District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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 and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101

APPLICATION FOR PERMIT TO DRILL

Operator Name and Address	OGRID Number
Matador Operating Company 8340 Meadow Road #150 Dallas, TX 75231	14245
	API Number 30-15-32945

Property Code	Property Name	Well No.
32693	MEAD	004

Surface Location

UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	5	22S	27E		2418	N	171	E	Eddy

Bottom Holes

Pool: CARLSBAD;MORROW, SOUTH (PRO GAS) 73960

UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	5	22S	27E		1600	N	760	E	Eddy

Work Type	Well Type	Cable/Rotary	Lease Type	Ground Level Elevation
New Well	Gas		Private	3153
Multiple	**Proposed Depth**	**Formation**	**Contractor**	**Spud Date**
N	11800	Morrow		8/15/2003

Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	48	400	350	0
Intl	12.25	9.625	36	3000	800	0
Prod	8.75	5.5	17	10000	1400	2800
Prod	8.75	5.5	17	11800	1400	2800

Casing/Cement Program: Additional Comments

The BOPE shown below will be used for the 8-3/4 hole section. The 12-1/4 hole section will be drilled utilizing a 3M WP annular preventer.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	2500	HYDRIL
Double Ram	5000	5000	HYDRIL

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Electronically Signed By: Jim Kramer	
Title: Senior Drilling Engineer	
Date: 7/7/2003	Phone: 214-987-7128

OIL CONSERVATION DIVISION	
Electronically Approved By: Bryan Arrant	
Title: Geologist	
Approval Date: 8/12/2003	Expiration Date: 8/12/2004
Conditions of Approval: There are conditions. See Attached.	

District I
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State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-102

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Name	Pool Code
30-15-32945	CARLSBAD;MORROW, SOUTH (PRO GAS)	73960
Property Code	**Property Name**	**Well No.**
32693	MEAD	004
OGRID No.	**Operator Name**	**Elevation**
14245	Matador Operating Company	3153

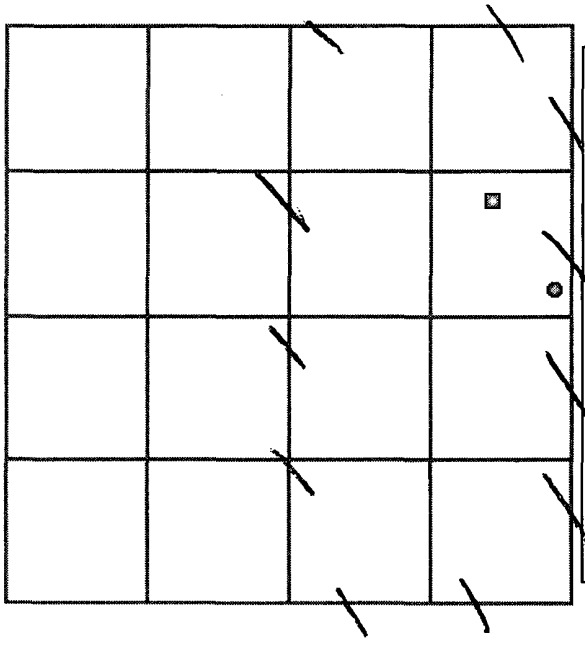
Surface Location

UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	5	22S	27E		2418	N	171	E	Eddy

Bottom Hole Location If Different From Surface

UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	5	22S	27E		1600	N	760	E	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Electronically Signed By: Jim Kramer
Title: Senior Drilling Engineer
Date: 7/7/2003

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.

Electronically Signed By: V. L. Bezner
Date of Survey: 5/19/2003
Certificate Number: 7920

APD Conditions Of Approval

Operator: 14245 Matador Operating Company
Well: MEAD 004

OCD Reviewer	Condition
BARRANT	Notify OCD time of spud & time to witness the cementing of surface and intermediate casing.
BARRANT	Operator to set intermediate casing above Delaware of @ 1900-2000 if sample cuttings indicate reef (carbonate) lithology.

