.8	55 / 55	60 / 60		1.3	1375	301	W	9.8	42	4.8									27-APR-01			
BHA=BIT,BS,6 1/2"DC,IBS,28-6 1/2"DC,RTT= 911.86'																																
6	7.875	HC	HR44C	F76JD	12 13 13	7950	92	11.5		8.0	55 / 55	60 / 60		1.3	1200	301	W	10.0	45	5												
					8175	317	35.3			9.0	55 / 55	60 / 60		1.3	1200	301	W	10.0	45	5												
					8383	525	58.5			9.0	55 / 55	60 / 60			1200	301	W	10.0	45	5												
					8435	577	68.3	377		8.5	55 / 55	60 / 60			1200	301	W	10.0	45	5									30-APR-01			
BHA= SAME AS ABOVE LOG WELL SET 6 1/2" (17#) CSG.																																

P.05

4325615533

Reed Hycalog

DEC-17-2003 21:17

TOTAL P.05

UNIQUE NO. 30-013-21443

PAY	ZONE	PROD	INTERVAL	IP	BO	W	HRS	CHK	TEST	BASIS
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1

WELL: YATES PET. #1 TIDWELL COM "ED"

ELEV

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Midland, Texas

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P. O. Box 2538
Midland, Texas

GOR	GTY	CP	TP	BHP	POT DATE	TREATMENT
		pkc	191		3-9-77	A/3000
CSG	13-3/8	- 400	- 250		4 1/2	- 7960 - 700
	8-5/8	- 1229	- 800			

COUNTY		FIELD	
WELL:		ELEV	
DATE	WELL RECORD	REACHED T. D.	SPL (LOG) MARKERS
	TD 8050', PB 7928'		San And (824)
	Pf 12/7803-06		Glor (2102)
	16/7857-61		Abo (4189)
	12/7890-93		Wolfc (5707)
	A/3000		Cisco (6330)
	F/300 MCFGPD, 1/4" ck, TP 195		L/Cany (7078)
	(6-15-77)		Stern (7467)
			Atoka (7720)
			Morr Clastic (7836)
			Chester (7970)

THE SUBSURFACE LIBRARY
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DALLAS, TEXAS 79702

UNIQUE NO. 30-015-20991

MAPS 10-24-73 CO-ORD 10-19-73

F. R. 8100' RT OBJ Cactus SPUD LAHEE CLASS

CTR ELEV D. F.

LOGS 3340' SPLS GL

TD 8180' PBD ABD LOC. P & A 11-16-73

GOR	GTY	CP	TP	BHP	POT DATE	TREATMENT
CSG	13 3/8	- 428	- 500			
	8 5/8	- 1350	- 650			

WELL:		ELEV
DATE	WELL-RECORD REACHED T. D.	SPL (LOG) MARKERS
	TD 8180' P&A 11-16-73	Glor (2190)
	DST 7811-8180, Op 90", GTS 15", 1/4"ck	Tubb (3528)
	@ 97,000 CFGPD dec to 40,000 CFGPD,	Abo (4244)
	Rec 430' SGCØM (SC R .5 cfg, 2000 cc	Wilfc (5434)
	ØF) 1'ISIP/1094, FP 263-285, 3'FSIP/	Cisco (6470)
	1596, HP 3989-3945	Cany (6824)
	SP DST 2150-2280, Op 75", Rec 725'	Atoka (7824)
	SGC Sulf Wtr, 1'ISIP/974, FP 220-374,	Morr Sd (7872)
	2'FSIP/952, HP 1088-1088	Chester (8126)
	(1-9-74)	
	The Subsurface Library P. O. Box 942 Midland, Texas	