

AUG - 5 2009

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease- 4 Copies
Fee Lease- 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-37208	Pool Code 60660	Pool Name Turkey Track; Bone Spring
Property Code 37772	Property Name PARKWAY 23 STATE	Well Number 4H
OGRID No. 7377	Operator Name EOG RESOURCES, INC.	Elevation 3278.6'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	23	19 SOUTH	29 EAST, N.M.P.M.		660	SOUTH	200	WEST	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
P	23	19 SOUTH	29 EAST, N.M.P.M.		660	SOUTH	330	EAST	EDDY

Dedicated Acres 160	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 that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Don J. M...</i> 7/29/09 Signature Date <i>Donny G. Glanton</i> Printed Name		
SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes or actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. <i>Terry J. ...</i> 7/2/2009 Signature and Seal of Professional Surveyor Certificate Number 15079 Date of Survey WO# 090625WL-c (KA)		

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
Y=596887.5
X=586302.3
LAT.: N 32.6406331°
LONG.: W 104.0529676°

ENTRY POINT
NEW MEXICO EAST
NAD 1927
Y=596886.6
X=586432.3
LAT.: N 32.6406296°
LONG.: W 104.0525453°

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
Y=596853.7
X=591061.2
LAT.: N 32.6405046°
LONG.: W 104.0375082°

GRID AZ = 90°24' 4759.0' IN ALL

PRODUCING AREA

PROJECT AREA

Permit Information:

Well Name: Parkway 23 State #4H

Location:

SL 660' FSL & 200' FWL, Section 23, T-19-S, R-29-E, Eddy Co., N.M.

BHL 660' FSL & 330' FEL, Section 23, T-18-S, R-30-E, Eddy Co., N.M.

Casing Program:

Casing	Setting Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Desired TOC
Surface	360'	14-3/4"	11-3/4"	42#	H-40	Surface
Intermediate	3,300'	11"	8-5/8"	32#	J-55	Surface
Production	12,627'	7-7/8"	5 1/2"	17#	N-80	2800'

Cement Program:

Depth	No. Sacks	Slurries:
360'	500	Premium Plus C + 0.005 pps Static Free + 2% CaCl ₂ + 0.25 pps CelloFlake + 0.005 gps FP-6L
3,300'	650	Lead: Class C + 2% SMS + 1.0% R-3 + 0.25 pps CelloFlake + 0.005 pps Static Free
	200	Tail: Premium Plus C + 0.25 pps CelloFlake + 0.005 pps Static Free
12,627'	750	Lead: 50:50:10 Poz:C:Gel+ 0.005 pps Static Free + 0.25 pps CelloFlake + 0.005 gps FP-6L + 0.80% FL-52A + 0.30% ASA-301 + 0.15% SMS
	1000	Tail: 50:50:2 Poz: H: Gel + 0.005 pps Static Free + 5% NaCl + 0.2% CD-32 + 0.65% FL-52A

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 360'	Fresh - Gel	8.6-8.8	28-34	N/c
360' – 3,300'	Brine	10.0-10.2	28-34	N/c
3,300' – 7,000'	Fresh Water	8.4 – 8.6	28-34	N/c
7,000' – 7,500'	Cut Brine	8.8-9.6	28-34	N/c
7,500' – 8,400'	Cut Brine	8.8-9.6	28-34	10-15
KOP – 12,627'	Cut Brine/ Polymer (Lateral)	8.8-9.6	40-45	10-25



Project: Eddy County
Site: Parkway 23 State
Well: #4H
Wellbore: OH
Plan: Plan #1 (#4H/OH)



