

NM OIL CONSERVATION
ARTESIA DISTRICT
0004110 2016
Artesia

16-595

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. SESW:NM-115410, SHL & BHL: fee
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name N/A
1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No. will comm. w/fee leases
2. Name of Operator MATADOR PRODUCTION COMPANY		8. Lease Name and Well No. Dr. Scrivner Fed. Com #224H
3a. Address 5400 LBJ FREEWAY, STE 1500, DALLAS, TX 75240	3b. Phone No. (include area code) 972-371-5241	9. API Well No. 30-015- 43023
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 721' FSL & 661' FEL At proposed prod. zone 990' FSL & 240' FWL		10. Field and Pool or Exploratory we, WOLF CAMP, Northeast
14. Distance in miles and direction from nearest town or post office* 2-1/2 AIR MILES NE OF MALAGA, NM		11. Sec., T. R. M. or Blk. and Survey or Area S2 1-24-28E NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	SHL: 661' (comm. line) BHL: 240' (comm. line)	12. County or Parish EDDY
16. No of acres in lease lease= 40 ac, comm=320 ac	17. Spacing Unit dedicated to this well S2 1-24S-28E	13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	SHL: 2,324' (P&A) BHL: 1,771' (P&A)	19. Proposed Depth TVD: 10,490' MD: 15,405'
20. BLM/BIA Bond No. in file BLM NMB-001079	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2,984' UNGRADED	22. Approximate date work will start* 08/21/2016
23. Estimated duration 3 MONTHS	24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

25. Signature 	Name (Printed/Typed) SAM PRYOR (PHONE: 972-371-5241)	Date 04/07/2016
-------------------	---	--------------------

Title
SR. Staff Landman

Approved by (Signature) James A. Amos	Name (Printed/Typed)	Date JUN 1 - 2016
--	----------------------	----------------------

Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
------------------------	---------------------------------

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Carlsbad Controlled Water Basin

NSL must be in place prior to placing well
on production

Approval Subject to General Requirements
& Special Stipulations Attached
(Continued on page 2)

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

*(Instructions on page 2)

Matador Production Company

SURFACE PLAN PAGE 5

Dr. Scrivner Fed. 01-24S-28E RB 224H

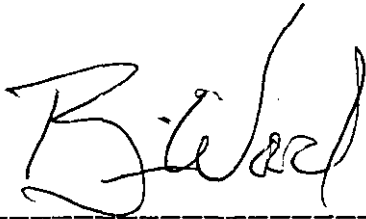
SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 18th day of January, 2016.



Brian Wood, Consultant

Permits West, Inc.

37 Verano Loop, Santa Fe, NM 87508

(505) 466-8120

FAX: (505) 466-9682

Cellular: (505) 699-2276

Field representative will be:

Sam Pryor, Senior Staff Landman

Matador Production Company

5400 LBJ Freeway, Suite 1500

Dallas TX 75240

Phone: (972) 371-5241

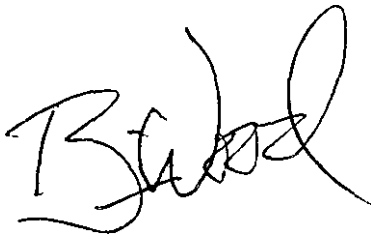
FAX: (214) 866-4841

January 18, 2016

To Who it May Concern:

Matador Resources Company has a private surface owner agreement with Johnson Enterprises (P. O. Box 1713, Roswell NM 88202) for the Dr. Scrivner Fed. 01-24S-28E RB 224H well site, battery, pipeline, power line, and road in Section 1, T. 24 S., R. 28 E. Eddy County, NM.

Matador Resources Company has a private surface owner agreement with John Draper Brantley, Jr. and Henry McDonald (706 W. Riverside Dr., Carlsbad NM 88220) for the Dr. Scrivner Fed. 01-24S-28E RB 224H pipeline and power line in Section 6, T. 24 S., R. 29 E. Eddy County, NM.

A handwritten signature in black ink, appearing to read "Brian Wood". The signature is stylized with a large, looping "B" and a cursive "Wood".