Ryan Energy Technologies
Planning Report

Company:	Matador Operating Company	Date:	7/11/2003	Time:	15:04:37
Field:	Burton Flat	Coordinate(NE) Reference:	Site: Mead #4, True North		
Site:	Mead #4	Vertical (TVD) Reference:	SITE 0.0		
Well:	Mead #4	Section (VS) Reference:	Well (0.00N,0.00E,324.31Azi)		
Wellpath:	OH	Plan:	Plan #1		

Field: Burton Flat
New Mexico
USA

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level
Map Zone: New Mexico, Eastern Zone
Coordinate System: Site Centre
Geomagnetic Model: igrf2000

Site: Mead #4
R27E, T22S, S5
Carlsbad, NM

Site Position: **Northing:** ft **Latitude:**
From: Lease Line **Easting:** ft **Longitude:**
Position Uncertainty: 0.00 ft **North Reference:** True
Ground Level: 3153.00 ft **Grid Convergence:** 0.06 deg

Well: Mead #4 **Slot Name:**

Well Position: +N/-S 0.00 ft **Northing:** 516991.50 ft **Latitude:** 32 25 16.567 N
+E/-W 0.00 ft **Easting:** 536213.84 ft **Longitude:** 104 12 57.502 W
Position Uncertainty: 0.00 ft

Wellpath: OH **Drilled From:** Surface
Tie-on Depth: 0.00 ft
Current Datum: SITE **Height** 0.00 ft **Above System Datum:** Mean Sea Level
Magnetic Data: 7/10/2003 **Declination:** 8.97 deg
Field Strength: 49602 nT **Mag Dip Angle:** 60.50 deg

Vertical Section: Depth From (TVD) ft	+N/-S ft	+E/-W ft	Direction deg
0.00	0.00	0.00	324.31

Plan: Plan #1 **Date Composed:** 7/10/2003
Version: 1
Principal: Yes **Tied-to:** User Defined

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
6200.00	0.00	324.31	6200.00	0.00	0.00	0.00	0.00	0.00	0.00	
6860.96	13.22	324.31	6855.11	61.65	-44.29	2.00	2.00	0.00	324.31	
10194.17	13.22	324.31	10100.00	680.70	-489.00	0.00	0.00	0.00	0.00	660' East Hard Line
10603.43	5.03	324.31	10503.74	733.38	-526.84	2.00	-2.00	0.00	180.00	
11800.00	5.03	324.31	11695.69	818.65	-588.10	0.00	0.00	0.00	0.00	PBHL / TD

Section 1 : Start Build 2.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
6200.00	0.00	324.31	6200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6300.00	2.00	324.31	6299.98	1.42	-1.02	1.75	2.00	2.00	0.00	0.00
6400.00	4.00	324.31	6399.84	5.67	-4.07	6.98	2.00	2.00	0.00	0.00
6500.00	6.00	324.31	6499.45	12.75	-9.16	15.69	2.00	2.00	0.00	0.00
6600.00	8.00	324.31	6598.70	22.64	-16.27	27.88	2.00	2.00	0.00	0.00
6700.00	10.00	324.31	6697.47	35.35	-25.39	43.52	2.00	2.00	0.00	0.00
6800.00	12.00	324.31	6795.62	50.84	-36.52	62.60	2.00	2.00	0.00	0.00
6860.96	13.22	324.31	6855.11	61.65	-44.29	75.91	2.00	2.00	0.00	0.00

Section 2 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
6900.00	13.22	324.31	6893.12	68.90	-49.50	84.84	0.00	0.00	0.00	0.00
7000.00	13.22	324.31	6990.47	87.47	-62.84	107.71	0.00	0.00	0.00	0.00
7100.00	13.22	324.31	7087.82	106.05	-76.18	130.57	0.00	0.00	0.00	0.00
7200.00	13.22	324.31	7185.17	124.62	-89.52	153.44	0.00	0.00	0.00	0.00
7300.00	13.22	324.31	7282.52	143.19	-102.86	176.31	0.00	0.00	0.00	0.00
7400.00	13.22	324.31	7379.87	161.76	-116.21	199.18	0.00	0.00	0.00	0.00