Azimuths to Grid North
True North: -0.15°
Magnetic North: 7.90°

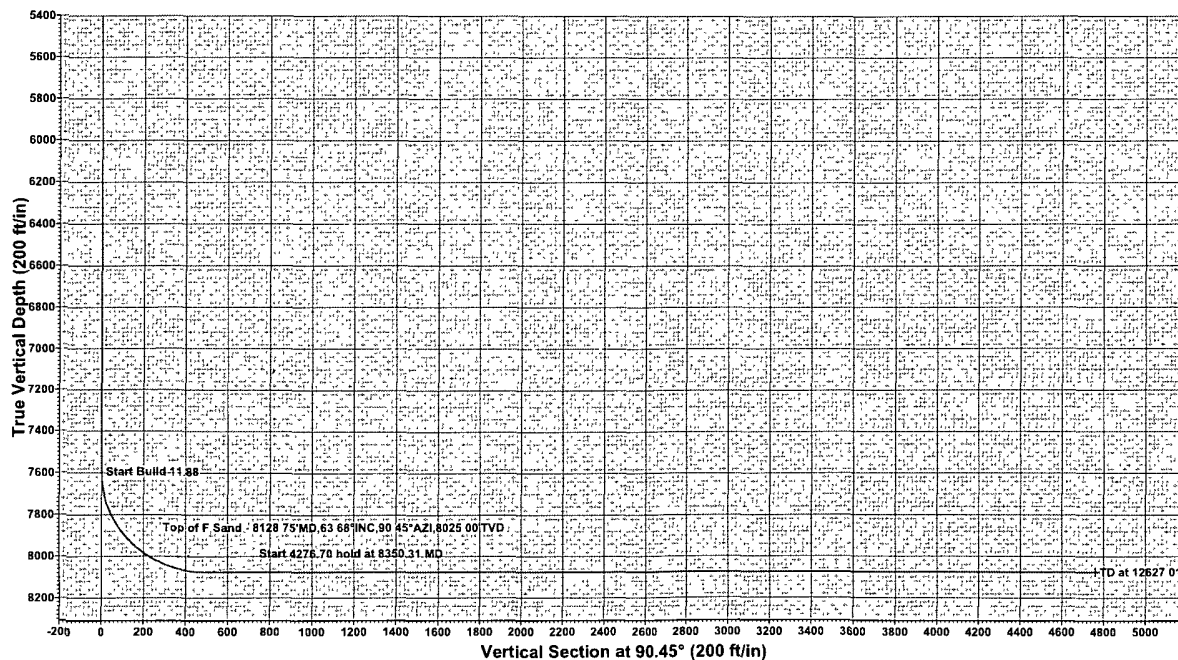
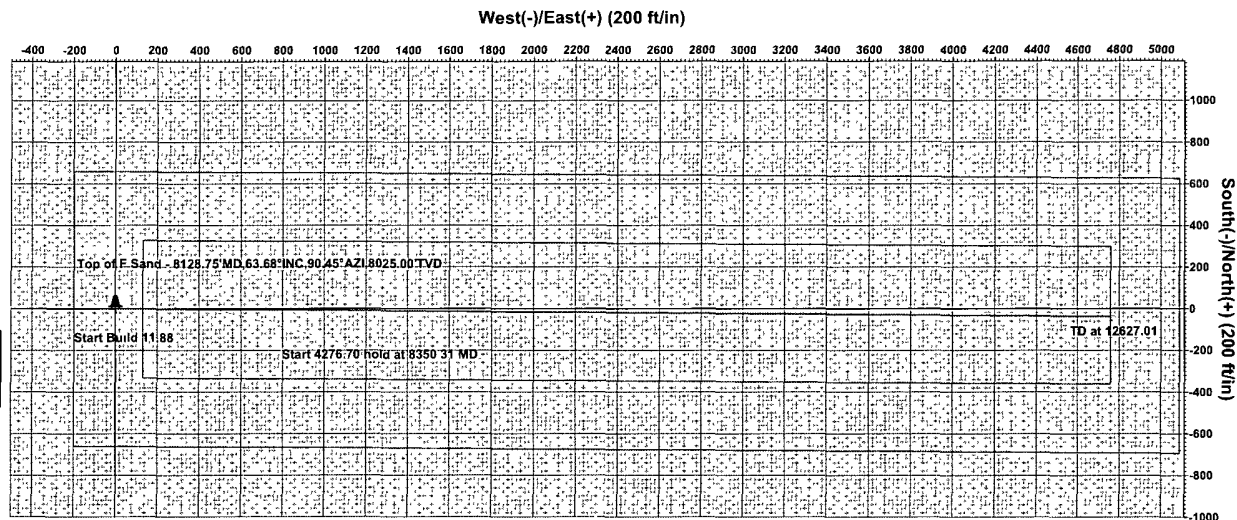
Magnetic Field
Strength: 49030.9snT
Dip Angle: 60.55°
Date: 07/28/2009
Model: IGRF200510

PATHFINDER

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	7592.68	0.00	0.00	7592.68	0.00	0.00	0.00	0.00	0.00	
3	8350.31	90.00	90.45	8075.00	-3.79	482.31	11.88	90.45	482.32	
4	12627.01	90.00	90.45	8075.00	-37.38	4758.87	0.00	0.00	4759.02	PBHL(#4HPW)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(#4HPW)	8075.00	-33.80	4758.90	596853.700	591061.200	Point



WELL DETAILS: #4H

Ground Elevation 3278.60
RKB Elevation WELL @ 3297.60ft (19' KB Correction)
Rig Name 19' KB Correction

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	596887.500	586302.300	32° 38' 26.279 N	104° 3' 10.684 W	

PROJECT DETAILS: Eddy County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

Plan Plan #1 (#4H/OH)

Created By Nate Bingham Date 15 27, July 28 2009

Checked _____ Date _____



EOG Resources, Inc.

Eddy County
Parkway 23 State Com
#4H
OH

Plan: Plan #1

Pathfinder X & Y Planning Report

28 July, 2009

PATHFINDER



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County	TVD Reference:	WELL @ 3297.60ft (19' KB Correction)
Site:	Parkway 23 State Com	MD Reference:	WELL @ 3297.60ft (19' KB Correction)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Project		Eddy County	
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Parkway 23 State Com									
Site Position:		Northing:		600,739.000 ft		Latitude:		32° 39' 4.392 N			
From:		Map		Easting:		586,310.400 ft		Longitude:		104° 3' 10.470 W	
Position Uncertainty:		0 00 ft		Slot Radius:		"		Grid Convergence:		0.15 °	

Well		#4H				
Well Position	+N/-S	0.00 ft	Northing:	596,887.500 ft	Latitude:	32° 38' 26.279 N
	+E/-W	0.00 ft	Easting:	586,302.300 ft	Longitude:	104° 3' 10.684 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,278.60 ft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	07/28/2009	(°)	(°)	(nT)
			8.05	60.55	49,031

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0 00	0 00	90 45

Survey Tool Program		Date 07/28/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	12,627.01	Plan #1 (OH)	MWD	MWD - Standard