Brian Wood

District I
1625 N French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT
*Wolfcamp B
is the goal

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015- 43023	² Pool Code 96712	³ Pool Name WG; Wolfcamp* Pierce Crossing; WC Northwest
⁴ Property Code 316324	⁵ Property Name DR. SCRIVNER FEDERAL 01-24S-28E RB	⁶ Well Number #224H
⁷ OGRID No. 228937	⁸ Operator Name MATADOR PRODUCTION COMPANY	⁹ Elevation 2984'

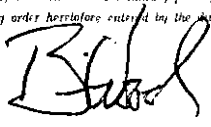
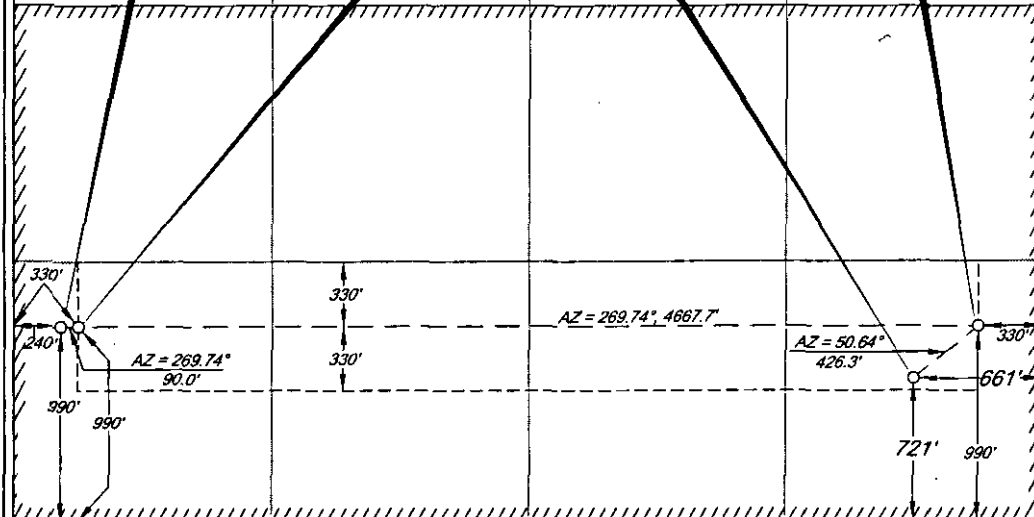
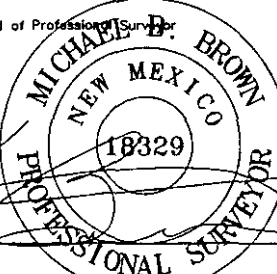
¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	1	24-S	28-E	-	721'	SOUTH	661'	EAST	EDDY