Ryan Energy Technologies
Planning Report

Company:	Matador Operating Company	Date:	7/11/2003	Time:	15:34:37	Page:	2
Field:	Button Flat	Coordinate(NE) Reference:	Site: Mead #4, True North				
Site:	Mead #4	Vertical (TVD) Reference:	SITE 0.0				
Well:	Mead #4	Section (VS) Reference:	Well (0.00N,0.00E,324.31Azi)				
Wellpath:	OH	Plan:	Plan #1				

Section 2 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
7500.00	13.22	324.31	7477.22	180.33	-129.55	222.04	0.00	0.00	0.00	0.00
7600.00	13.22	324.31	7574.57	198.91	-142.89	244.91	0.00	0.00	0.00	0.00
7700.00	13.22	324.31	7671.92	217.48	-156.23	267.78	0.00	0.00	0.00	0.00
7800.00	13.22	324.31	7769.27	236.05	-169.57	290.65	0.00	0.00	0.00	0.00
7900.00	13.22	324.31	7866.62	254.62	-182.92	313.51	0.00	0.00	0.00	0.00
8000.00	13.22	324.31	7963.97	273.20	-196.26	336.38	0.00	0.00	0.00	0.00
8100.00	13.22	324.31	8061.32	291.77	-209.60	359.25	0.00	0.00	0.00	0.00
8200.00	13.22	324.31	8158.67	310.34	-222.94	382.12	0.00	0.00	0.00	0.00
8300.00	13.22	324.31	8256.02	328.91	-236.28	404.98	0.00	0.00	0.00	0.00
8400.00	13.22	324.31	8353.37	347.48	-249.62	427.85	0.00	0.00	0.00	0.00
8500.00	13.22	324.31	8450.72	366.06	-262.97	450.72	0.00	0.00	0.00	0.00
8600.00	13.22	324.31	8548.07	384.63	-276.31	473.59	0.00	0.00	0.00	0.00
8700.00	13.22	324.31	8645.42	403.20	-289.65	496.46	0.00	0.00	0.00	0.00
8800.00	13.22	324.31	8742.77	421.77	-302.99	519.32	0.00	0.00	0.00	0.00
8900.00	13.22	324.31	8840.12	440.34	-316.33	542.19	0.00	0.00	0.00	0.00
9000.00	13.22	324.31	8937.47	458.92	-329.68	565.06	0.00	0.00	0.00	0.00
9100.00	13.22	324.31	9034.82	477.49	-343.02	587.93	0.00	0.00	0.00	0.00
9200.00	13.22	324.31	9132.17	496.06	-356.36	610.79	0.00	0.00	0.00	0.00
9300.00	13.22	324.31	9229.52	514.63	-369.70	633.66	0.00	0.00	0.00	0.00
9400.00	13.22	324.31	9326.87	533.21	-383.04	656.53	0.00	0.00	0.00	0.00
9500.00	13.22	324.31	9424.22	551.78	-396.39	679.40	0.00	0.00	0.00	0.00
9600.00	13.22	324.31	9521.57	570.35	-409.73	702.26	0.00	0.00	0.00	0.00
9700.00	13.22	324.31	9618.92	588.92	-423.07	725.13	0.00	0.00	0.00	0.00
9800.00	13.22	324.31	9716.27	607.49	-436.41	748.00	0.00	0.00	0.00	0.00
9900.00	13.22	324.31	9813.62	626.07	-449.75	770.87	0.00	0.00	0.00	0.00
10000.00	13.22	324.31	9910.97	644.64	-463.09	793.73	0.00	0.00	0.00	0.00
10100.00	13.22	324.31	10008.33	663.21	-476.44	816.60	0.00	0.00	0.00	0.00
10194.17	13.22	324.31	10100.00	680.70	-489.00	838.14	0.00	0.00	0.00	0.00

Section 3 : Start Drop -2.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
10200.00	13.10	324.31	10105.68	681.78	-489.77	839.46	2.00	-2.00	0.00	180.00
10300.00	11.10	324.31	10203.45	698.81	-502.01	860.43	2.00	-2.00	0.00	180.00
10400.00	9.10	324.31	10301.89	713.05	-512.24	877.97	2.00	-2.00	0.00	180.00
10500.00	7.10	324.31	10400.89	724.50	-520.46	892.08	2.00	-2.00	0.00	180.00
10603.43	5.03	324.31	10503.74	733.38	-526.84	903.00	2.00	-2.00	0.00	-180.00