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County	TVD Reference:	WELL @ 3297.60ft (19' KB Correction)
Site:	Parkway 23 State Com	MD Reference:	WELL @ 3297.60ft (19' KB Correction)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	North (ft)	Easting (ft)	
0.00	0.00	0.00	0.00	-3,297.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
100.00	0.00	0.00	100.00	-3,197.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
200.00	0.00	0.00	200.00	-3,097.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
300.00	0.00	0.00	300.00	-2,997.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
400.00	0.00	0.00	400.00	-2,897.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
500.00	0.00	0.00	500.00	-2,797.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
600.00	0.00	0.00	600.00	-2,697.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
700.00	0.00	0.00	700.00	-2,597.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
800.00	0.00	0.00	800.00	-2,497.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
900.00	0.00	0.00	900.00	-2,397.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,000.00	0.00	0.00	1,000.00	-2,297.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,100.00	0.00	0.00	1,100.00	-2,197.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,200.00	0.00	0.00	1,200.00	-2,097.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,300.00	0.00	0.00	1,300.00	-1,997.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,400.00	0.00	0.00	1,400.00	-1,897.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,500.00	0.00	0.00	1,500.00	-1,797.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,600.00	0.00	0.00	1,600.00	-1,697.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,700.00	0.00	0.00	1,700.00	-1,597.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,800.00	0.00	0.00	1,800.00	-1,497.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
1,900.00	0.00	0.00	1,900.00	-1,397.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,000.00	0.00	0.00	2,000.00	-1,297.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,100.00	0.00	0.00	2,100.00	-1,197.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,200.00	0.00	0.00	2,200.00	-1,097.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,300.00	0.00	0.00	2,300.00	-997.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,400.00	0.00	0.00	2,400.00	-897.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,500.00	0.00	0.00	2,500.00	-797.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,600.00	0.00	0.00	2,600.00	-697.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County	TVD Reference:	WELL @ 3297.60ft (19' KB Correction)
Site:	Parkway 23 State Com	MD Reference:	WELL @ 3297.60ft (19' KB Correction)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
2,700.00	0.00	0.00	2,700.00	-597.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,800.00	0.00	0.00	2,800.00	-497.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
2,900.00	0.00	0.00	2,900.00	-397.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,000.00	0.00	0.00	3,000.00	-297.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,100.00	0.00	0.00	3,100.00	-197.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,200.00	0.00	0.00	3,200.00	-97.60	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,300.00	0.00	0.00	3,300.00	2.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,400.00	0.00	0.00	3,400.00	102.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,500.00	0.00	0.00	3,500.00	202.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,600.00	0.00	0.00	3,600.00	302.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,700.00	0.00	0.00	3,700.00	402.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,800.00	0.00	0.00	3,800.00	502.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
3,900.00	0.00	0.00	3,900.00	602.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,000.00	0.00	0.00	4,000.00	702.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,100.00	0.00	0.00	4,100.00	802.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,200.00	0.00	0.00	4,200.00	902.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,300.00	0.00	0.00	4,300.00	1,002.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,400.00	0.00	0.00	4,400.00	1,102.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,500.00	0.00	0.00	4,500.00	1,202.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,600.00	0.00	0.00	4,600.00	1,302.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,700.00	0.00	0.00	4,700.00	1,402.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,800.00	0.00	0.00	4,800.00	1,502.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
4,900.00	0.00	0.00	4,900.00	1,602.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,000.00	0.00	0.00	5,000.00	1,702.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,100.00	0.00	0.00	5,100.00	1,802.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,200.00	0.00	0.00	5,200.00	1,902.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,300.00	0.00	0.00	5,300.00	2,002.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company:	EOG Resources, Inc	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County	TVD Reference:	WELL @ 3297.60ft (19' KB Correction)
Site:	Parkway 23 State Com	MD Reference:	WELL @ 3297.60ft (19' KB Correction)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
5,400.00	0.00	0.00	5,400.00	2,102.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,500.00	0.00	0.00	5,500.00	2,202.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,600.00	0.00	0.00	5,600.00	2,302.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,700.00	0.00	0.00	5,700.00	2,402.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,800.00	0.00	0.00	5,800.00	2,502.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
5,900.00	0.00	0.00	5,900.00	2,602.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,000.00	0.00	0.00	6,000.00	2,702.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,100.00	0.00	0.00	6,100.00	2,802.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,200.00	0.00	0.00	6,200.00	2,902.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,300.00	0.00	0.00	6,300.00	3,002.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,400.00	0.00	0.00	6,400.00	3,102.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,500.00	0.00	0.00	6,500.00	3,202.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,600.00	0.00	0.00	6,600.00	3,302.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,700.00	0.00	0.00	6,700.00	3,402.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,800.00	0.00	0.00	6,800.00	3,502.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
6,900.00	0.00	0.00	6,900.00	3,602.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
7,000.00	0.00	0.00	7,000.00	3,702.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
7,100.00	0.00	0.00	7,100.00	3,802.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
7,200.00	0.00	0.00	7,200.00	3,902.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
7,300.00	0.00	0.00	7,300.00	4,002.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
7,400.00	0.00	0.00	7,400.00	4,102.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
7,500.00	0.00	0.00	7,500.00	4,202.40	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
7,592.68	0.00	0.00	7,592.68	4,295.08	0.00	0.00	0.00	0.00	596,887.50	586,302.30	
Start Build 11.88											
7,600.00	0.87	90.45	7,600.00	4,302.40	0.00	0.06	0.06	11.88	596,887.50	586,302.30	
7,625.00	3.84	90.45	7,624.98	4,327.38	-0.01	1.08	1.08	11.88	596,887.49	586,303.38	
7,650.00	6.81	90.45	7,649.87	4,352.27	-0.03	3.40	3.40	11.88	596,887.47	586,305.70	