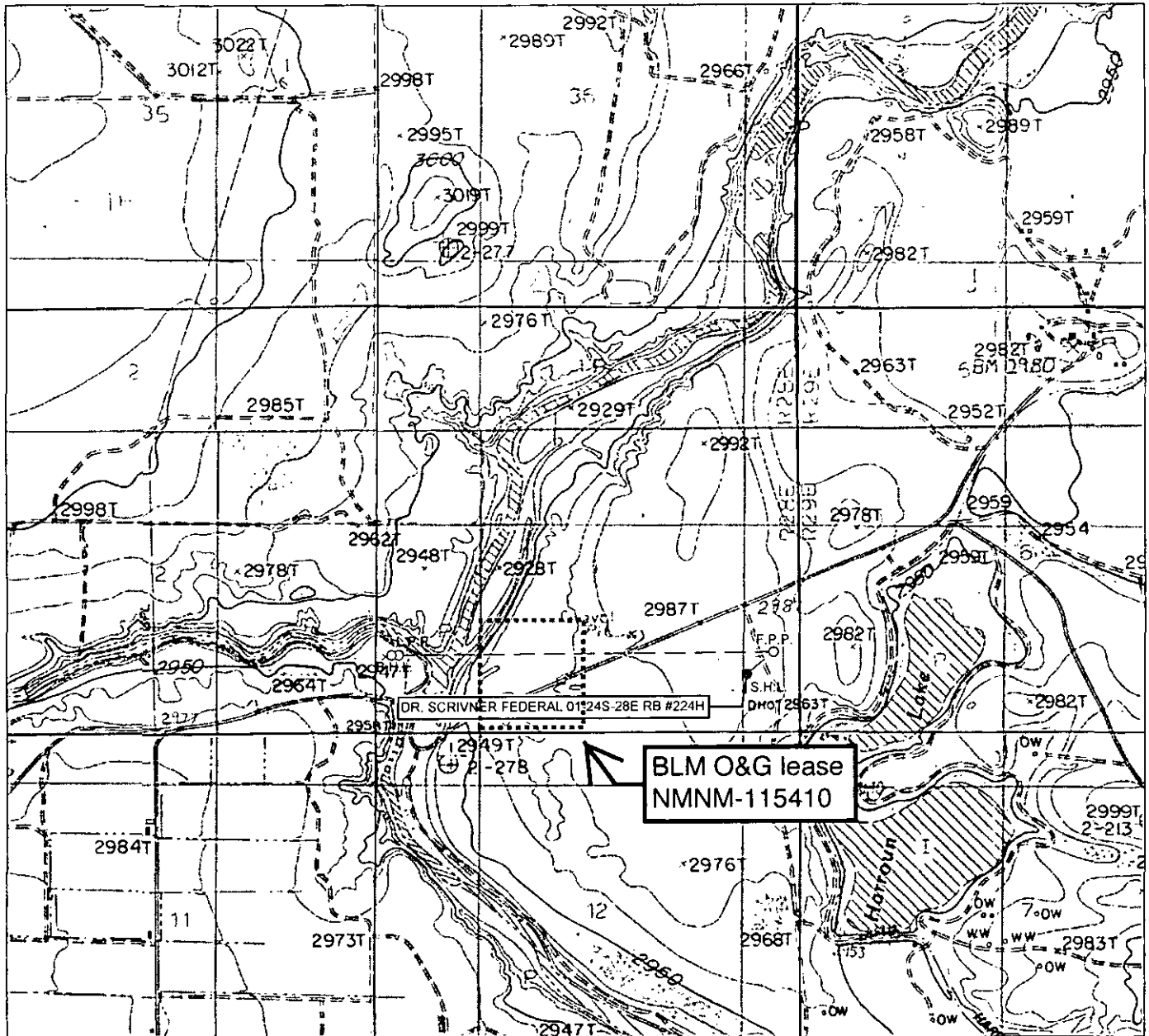
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	24-S	28-E	-	990'	SOUTH	240'	WEST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code C	¹⁵ Order No.
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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.

BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=588132 Y=451962 LAT.: N 32.2422389 LONG.: W 104.0482794 NAD 1983 X=629316 Y=452021 LAT.: N 32.24236065 LONG.: W 104.0487713	LAST PERFORATION POINT NEW MEXICO EAST NAD 1927 X=588222 Y=451962 LAT.: N 32.2422394 LONG.: W 104.0479883 NAD 1983 X=629406 Y=452021 LAT.: N 32.24236112 LONG.: W 104.0484801	SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=592560 Y=451713 LAT.: N 32.2415218 LONG.: W 104.0339597 NAD 1983 X=633744 Y=451772 LAT.: N 32.2416438 LONG.: W 104.0344510	FIRST PERFORATION POINT NEW MEXICO EAST NAD 1927 X=592890 Y=451984 LAT.: N 32.2422626 LONG.: W 104.0328912 NAD 1983 X=634073 Y=452042 LAT.: N 32.24238454 LONG.: W 104.0333824	¹⁷OPERATOR 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 undivided 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.  1-18-16 Signature BRIAN WOOD Printed Name brian@permitswest.com E-mail Address
				¹⁸SURVEYOR 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 to the best of my belief. 11/19/2015 Date of Survey Signature and Seal of Professional Surveyor  Certificate Number

LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: DR. SCRIVNER FEDERAL 01-24S-28E RB #224H

SECTION 1 TWP 24-S RGE 28-E SURVEY N.M.P.M.
 COUNTY EDDY STATE NM ELEVATION 2984'
 DESCRIPTION 721' FSL & 661' FEL

LATITUDE N 32.2415218 LONGITUDE W 104.0339597



SCALE: 1" = 2000'
 0' 1000' 2000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET.