Section 4 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
10605.37	5.03	324.31	10505.67	733.51	-526.94	903.17	0.00	0.00	0.00	0.00
10700.00	5.03	324.31	10599.93	740.26	-531.79	911.47	0.00	0.00	0.00	0.00
10800.00	5.03	324.31	10699.55	747.38	-536.91	920.24	0.00	0.00	0.00	0.00
10900.00	5.03	324.31	10799.16	754.51	-542.03	929.02	0.00	0.00	0.00	0.00
11000.00	5.03	324.31	10898.78	761.64	-547.15	937.79	0.00	0.00	0.00	0.00
11100.00	5.03	324.31	10998.39	768.76	-552.26	946.57	0.00	0.00	0.00	0.00
11200.00	5.03	324.31	11098.00	775.89	-557.38	955.34	0.00	0.00	0.00	0.00
11300.00	5.03	324.31	11197.62	783.02	-562.50	964.12	0.00	0.00	0.00	0.00
11400.00	5.03	324.31	11297.23	790.14	-567.62	972.89	0.00	0.00	0.00	0.00
11500.00	5.03	324.31	11396.85	797.27	-572.74	981.67	0.00	0.00	0.00	0.00
11600.00	5.03	324.31	11496.46	804.39	-577.86	990.44	0.00	0.00	0.00	0.00
11700.00	5.03	324.31	11596.08	811.52	-582.98	999.22	0.00	0.00	0.00	0.00
11800.00	5.03	324.31	11695.69	818.65	-588.10	1007.99	0.00	0.00	0.00	0.00

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6200.00	0.00	324.31	6200.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP - Build 2/100
6300.00	2.00	324.31	6299.98	1.42	-1.02	1.75	2.00	2.00	0.00	MWD
6400.00	4.00	324.31	6399.84	5.67	-4.07	6.98	2.00	2.00	0.00	MWD

Ryan Energy Technologies
Planning Report

Company:	Matador Operating Company	Date:	7/11/2003	Time:	15:34:37
Field:	Burton Flat	Co-ordinate(NE) Reference:	Site: Mead #4, True North		
Site:	Mead #4	Vertical (TVD) Reference:	SITE 0.0		
Well:	Mead #4	Section (VS) Reference:	Well (0.00N,0.00E,324.31Azi)		
Wellpath:	Orig	Plan:	Plan #1		