Company: EOG Resources, Inc
Project: Eddy County
Site: Parkway 23 State Com
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3297.60ft (19' KB Correction)
MD Reference: WELL @ 3297.60ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
7,675.00	9.78	90.45	7,674.60	4,377.00	-0.06	7.01	7.01	11.88	596,887.44	586,309.31
7,700.00	12.75	90.45	7,699.12	4,401.52	-0.09	11.89	11.89	11.88	596,887.41	586,314.19
7,725.00	15.72	90.45	7,723.35	4,425.75	-0.14	18.04	18.04	11.88	596,887.36	586,320.34
7,750.00	18.69	90.45	7,747.23	4,449.63	-0.20	25.43	25.43	11.88	596,887.30	586,327.73
7,775.00	21.66	90.45	7,770.69	4,473.09	-0.27	34.05	34.05	11.88	596,887.23	586,336.35
7,800.00	24.63	90.45	7,793.67	4,496.07	-0.34	43.87	43.88	11.88	596,887.16	586,346.17
7,825.00	27.60	90.45	7,816.12	4,518.52	-0.43	54.88	54.88	11.88	596,887.07	586,357.18
7,850.00	30.57	90.45	7,837.97	4,540.37	-0.53	67.03	67.03	11.88	596,886.97	586,369.33
7,875.00	33.54	90.45	7,859.15	4,561.55	-0.63	80.29	80.30	11.88	596,886.87	586,382.59
7,900.00	36.51	90.45	7,879.62	4,582.02	-0.74	94.64	94.64	11.88	596,886.76	586,396.94
7,925.00	39.48	90.45	7,899.32	4,601.72	-0.86	110.02	110.03	11.88	596,886.64	586,412.32
7,950.00	42.45	90.45	7,918.20	4,620.60	-0.99	126.41	126.42	11.88	596,886.51	586,428.71
7,975.00	45.42	90.45	7,936.20	4,638.60	-1.13	143.75	143.76	11.88	596,886.37	586,446.05
8,000.00	48.39	90.45	7,953.28	4,655.68	-1.27	162.01	162.01	11.88	596,886.23	586,464.31
8,025.00	51.36	90.45	7,969.39	4,671.79	-1.42	181.12	181.12	11.88	596,886.08	586,483.42
8,050.00	54.33	90.45	7,984.49	4,686.89	-1.58	201.04	201.05	11.88	596,885.92	586,503.34
8,075.00	57.30	90.45	7,998.54	4,700.94	-1.74	221.72	221.72	11.88	596,885.76	586,524.02
8,100.00	60.27	90.45	8,011.49	4,713.89	-1.91	243.09	243.10	11.88	596,885.59	586,545.39
8,125.00	63.24	90.45	8,023.33	4,725.73	-2.08	265.11	265.12	11.88	596,885.42	586,567.41
8,128.75	63.68	90.45	8,025.00	4,727.40	-2.11	268.46	268.47	11.88	596,885.39	586,570.76
Top of F Sand - 8128.75' MD, 63.68° INC, 90.45° AZI, 8025.00' TVD										
8,150.00	66.21	90.45	8,034.00	4,736.40	-2.26	287.71	287.72	11.88	596,885.24	586,590.01
8,175.00	69.17	90.45	8,043.49	4,745.89	-2.44	310.84	310.85	11.88	596,885.06	586,613.14
8,200.00	72.14	90.45	8,051.77	4,754.17	-2.63	334.43	334.44	11.88	596,884.87	586,636.73
8,225.00	75.11	90.45	8,058.81	4,761.21	-2.81	358.41	358.42	11.88	596,884.69	586,660.71
8,250.00	78.08	90.45	8,064.61	4,767.01	-3.01	382.72	382.74	11.88	596,884.49	586,685.02
8,275.00	81.05	90.45	8,069.13	4,771.53	-3.20	407.31	407.32	11.88	596,884.30	586,709.61