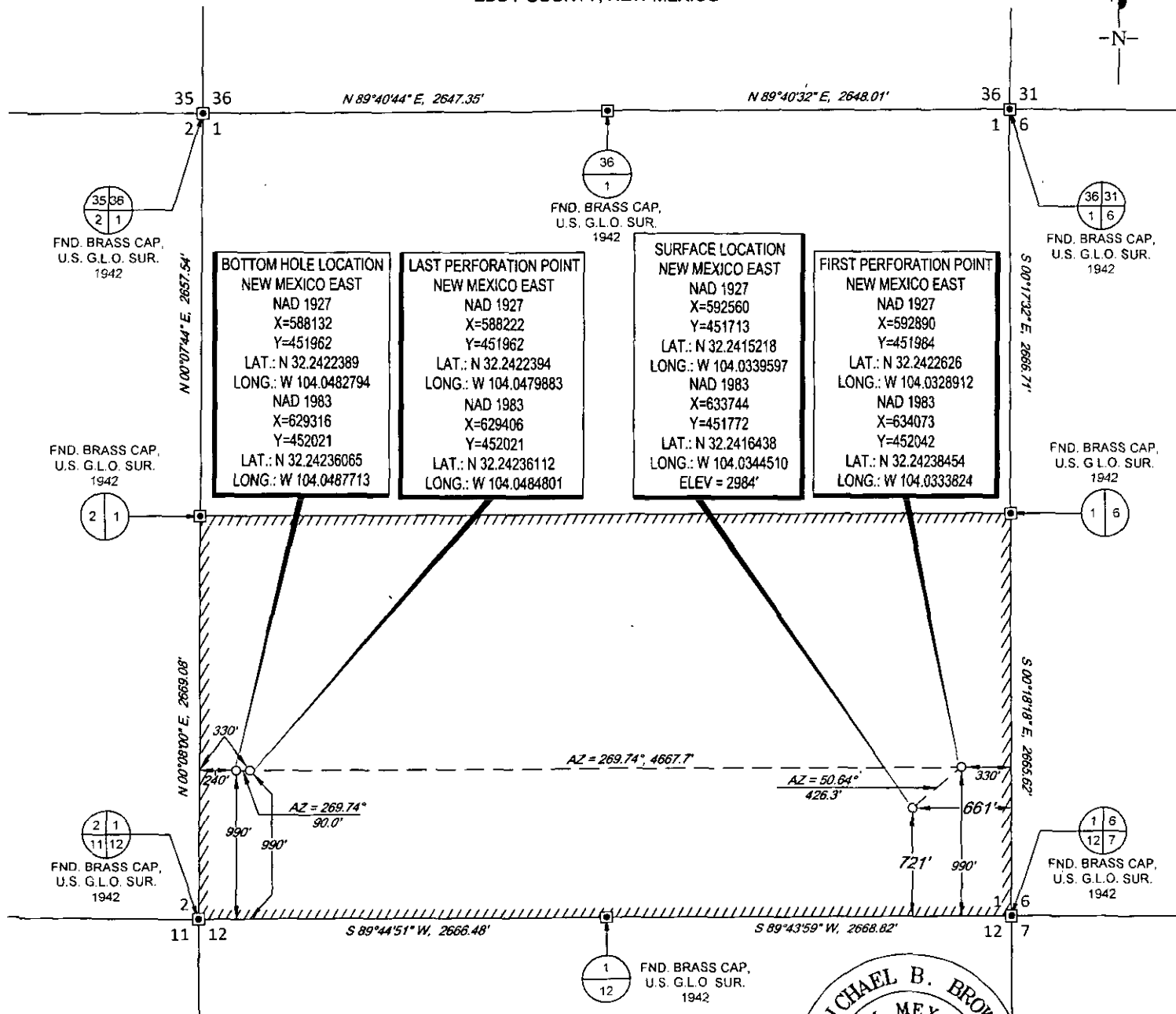
TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
 WWW.TOPOGRAPHIC.COM

SCALE: 1" = 1000'
0' 500' 1000'



SECTION 1, TOWNSHIP 24-S, RANGE 28-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: DR. SCRIVNER FEDERAL 01-24S-28E RB #224H

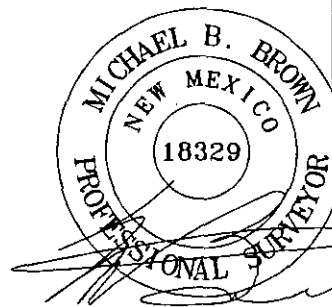
SECTION 1 TWP 24-S RGE 28-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 721' FSL & 661' FEL