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6500.00	6.00	324.31	6499.45	12.75	-9.16	15.69	2.00	2.00	0.00	MWD
6600.00	8.00	324.31	6598.70	22.64	-16.27	27.88	2.00	2.00	0.00	MWD
6700.00	10.00	324.31	6697.47	35.35	-25.39	43.52	2.00	2.00	0.00	MWD
6800.00	12.00	324.31	6795.62	50.84	-36.52	62.60	2.00	2.00	0.00	MWD
6860.96	13.22	324.31	6855.11	61.65	-44.29	75.91	2.00	2.00	0.00	Hold 13.22 Deg
6900.00	13.22	324.31	6893.12	68.90	-49.50	84.84	0.00	0.00	0.00	MWD
7000.00	13.22	324.31	6990.47	87.47	-62.84	107.71	0.00	0.00	0.00	MWD
7100.00	13.22	324.31	7087.82	106.05	-76.18	130.57	0.00	0.00	0.00	MWD
7200.00	13.22	324.31	7185.17	124.62	-89.52	153.44	0.00	0.00	0.00	MWD
7300.00	13.22	324.31	7282.52	143.19	-102.86	176.31	0.00	0.00	0.00	MWD
7400.00	13.22	324.31	7379.87	161.76	-116.21	199.18	0.00	0.00	0.00	MWD
7500.00	13.22	324.31	7477.22	180.33	-129.55	222.04	0.00	0.00	0.00	MWD
7600.00	13.22	324.31	7574.57	198.91	-142.89	244.91	0.00	0.00	0.00	MWD
7700.00	13.22	324.31	7671.92	217.48	-156.23	267.78	0.00	0.00	0.00	MWD
7800.00	13.22	324.31	7769.27	236.05	-169.57	290.65	0.00	0.00	0.00	MWD
7900.00	13.22	324.31	7866.62	254.62	-182.92	313.51	0.00	0.00	0.00	MWD
8000.00	13.22	324.31	7963.97	273.20	-196.26	336.38	0.00	0.00	0.00	MWD
8100.00	13.22	324.31	8061.32	291.77	-209.60	359.25	0.00	0.00	0.00	MWD
8200.00	13.22	324.31	8158.67	310.34	-222.94	382.12	0.00	0.00	0.00	MWD
8300.00	13.22	324.31	8256.02	328.91	-236.28	404.98	0.00	0.00	0.00	MWD
8400.00	13.22	324.31	8353.37	347.48	-249.62	427.85	0.00	0.00	0.00	MWD
8500.00	13.22	324.31	8450.72	366.06	-262.97	450.72	0.00	0.00	0.00	MWD
8600.00	13.22	324.31	8548.07	384.63	-276.31	473.59	0.00	0.00	0.00	MWD
8700.00	13.22	324.31	8645.42	403.20	-289.65	496.46	0.00	0.00	0.00	MWD
8800.00	13.22	324.31	8742.77	421.77	-302.99	519.32	0.00	0.00	0.00	MWD
8900.00	13.22	324.31	8840.12	440.34	-316.33	542.19	0.00	0.00	0.00	MWD
9000.00	13.22	324.31	8937.47	458.92	-329.68	565.06	0.00	0.00	0.00	MWD
9100.00	13.22	324.31	9034.82	477.49	-343.02	587.93	0.00	0.00	0.00	MWD
9200.00	13.22	324.31	9132.17	496.06	-356.36	610.79	0.00	0.00	0.00	MWD
9300.00	13.22	324.31	9229.52	514.63	-369.70	633.66	0.00	0.00	0.00	MWD
9400.00	13.22	324.31	9326.87	533.21	-383.04	656.53	0.00	0.00	0.00	MWD
9500.00	13.22	324.31	9424.22	551.78	-396.39	679.40	0.00	0.00	0.00	MWD
9600.00	13.22	324.31	9521.57	570.35	-409.73	702.26	0.00	0.00	0.00	MWD
9700.00	13.22	324.31	9618.92	588.92	-423.07	725.13	0.00	0.00	0.00	MWD
9800.00	13.22	324.31	9716.27	607.49	-436.41	748.00	0.00	0.00	0.00	MWD
9900.00	13.22	324.31	9813.62	626.07	-449.75	770.87	0.00	0.00	0.00	MWD
10000.00	13.22	324.31	9910.97	644.64	-463.09	793.73	0.00	0.00	0.00	MWD
10100.00	13.22	324.31	10008.33	663.21	-476.44	816.60	0.00	0.00	0.00	MWD
10194.17	13.22	324.31	10100.00	680.70	-489.00	838.14	0.00	0.00	0.00	660' East Hard Line
10200.00	13.10	324.31	10105.68	681.78	-489.77	839.46	2.00	-2.00	0.00	MWD
10300.00	11.10	324.31	10203.45	698.81	-502.01	860.43	2.00	-2.00	0.00	MWD
10400.00	9.10	324.31	10301.89	713.05	-512.24	877.97	2.00	-2.00	0.00	MWD
10500.00	7.10	324.31	10400.89	724.50	-520.46	892.06	2.00	-2.00	0.00	MWD
10603.43	5.03	324.31	10503.74	733.38	-526.84	903.00	2.00	-2.00	0.00	MWD
10605.37	5.03	324.31	10505.67	733.51	-526.94	903.17	0.00	0.00	0.00	Hold 5 Deg
10700.00	5.03	324.31	10599.93	740.26	-531.79	911.47	0.00	0.00	0.00	MWD
10800.00	5.03	324.31	10699.55	747.38	-536.91	920.24	0.00	0.00	0.00	MWD
10900.00	5.03	324.31	10799.16	754.51	-542.03	929.02	0.00	0.00	0.00	MWD
11000.00	5.03	324.31	10898.78	761.64	-547.15	937.79	0.00	0.00	0.00	MWD
11100.00	5.03	324.31	10998.39	768.76	-552.26	946.57	0.00	0.00	0.00	MWD
11200.00	5.03	324.31	11098.00	775.89	-557.38	955.34	0.00	0.00	0.00	MWD
11300.00	5.03	324.31	11197.62	783.02	-562.50	964.12	0.00	0.00	0.00	MWD
11400.00	5.03	324.31	11297.23	790.14	-567.62	972.89	0.00	0.00	0.00	MWD

