

Hydrogen Sulfide Drilling Operations Plan
Young Deep Unit No. 40H
Sec 9, T18S, R32E
Lea Co. N.M.

1. Company and contract personnel admitted on location should be trained by a qualified H₂S safety instructor to the recognize and handle following:
 - A. Characteristics of H₂S gas
 - B. Physical effects and hazards
 - C. Proper use of safety equipment and life support systems
 - D. Principle and operation of H₂S detectors, warning system and briefing knowledge
 - E. Evacuation procedure, routes and first aid support
 - F. Proper use of 30 minutes Pressure-on-Demand Air Pack

2. Supervisory personnel will be trained in the following areas:
 - A. Effects of H₂S on metal components.
 - B. Corrective action and shut in procedures, blowout prevention, and well control procedure.
 - C. Contents of Hydrogen Sulfide Drilling Operations Plan.

3. H₂S Detection and Alarm Systems (will be in place after setting surface casing and will not drill within 500ft of Yates formation without alarm system working)
 - A. H₂S detectors and audio alarm system to be located at bell nipple, shale shaker and on derrick floor or doghouse installed and maintained by third party safety company.
 - B. Thirty minute self-contained work unit located in dog house and at briefing areas.

3. Windssock and/or Wind Streamers
 - A. Windssock at mud pit area (high enough to be visible)
 - B. Windssock on dog house (high enough to be visible)

4. Condition Flags and Signs
 - A. H₂S warning signs on lease access road into location
 - B. Flags displayed on sign at location entrance
 1. Green flag indicates "Normal Safe Conditions"
 2. Yellow Flag indicates "Potential Pressure and Danger"
 3. Red Flag indicates "Danger - H₂S Present in High Concentrations" *admit only emergency personnel*

5. Well Control Equipment
 - A. See BOP, Choke, and Mud/Gas Separator exhibit.
 - B. Blow out preventers will be equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit. Annular type blowout preventer will also be in place. Supplemental fuel will be provided for flaring noncombustible gas.

6. Communication
 - A. While working under masks chalkboards will be used for communication
 - B. Hand signals will be used where chalk board is inappropriate
 - C. Two -way radios or cell phones used to communicate off location or minimally in Drilling Foreman's trailer or living quarters

7. Drillstem Testing (**not planned**)
 - A. Exhausts watered
 - B. Flare line equipped with electric igniter/propane pilot light in case gas reaches surface

C. If location near dwelling closed DST will be performed

9. If H₂S encountered, mud system shall be addressed to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers, if necessary. pH will be maintained at 10, to minimize h₂S in the system. Hydrogen sulfide scavengers will also be used to minimize hazards while drilling the well.
10. Mud program: pH of 10 will be maintained with additives to minimize hazards of H₂S. H₂S scavengers will also be used to minimize effects on tubulars and well control equipment and control effects of H₂S on metallurgy.

PUBLIC PROTECTION PLAN FOR EMERGENCY CONTACTS

NADEL AND GUSSMAN HEYCO, LLC (432) 682-4429

Company Personnel

Jason Goss	Drilling Engineer	432-682-4429 512-784-2613
Keith Cannon	Drilling Supt.	575-623-6601 575-626-1936

ARTESIA N.M.

Ambulance	911
State Police	575-746-5000
City Police	575-746-5000
Sheriff's Office	575-746-9888
Fire Department	575-746-5050 or 575-746-5051
N.M.O.C.D	575-748-1283

CARLSBAD N.M.

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-885-3125 or 575-885-2111
Carlsbad BLM	575-887-6544

HOBBS N.M.

Ambulance	911
State Police	575-392-5588
City Police	575-397-9265
Sheriff's Office	575-396-3611
Fire Department	575-397-9308
N.M.O.C.D	575-393-6161
Hobbs BLM	575-393-3612

Flight for Life (Lubbock Tx)	806-743-9911
Aerocare (Lubbock Tx)	806-747-8923
Med flight air Ambulance (Albuq NM)	505-842-4433
SB air Med Services (Albuq NM)	505-842-4949

Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd Pressure Control	915-699-0139 or 915-563-3356
BJ Services (Artesia NM)	575-746-3569
(Hobbs NM)	575-392-5556

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

Production Facility Layout

Young Deep Unit 40H
 SHL: 510' FSL & 330' FEL SEC 9-T18S-R32E
 BHL: 510' FSL & 660' FEL SEC 10-T18S-R32E
 Lea Co, NM

NADEL AND GUSSMAN HEYCO, LLC
 500 NORTH MAIN SUITE ONE
 ROSWELL, NM