DISTANCE & DIRECTION

FROM INT. OF US-285 S. & HWY. 720 GO EAST (RIGHT) ON DUARTE RD.
±0.8 MILES, THENCE GO NORTH (LEFT) ON HARROUN RD. ±2.6 MILES.
THENCE GO SOUTH (RIGHT) ON LEASE RD. ±0.1 MILES, THENCE WEST
(RIGHT) ON LEASE RD. ±67 FEET TO A POINT ±250 FEET NORTHEAST
OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID
BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE
NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND
UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF
SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE
AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS
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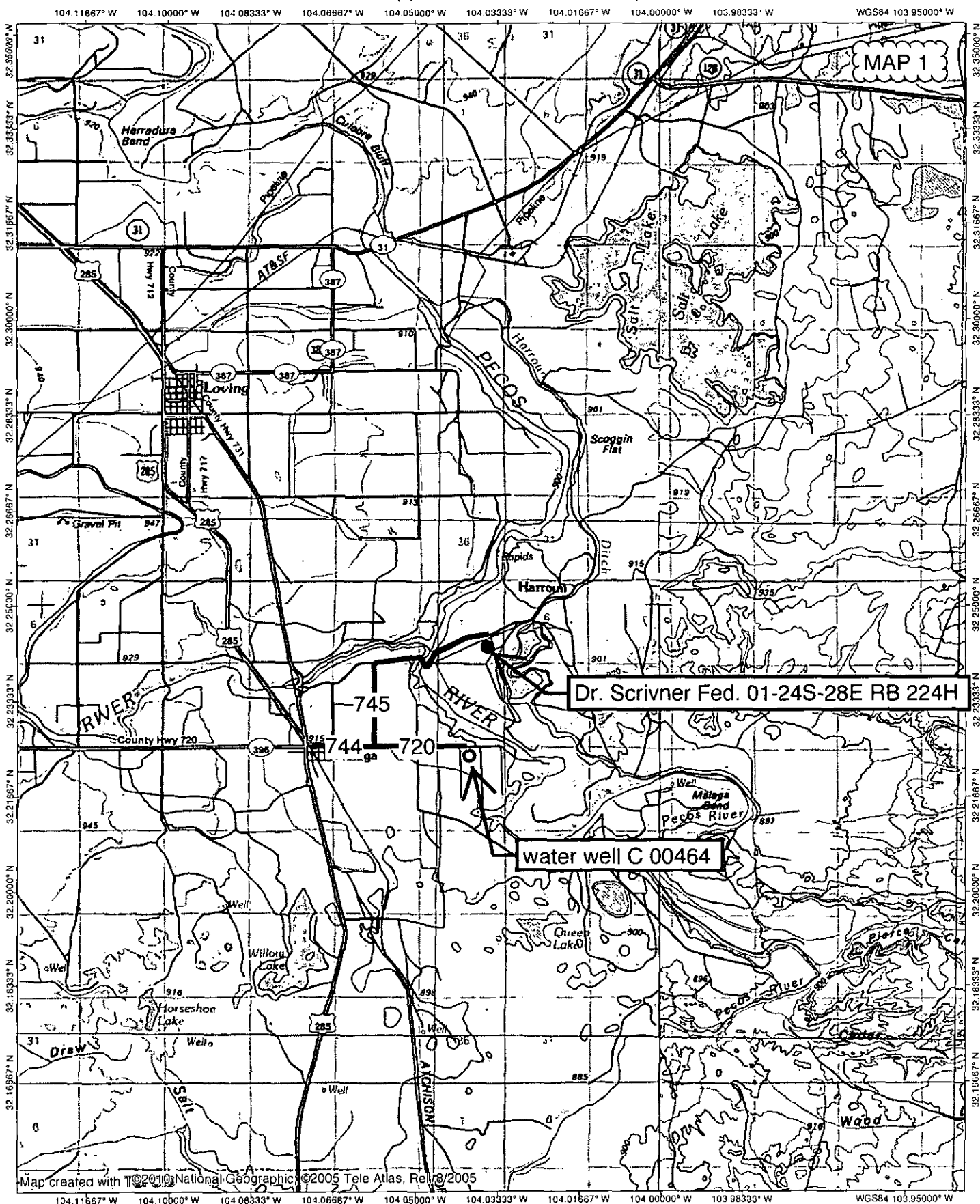