Ryan Energy Technologies
Planning Report

Company:	Matador Operating Company	Date:	7/11/2003	Time:	15:04:37
Field:	Buton Flat	Co-ordinate(NE) Reference:	Site: Mead #4, True North		
Site:	Mead #4	Vertical (TVD) Reference:	SITE 0.0		
Well:	Mead #4	Section (VS) Reference:	Well (0.00N,0.00E,324.31Azi)		
Wellpath:	OH	Plan:	Plan #1		

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
11500.00	5.03	324.31	11396.85	797.27	-572.74	981.67	0.00	0.00	0.00	MWD
11600.00	5.03	324.31	11496.46	804.39	-577.86	990.44	0.00	0.00	0.00	MWD
11700.00	5.03	324.31	11596.08	811.52	-582.98	999.22	0.00	0.00	0.00	MWD
11800.00	5.03	324.31	11695.69	818.65	-588.10	1007.99	0.00	0.00	0.00	PBHL / TD

Targets

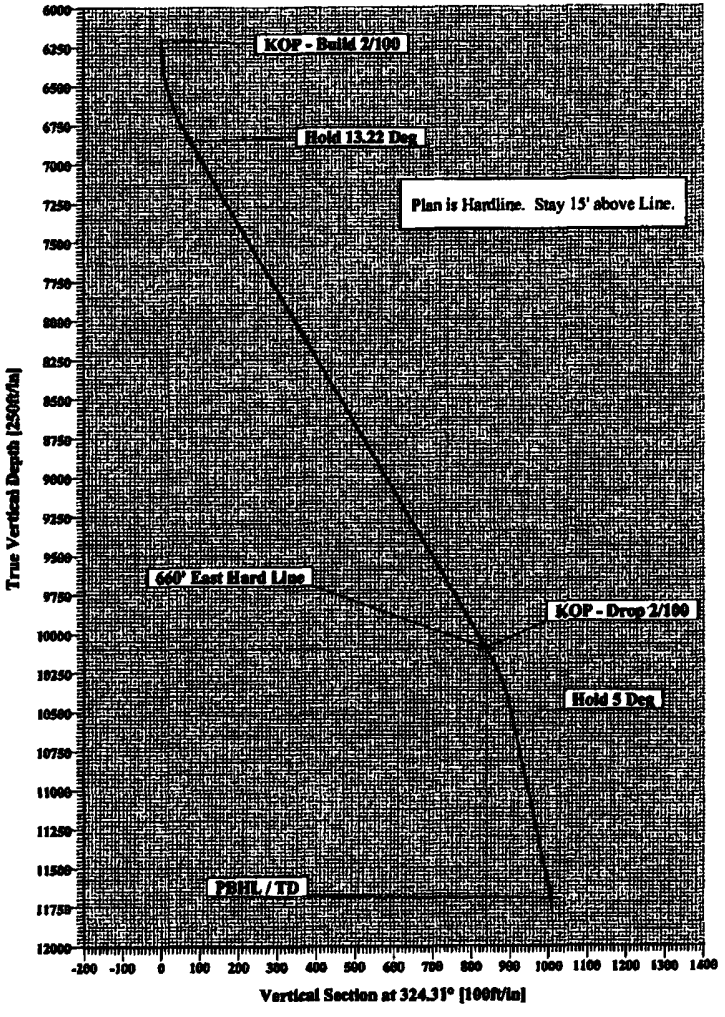
Name	Description Top	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg	Min	Sec		Longitude Deg	Min	Sec	
660' East Hard Line -Plan hit target			10100.00	680.70	-489.00	517671.66	535724.10	32	25	23.303	N	104	13	3.207	W
PBHL / TD -Plan hit target			11695.69	818.65	-588.10	517809.50	535624.84	32	25	24.668	N	104	13	4.363	W