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: EOG Resources, Inc
Project: Eddy County
Site: Parkway 23 State Com
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3297.60ft (19' KB Correction)
MD Reference: WELL @ 3297.60ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,300.00	84.02	90.45	8,072.38	4,774.78	-3.39	432.09	432.11	11.88	596,884.11	586,734.39
8,325.00	86.99	90.45	8,074.34	4,776.74	-3.59	457.01	457.03	11.88	596,883.91	586,759.31
8,350.31	90.00	90.45	8,075.00	4,777.40	-3.79	482.31	482.32	11.88	596,883.71	586,784.61
Start 4276.70 hold at 8350.31 MD										
8,400.00	90.00	90.45	8,075.00	4,777.40	-4.18	532.00	532.01	0.00	596,883.32	586,834.30
8,500.00	90.00	90.45	8,075.00	4,777.40	-4.96	632.00	632.01	0.00	596,882.54	586,934.30
8,600.00	90.00	90.45	8,075.00	4,777.40	-5.75	731.99	732.01	0.00	596,881.75	587,034.29
8,700.00	90.00	90.45	8,075.00	4,777.40	-6.53	831.99	832.01	0.00	596,880.97	587,134.29
8,800.00	90.00	90.45	8,075.00	4,777.40	-7.32	931.99	932.01	0.00	596,880.18	587,234.29
8,900.00	90.00	90.45	8,075.00	4,777.40	-8.11	1,031.98	1,032.01	0.00	596,879.39	587,334.28
9,000.00	90.00	90.45	8,075.00	4,777.40	-8.89	1,131.98	1,132.01	0.00	596,878.61	587,434.28
9,100.00	90.00	90.45	8,075.00	4,777.40	-9.68	1,231.98	1,232.01	0.00	596,877.82	587,534.28
9,200.00	90.00	90.45	8,075.00	4,777.40	-10.46	1,331.97	1,332.01	0.00	596,877.04	587,634.27
9,300.00	90.00	90.45	8,075.00	4,777.40	-11.25	1,431.97	1,432.01	0.00	596,876.25	587,734.27
9,400.00	90.00	90.45	8,075.00	4,777.40	-12.03	1,531.97	1,532.01	0.00	596,875.47	587,834.27
9,500.00	90.00	90.45	8,075.00	4,777.40	-12.82	1,631.96	1,632.01	0.00	596,874.68	587,934.26
9,600.00	90.00	90.45	8,075.00	4,777.40	-13.60	1,731.96	1,732.01	0.00	596,873.90	588,034.26
9,700.00	90.00	90.45	8,075.00	4,777.40	-14.39	1,831.96	1,832.01	0.00	596,873.11	588,134.26
9,800.00	90.00	90.45	8,075.00	4,777.40	-15.17	1,931.96	1,932.01	0.00	596,872.33	588,234.26
9,900.00	90.00	90.45	8,075.00	4,777.40	-15.96	2,031.95	2,032.01	0.00	596,871.54	588,334.25
10,000.00	90.00	90.45	8,075.00	4,777.40	-16.74	2,131.95	2,132.01	0.00	596,870.76	588,434.25
10,100.00	90.00	90.45	8,075.00	4,777.40	-17.53	2,231.95	2,232.01	0.00	596,869.97	588,534.25
10,200.00	90.00	90.45	8,075.00	4,777.40	-18.32	2,331.94	2,332.01	0.00	596,869.18	588,634.24
10,300.00	90.00	90.45	8,075.00	4,777.40	-19.10	2,431.94	2,432.01	0.00	596,868.40	588,734.24
10,400.00	90.00	90.45	8,075.00	4,777.40	-19.89	2,531.94	2,532.01	0.00	596,867.61	588,834.24
10,500.00	90.00	90.45	8,075.00	4,777.40	-20.67	2,631.93	2,632.01	0.00	596,866.83	588,934.23
10,600.00	90.00	90.45	8,075.00	4,777.40	-21.46	2,731.93	2,732.01	0.00	596,866.04	589,034.23



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: EOG Resources, Inc.
Project: Eddy County
Site: Parkway 23 State Com
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3297.60ft (19' KB Correction)
MD Reference: WELL @ 3297.60ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
10,700.00	90.00	90.45	8,075.00	4,777.40	-22.24	2,831.93	2,832.01	0.00	596,865.26	589,134.23
10,800.00	90.00	90.45	8,075.00	4,777.40	-23.03	2,931.92	2,932.01	0.00	596,864.47	589,234.22
10,900.00	90.00	90.45	8,075.00	4,777.40	-23.81	3,031.92	3,032.01	0.00	596,863.69	589,334.22
11,000.00	90.00	90.45	8,075.00	4,777.40	-24.60	3,131.92	3,132.01	0.00	596,862.90	589,434.22
11,100.00	90.00	90.45	8,075.00	4,777.40	-25.38	3,231.92	3,232.01	0.00	596,862.12	589,534.22
11,200.00	90.00	90.45	8,075.00	4,777.40	-26.17	3,331.91	3,332.01	0.00	596,861.33	589,634.21
11,300.00	90.00	90.45	8,075.00	4,777.40	-26.95	3,431.91	3,432.01	0.00	596,860.55	589,734.21
11,400.00	90.00	90.45	8,075.00	4,777.40	-27.74	3,531.91	3,532.01	0.00	596,859.76	589,834.21
11,500.00	90.00	90.45	8,075.00	4,777.40	-28.53	3,631.90	3,632.01	0.00	596,858.97	589,934.20
11,600.00	90.00	90.45	8,075.00	4,777.40	-29.31	3,731.90	3,732.01	0.00	596,858.19	590,034.20
11,700.00	90.00	90.45	8,075.00	4,777.40	-30.10	3,831.90	3,832.01	0.00	596,857.40	590,134.20
11,800.00	90.00	90.45	8,075.00	4,777.40	-30.88	3,931.89	3,932.01	0.00	596,856.62	590,234.19
11,900.00	90.00	90.45	8,075.00	4,777.40	-31.67	4,031.89	4,032.01	0.00	596,855.83	590,334.19
12,000.00	90.00	90.45	8,075.00	4,777.40	-32.45	4,131.89	4,132.01	0.00	596,855.05	590,434.19
12,100.00	90.00	90.45	8,075.00	4,777.40	-33.24	4,231.88	4,232.01	0.00	596,854.26	590,534.18
12,200.00	90.00	90.45	8,075.00	4,777.40	-34.02	4,331.88	4,332.01	0.00	596,853.48	590,634.18
12,300.00	90.00	90.45	8,075.00	4,777.40	-34.81	4,431.88	4,432.01	0.00	596,852.69	590,734.18
12,400.00	90.00	90.45	8,075.00	4,777.40	-35.59	4,531.88	4,532.01	0.00	596,851.91	590,834.18
12,500.00	90.00	90.45	8,075.00	4,777.40	-36.38	4,631.87	4,632.01	0.00	596,851.12	590,934.17
12,600.00	90.00	90.45	8,075.00	4,777.40	-37.16	4,731.87	4,732.01	0.00	596,850.34	591,034.17
12,627.01	90.00	90.45	8,075.00	4,777.40	-37.38	4,758.87	4,759.02	0.00	596,850.12	591,061.17

TD at 12627.01

Company: EOG Resources, Inc.
Project: Eddy County
Site: Parkway 23 State Com
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3297.60ft (19' KB Correction)
MD Reference: WELL @ 3297.60ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Targets

Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(#4HPW)		0.00	0.00	8,075.00	-33.80	4,758.90	596,853.700	591,061.200	32° 38' 25.817 N	104° 2' 15.030 W
- plan misses by 3.58ft at 12627.00ft MD (8075.00 TVD, -37.38 N, 4758.87 E)										
- Point										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,592.68	7,592.68	0.00	0.00	Start Build 11.88
8,128.75	8,025.00	-2.11	268.46	Top of F Sand - 8128.75' MD, 63.68° INC, 90 45° AZI, 8025.00' TVD
8,350.31	8,075.00	-3.79	482.31	Start 4276 70 hold at 8350.31 MD
12,627.01	8,075.00	-37.38	4,758.87	TD at 12627.01

Checked By: _____ Approved By: _____ Date: _____

EOG Resources, Inc.