Michael Blake Brown, P.S. No. 18329
NOVEMBER 25, 2015



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Dr. Scrivner Fed. 01-24S-28E RB 224H

water well C 00464

NATIONAL
GEOGRAPHIC

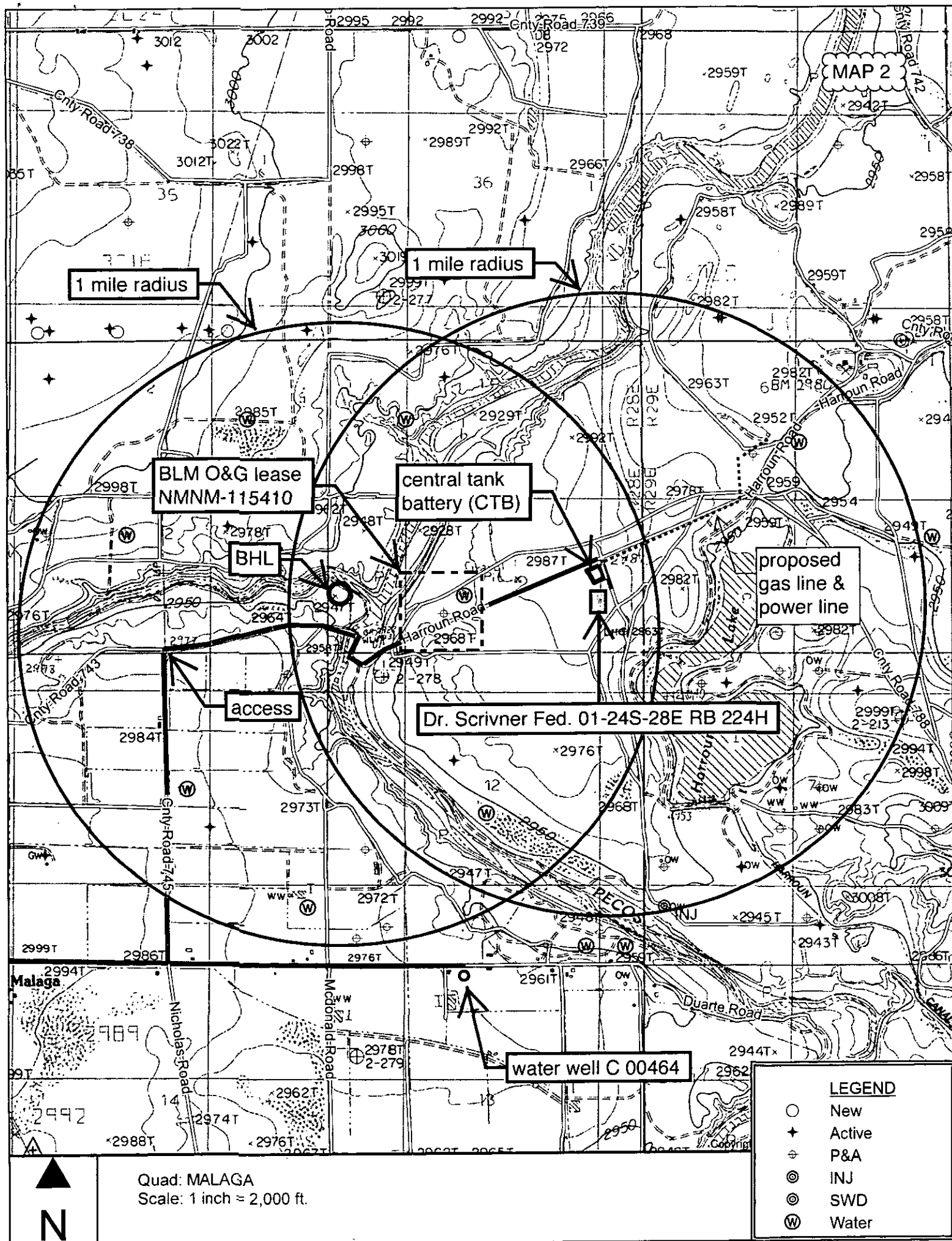
0.0 0.5 1.0 1.5 2.0 2.5 3.0 miles
0 1 2 3 4 5 km