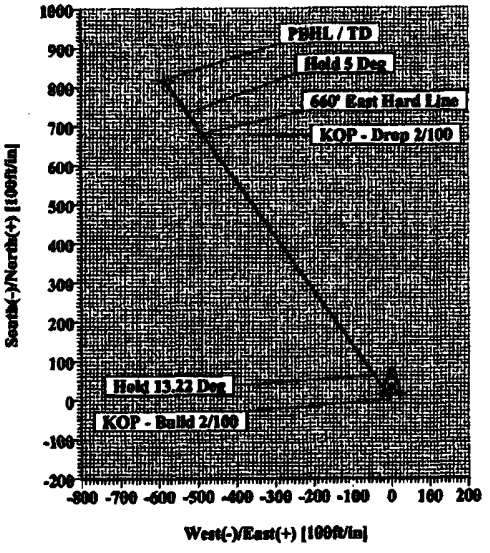
Annotation

MD ft	TVD ft	
6200.00	6200.00	KOP - Build 2/100
6860.96	6855.11	Hold 13.22 Deg
10194.17	10100.00	KOP - Drop 2/100
10605.37	10505.67	Hold 5 Deg

Matador Operating Company

Field: Burton Flat
Site: Mead #4
Well: Mead #4
Wellpath: OH
Plan: Plan #1





Azimuths to True North
Magnetic North: 8.97°

Magnetic Field
Strength: 49607nT
Dip Angle: 60.98°
Date: 7/10/2003
Model: bgm2000

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	6200.00	0.00	324.31	6200.00	0.00	0.00	0.00	0.00	0.00	
2	6960.96	13.22	324.31	6855.11	61.65	-44.29	2.00	324.31	75.91	
3	10194.17	13.22	324.31	10100.00	680.70	-489.00	0.00	0.00	838.14	660' East Hard Line
4	10603.43	5.03	324.31	10503.74	733.38	-526.84	2.00	180.00	903.00	
5	11800.00	5.03	324.31	11695.69	818.65	-588.10	0.00	0.00	1007.99	PBHL / TD

Plan: Plan #1 (Mead #4/OH)

Created By: Well Planning - Midland Date: 7/11/2003
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

OCD Rule 118

Pasquill-Gifford Equation for Calculating Radius of Exposure (ROE) of Hydrogen Sulfide (H2S)

Enter H2S in PPM	[redacted]	*enter Data in green shaded areas*	
Enter Gas flow in mcf/day	[redacted]		
Constant for 500 ppm ROE	0.4546	constant	
Constant for 300 ppm ROE	0.77	constant	
Constant for 100 ppm ROE	1.589	constant	
Mult factor for 500 ppm ROE	909.2	formula	
Mult factor for 300 ppm ROE	1540	formula	
Mult factor for 100 ppm ROE	3178	formula	
Flow Rate of Pure H2S in Gas Stream (Actual Volume Fraction)	2	mcf/day	
H2S Concentration Volume Fraction	0.004	decimal equivalent	
H2S Concentration Volume Fraction in percent %	0.40%	percent	
500 ppm radius of exposure (public road)	71	feet	*ANSWER*
300 ppm radius of exposure	93	feet	*ANSWER*
100 ppm radius of exposure (public area)	165	feet	*ANSWER*

Conversions:

To convert H2S in percent to parts per million (ppm) Put H2S in % in blue shaded area, read answer to the right in the yellow shaded area in ppm	Input H2S in % below [redacted]	ppm 100000	*ANSWER*
To convert H2S from parts per million (ppm) to percent Put H2S in ppm in blue shaded area; read answer to the right in the yellow shaded area in percent	Input H2S in ppm below [redacted]	% 0.0214%	*ANSWER*
To convert gas flow in cubic feet per day to mcf per day put cubic feet per day in blue shaded area; read answer to the right in the yellow shaded area in MCF	Input cubic feet per day below [redacted]	mcf/day 128.999	*ANSWER*
To convert gas flow from MCF per day to cubic feet per day put MCF per day in blue shaded area; read answer to the right in the yellow shaded area in Cubic feet per day	Input MCF day below [redacted]	Cubic feet per day 999000	*ANSWER*