Legals:

Parkway 23 State 4H

Eddy Co. New Mexico

660' FSL & 200' FWL Surface Location

Section 23

T-19-S, R-29-E

Lat: N 32.6406331

Long: W 104.0529676

660' FSL & 330' FEL Bottom of Hole Location

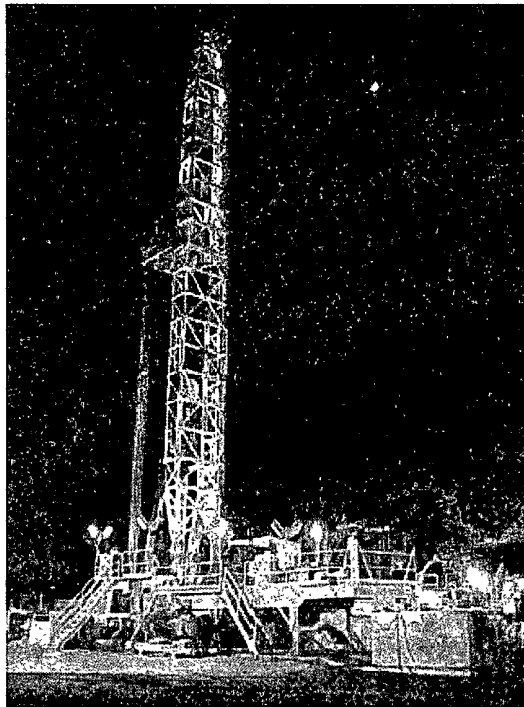
Section 23

T-19-S, R-29-E

Lat: N 32.6405046

Long: W 104.0375082

H₂S “Contingency Plan”



Safety Solutions, LLC
3222 Commercial Dr.

(432) 686-8555
Midland, TX 79701

Table of Contents

I. H₂S Contingency Plan

- a. Scope
- b. Objective
- c. Discussion of Plan

II. Emergency Procedures

- a. Emergency Procedures
- b. Emergency Reaction Steps
- c. Simulated Blowout Control Drills

III. Ignition Procedures

- a. Responsibility
- b. Instructions

IV. Training Requirements

V. Emergency Equipment

VI. Check Lists

- a. Status Check List
- b. Procedural Check List

VII. Briefing Procedures

VIII. Evacuation Plan

- a. General Plan
- b. Emergency Phone Lists

IX. Maps and Plats

- a. Location Plat
- b. Map to Location
- c. Radius of Exposure

X. General Information

- a. Drilling/Re-entry Permits
- b. H-9 Permit
- c. H₂S Permissible Limits
- d. Toxicity Table
- e. Physical Properties
- f. Respirator Use
- g. Emergency Rescue

H₂S CONTINGENCY PLAN SECTION

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release, or following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H₂S).

Objective:

Prevent any and all accidents, and prevent the uncontrolled release of H₂S into the atmosphere.

Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

Discussion of Plan:

Suspected Problem Zones:

Implementation: This plan, with all details, is to be fully implemented 1000' before drilling into the first sour zone.

Emergency Response Procedure: This section outlines the conditions and denotes steps to be taken in the event of an emergency.

Emergency Equipment and Procedure: This section outlines the safety and emergency equipment that will be required for the drilling of this well.

Training Provisions: This section outlines the training provisions that must be adhered to 1000' before drilling into the first sour zone.

Emergency call list: Included are the telephone numbers of all persons that would need to be contacted, should an H₂S emergency occur.

Briefing: This section deals with the briefing of all persons involved with the drilling of this well.

Public Safety: Public Safety Personnel will be made aware of the drilling of this well.

Check Lists: Status check lists and procedural check lists have been included to ensure adherence to the plan.

General Information: A general information section has been included to supply support information.

EMERGENCY PROCEDURES SECTION

- I. In the event of any evidence of H₂S level above 10ppm, take the following steps immediately:
 - a. Secure breathing apparatus.
 - b. Order non-essential personnel out of the danger zone.
 - c. Take steps to determine if the H₂S level can be corrected or suppressed, and if so, proceed with normal operations.
- II. If uncontrollable conditions occur, proceed with the following:
 - a. Take steps to protect and/or remove any public downwind of the rig, including partial evacuation or isolation. Notify necessary public safety personnel and the New Mexico Oil Conservation Division of the situation.
 - b. Remove all personnel to the Safe Briefing Area.
 - c. Notify public safety personnel for help with maintaining roadblocks and implementing evacuation.
 - d. Determine and proceed with the best possible plan to regain control of the well. Maintain tight security and safety measures.
- III. Responsibility:
 - a. The Company Approved Supervisor shall be responsible for the total implementation of the plan.
 - b. The Company Approved Supervisor shall be in complete command during any emergency.
 - c. The Company Approved Supervisor shall designate a back up Supervisor in the event that he/she is not available.

EMERGENCY PROCEDURE IMPLEMENTATION

I. Drilling or Tripping

a. All Personnel

- i. When alarm sounds, don escape unit and report to upwind Safe Briefing Area.
- ii. Check status of other personnel (buddy system).
- iii. Secure breathing apparatus.
- iv. Wait for orders from supervisor.

b. Drilling Foreman

- i. Report to the upwind Safe Briefing Area.
- ii. Don Breathing Apparatus and return to the point of release with the Tool Pusher or Driller (buddy system).
- iii. Determine the concentration of H₂S.
- iv. Assess the situation and take appropriate control measures.

c. Tool Pusher

- i. Report to the upwind Safe Briefing Area.
- ii. Don Breathing Apparatus and return to the point of release with the Drilling Foreman or the Driller (buddy system).
- iii. Determine the concentration of H₂S.
- iv. Assess the situation and take appropriate control measures.

d. Driller

- i. Check the status of other personnel (in a rescue attempt, always use the buddy system).
- ii. Assign the least essential person to notify the Drilling Foreman and Tool Pusher, in the event of their absence.
- iii. Assume the responsibility of the Drilling Foreman and the Tool Pusher until they arrive, in the event of their absence.

e. Derrick Man and Floor Hands

- i. Remain in the upwind Safe Briefing Area until otherwise instructed by a supervisor.

f. Mud Engineer

- i. Report to the upwind Safe Briefing Area.
- ii. When instructed, begin check of mud for pH level and H₂S level.

g. Safety Personnel

- i. Don Breathing Apparatus.
- ii. Check status of personnel.
- iii. Wait for instructions from Drilling Foreman or Tool Pusher.

II. Taking a Kick

- a. All Personnel report to the upwind Safe Briefing Area.
- b. Follow standard BOP procedures.

III. Open Hole Logging

- a. All unnecessary personnel should leave the rig floor.
- b. Drilling Foreman and Safety Personnel should monitor the conditions and make necessary safety equipment recommendations.

IV. Running Casing or Plugging

- a. Follow "Drilling or Tripping" procedures.
- b. Assure that all personnel have access to protective equipment.

SIMULATED BLOWOUT CONTROL DRILLS

All drills will be initiated by activating alarm devices (air horn). One long blast, on the air horn, for ACTUAL and SIMULATED Blowout Control Drills. This operation will be performed by the Drilling Foreman or Tool Pusher at least one time per week for each of the following conditions, with each crew:

Drill #1 Bottom Drilling

Drill #2 Tripping Drill Pipe

In each of these drills, the initial reaction time to shutting in the well shall be timed as well as the total time for the crew to complete its entire pit drill assignment. The times must be recorded on the IADC Driller's Log as "Blowout Control Drill".

Drill No.:

Reaction Time to Shut-In: minutes, seconds.

Total Time to Complete Assignment: minutes, seconds.

I. Drill Overviews

a. Drill No. 1 – Bottom Drilling

- i. Sound the alarm immediately.
- ii. Stop the rotary and hoist Kelly joint above the rotary table.
- iii. Stop the circulatory pump.
- iv. Close the drill pipe rams.
- v. Record casing and drill pipe shut-in pressures and pit volume increases.

b. Drill No. 2 – Tripping Drill Pipe

- i. Sound the alarm immediately.
- ii. Position the upper tool joint just above the rotary table and set the slips.
- iii. Install a full opening valve or inside blowout preventer tool in order to close the drill pipe.
- iv. Close the drill pipe rams.
- v. Record the shut-in annular pressure.

II. Crew Assignments

a. Drill No. 1 – Bottom Drilling

i. Driller

1. Stop the rotary and hoist Kelly joint above the rotary table.
2. Stop the circulatory pump.
3. Check Flow.
4. If flowing, sound the alarm immediately
5. Record the shut-in drill pipe pressure
6. Determine the mud weight increase needed or other courses of action.

ii. Derrickman

1. Open choke line valve at BOP.
2. Signal Floor Man #1 at accumulator that choke line is open.
3. Close choke and upstream valve after pipe tam have been closed.
4. Read the shut-in annular pressure and report readings to Driller.

iii. Floor Man #1

1. Close the pipe rams after receiving the signal from the Derrickman.
2. Report to Driller for further instructions.

iv. Floor Man #2

1. Notify the Tool Pusher and Operator representative of the H₂S alarms.
2. Check for open fires and, if safe to do so, extinguish them.
3. Stop all welding operations.
4. Turn-off all non-explosions proof lights and instruments.
5. Report to Driller for further instructions.

v. Tool Pusher

1. Report to the rig floor.
2. Have a meeting with all crews.

3. Compile and summarize all information.
4. Calculate the proper kill weight.
5. Ensure that proper well procedures are put into action.

vi. Operator Representative

1. Notify the Drilling Superintendent.
2. Determine if an emergency exists and if so, activate the contingency plan.

b. Drill No. 2 – Tripping Pipe

i. Driller

1. Sound the alarm immediately when mud volume increase has been detected.
2. Position the upper tool joint just above the rotary table and set slips.
3. Install a full opening valve or inside blowout preventer tool to close the drill pipe.
4. Check flow.
5. Record all data reported by the crew.
6. Determine the course of action.

ii. Derrickman

1. Come down out of derrick.
2. Notify Tool Pusher and Operator Representative.
3. Check for open fires and, if safe to do so , extinguish them.
4. Stop all welding operations.
5. Report to Driller for further instructions.

iii. Floor Man #1

1. Pick up full opening valve or inside blowout preventer tool and stab into tool joint above rotary table (with Floor Man #2).
2. Tighten valve with back-up tongs.