EXAMPLE CALCULATIONS and DEFINITIONS:

Problem: Calculate the 100 PPM ROE for a gas well that contains 10,000 ppm of H2S and the absolute open gas flow rate is calculated to be 1000 mcf/day

cf = cubic feet = ft^3

NG Eq. $X\,(feet) = [1.589 \times H2S\ Concentration \times Q]^{.625}$

H2S concentration is found by taking 10000 ppm / 1,000,000 ppm = .01 (Decimal equivalent)

Q is gas flow rate in ft^3/day can be found by 1000 mcf/day x 1000 ft^3/mcf = 1,000,000 (ft^3/day)

$x(ft) = [1.589 \times .01 \times 1{,}000{,}000]^{.625}$

$x(ft) = [1.589 \times 10{,}000]^{.625}$

100 ROE = 425 feet

Note: The actual H2S Volume fraction (pure H2S) in this case would be 10,000 cf/day obtained by the product of H2S concentration x Q (.01 x 1,000,000 cf/day) = 10,000 cf/day

OCD Rule 118

Pasquill-Gifford Equation for Calculating Radius of Exposure (ROE) of Hydrogen Sulfide (H2S)

Enter H2S in PPM	[redacted]	enter Data in green shaded areas	
Enter Gas flow in mcf/day	[redacted]		
Constant for 500 ppm ROE	0.4546	constant	
Constant for 300 ppm ROE	0.77	constant	
Constant for 100 ppm ROE	1.589	constant	
Mult factor for 500 ppm ROE	909.2	formula	
Mult factor for 300 ppm ROE	1540	formula	
Mult factor for 100 ppm ROE	3178	formula	
Flow Rate of Pure H2S in Gas Stream (Actual Volume Fraction)	2	mcf/day	
H2S Concentration Volume Fraction	0.004	decimal equivalent	
H2S Concentration Volume Fraction in percent %	0.40%	percent	
500 ppm radius of exposure (public road)	71	feet	ANSWER
300 ppm radius of exposure	92	feet	ANSWER
100 ppm radius of exposure (public area)	165	feet	ANSWER

Conversions:

To convert H2S in percent to parts per million (ppm) Put H2S in % in blue shaded area, read answer to the right in the yellow shaded area in ppm	Input H2S in % below [redacted]	ppm 100000	ANSWER
To convert H2S from parts per million (ppm) to percent Put H2S in ppm in blue shaded area; read answer to the right in the yellow shaded area in percent	Input H2S in ppm below [redacted]	% 0.0214%	ANSWER
To convert gas flow in cubic feet per day to mcf per day put cubic feet per day in blue shaded area; read answer to the right in the yellow shaded area in MCF	Input cubic feet per day below [redacted]	mcf/day 126.999	ANSWER
To convert gas flow from MCF per day to cubic feet per day put MCF per day in blue shaded area; read answer to the right in the yellow shaded area in Cubic feet per day	Input MCF day below [redacted]	Cubic feet per day 999000	ANSWER

EXAMPLE CALCULATIONS and DEFINITIONS:

lation: Calculate the 100 PPM ROE for a gas well that contains 10,000 ppm of H2S and the absolute open gas flow rate is calculated to be 1000 mcf/day

cf = cubic feet = ft^3

G Eq. $X\ (feet) = [1.589 \times H2S\ Concentration \times Q]^{.6258}$

H2S concentration as found by using 10000 ppm / 1,000,000 ppm = .01 (Decimal equivalent)

Q is gas flow rate in ft^3/day can be found by 1000 mcf/day x 1000 ft^3/mcf = 1,000,000 (ft^3/day)

$x(ft) = (1.589 \times .01 \times 1,000,000)^{.6258}$

$x(ft) = (1.589 \times 10,000)^{.6258}$

100 ROE = 426 feet

Note: The actual H2S Volume fraction (pure H2S) in this case would be 10,000 cf/day obtained by the product of H2S concentration x Q (.01 x 1,000,000 cf/day) = 10,000 cf/day