3. Close pipe rams after signal from Floor Man #2.
4. Read accumulator pressure and check for possible high pressure fluid leaks in valves or piping.
5. Report to Driller for further instructions.

iv. Floor Man #2

1. Pick-up full opening valve or inside blowout preventer tool and stab into tool joint above rotary table (with Floor Man #1).
2. Position back-up tongs on drill pipe.
3. Open choke line valve at BOP.
4. Signal Floor Man #1 at accumulator that choke line is open.
5. Close choke and upstream valve after pipe rams have been closed.
6. Check for leaks on BOP stack and choke manifold.
7. Read annular pressure.
8. Report readings to the Driller.

v. Tool Pusher

1. Report to the rig floor.
2. Have a meeting with all of the crews.
3. Compile and summarize all information.
4. See that proper well kill procedures are put into action.

vi. Operator Representative

1. Notify Drilling Superintendent
2. Determine if an emergency exists, and if so, activate the contingency plan.

IGNITION PROCEDURES

Responsibility:

The decision to ignite the well is the responsibility of the DRILLING FOREMAN in concurrence with the STATE POLICE. In the event the Drilling Foreman is incapacitated, it becomes the responsibility of the RIG TOOL PUSHER. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope of controlling the blowout under the prevailing conditions.

If time permits, notify the main office, but do not delay if human life is in danger. Initiate the first phase of the evacuation plan.

Instructions for Igniting the Well:

1. Two people are required for the actual igniting operation. Both men must wear self-contained breathing apparatus and must use a full body harness and attach a retrievable safety line to the D-Ring in the back. One man must monitor the atmosphere for explosive gases with the LEL monitor, while the Drilling Foreman is responsible for igniting the well.
2. The primary method to ignite is a 25mm flare gun with a range of approximately 500 feet.
3. Ignite from upwind and do not approach any closer than is warranted.
4. Select the ignition site best suited for protection and which offers an easy escape route.
5. Before igniting, check for the presence of combustible gases.
6. After igniting, continue emergency actions and procedures as before.
7. All unassigned personnel will limit their actions to those directed by the Drilling Foreman.

Note: After the well is ignited, burning Hydrogen Sulfide will convert to Sulfur Dioxide, which is also highly toxic. Do not assume the area is safe after the well is ignited.

TRAINING PROGRAM

When working in an area where Hydrogen Sulfide (H₂S) might be encountered, definite training requirements must be carried out. The Company Supervisor will ensure that all personnel, at the well site, have had adequate training in the following:

1. Hazards and characteristics of Hydrogen Sulfide.
2. Physicals effects of Hydrogen Sulfide on the human body.
3. Toxicity of Hydrogen Sulfide and Sulfur Dioxide.
4. H₂S detection, Emergency alarm and sensor location.
5. Emergency rescue.
6. Resuscitators.
7. First aid and artificial resuscitation.
8. The effects of Hydrogen Sulfide on metals.
9. Location safety.

Service company personnel and visiting personnel must be notified if the zone contains H₂S, and each service company must provide adequate training and equipment for their employees before they arrive at the well site.

EMERGENCY EQUIPMENT REQUIREMENTS

Lease Entrance Sign:

Should be located at the lease entrance with the following information:

CAUTION – POTENTIAL POISON GAS
HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION

Respiratory Equipment:

- Fresh air breathing equipment should be placed at the safe briefing areas and should include the following:
- Two SCBA's at each briefing area.
- Enough air line units to operate safely, anytime the H₂S concentration reaches the IDLH level (100 ppm).
- Cascade system with enough breathing air hose and manifolds to reach the rig floor, the derrickman and the other operation areas.

Windsocks or Wind Streamers:

- A minimum of two 10" windsocks located at strategic locations so that they may be seen from any point on location.
- Wind streamers (if preferred) should be placed at various locations on the well site to ensure wind consciousness at all times. (Corners of location).

Hydrogen Sulfide Detector and Alarms:

- 1 - Four channel H₂S monitor with alarms.
- Four (4) sensors located as follows: #1 – Rig Floor, #2 – Bell Nipple, #3 – Shale Shaker, #4 – Mud Pits.
- Gastec or Draeger pump with tubes.
- Sensor test gas.

Well Condition Sign and Flags:

The Well Condition Sign w/flags should be placed a minimum of 150' before you enter the location. It should have three (3) color coded flags (green, yellow and red) that will be used to denote the following location conditions:

GREEN – Normal Operating Conditions
YELLOW – Potential Danger
RED – Danger, H₂S Gas Present

Auxiliary Rescue Equipment:

- Stretcher
- 2 – 100' Rescue lines.
- First Aid Kit properly stocked.

Mud Inspection Equipment:

Garret Gas Train or Hach Tester for inspection of Hydrogen Sulfide in the drilling mud system.

Fire Extinguishers:

Adequate fire extinguishers shall be located at strategic locations.

Blowout Preventer:

- The well shall have hydraulic BOP equipment for the anticipated BHP.
- The BOP should be tested upon installation.
- BOP, Choke Line and Kill Line will be tested as specified by Operator.

Confined Space Monitor:

There should be a portable multi-gas monitor with at least 3 sensors (O₂, LEL H₂S). This instrument should be used to test the atmosphere of any confined space before entering. It should also be used for atmospheric testing for LEL gas before beginning any type of Hot Work. Proper calibration documentation will need to be provided.

Communication Equipment:

- Proper communication equipment such as cell phones or 2-way radios should be available at the rig.
- Radio communication shall be available for communication between the company man's trailer, rig floor and the tool pusher's trailer.