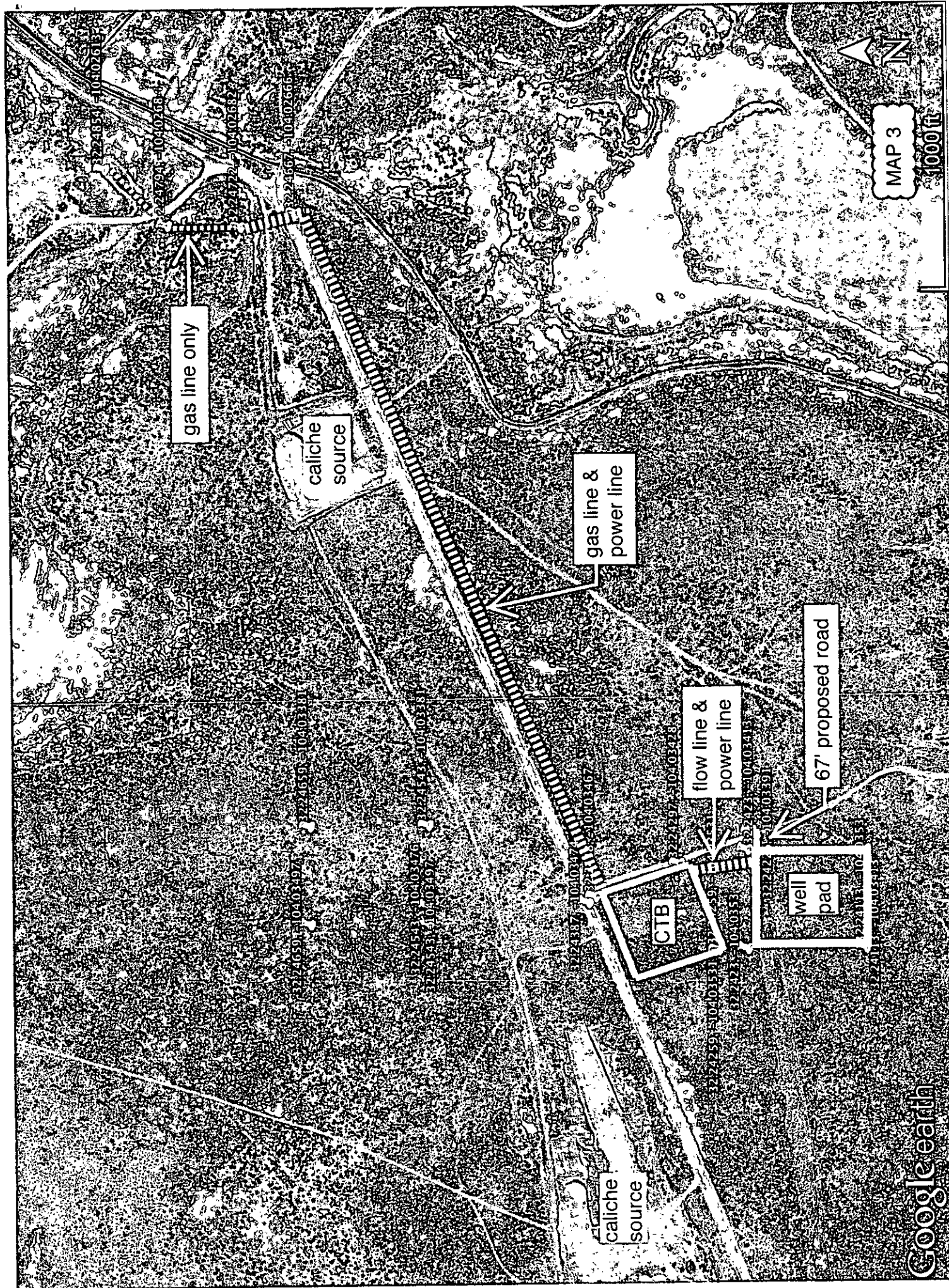
TN 41MN

75°

12/18/15

MAP 2

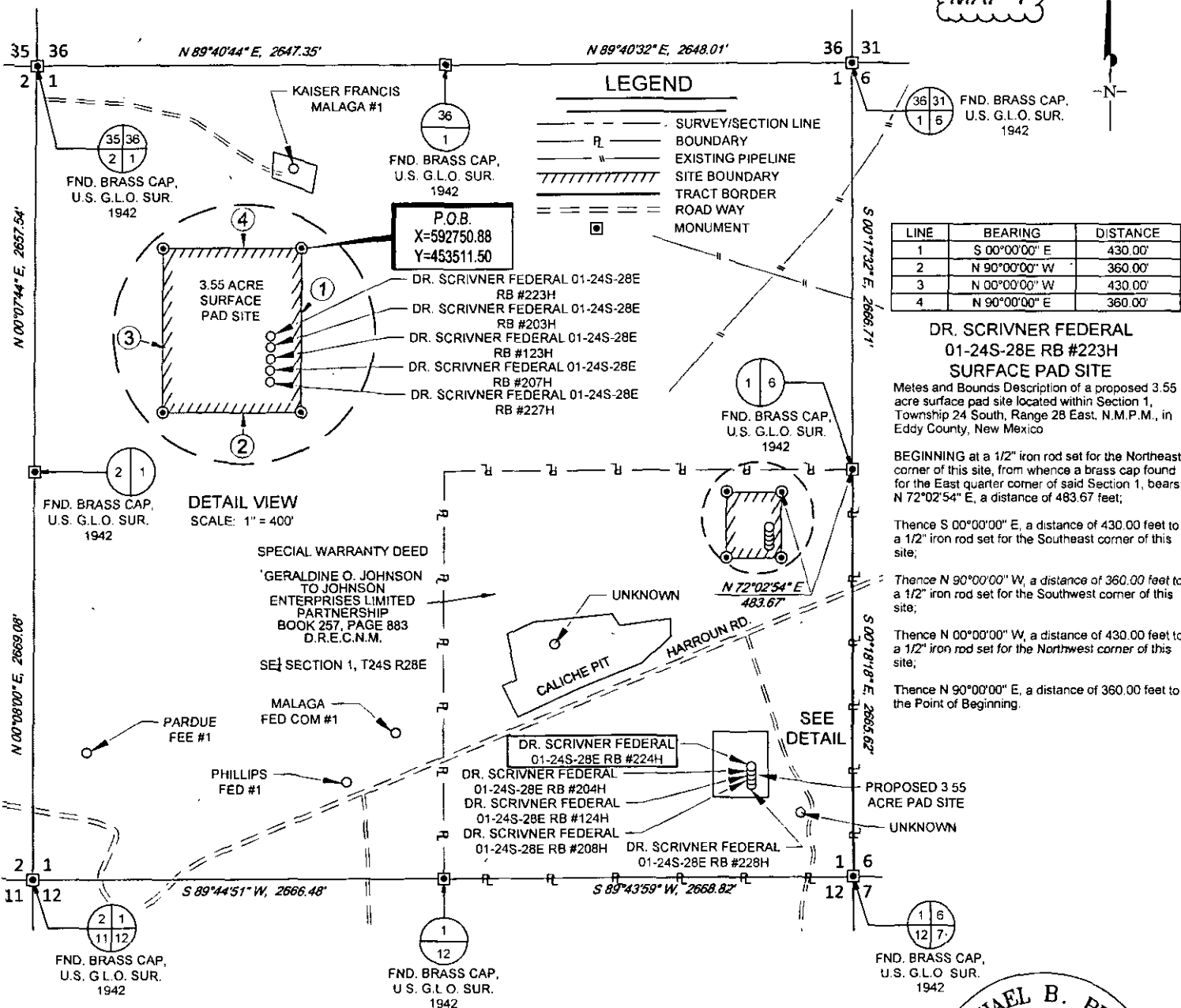




SCALE: 1" = 1000'
0' 500' 1000'

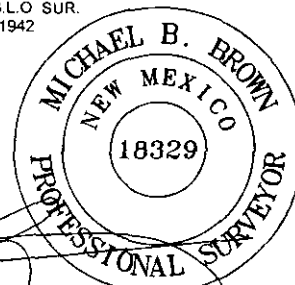
SECTION 1, TOWNSHIP 24-S, RANGE 28-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
PROPOSED 3.55 ACRE SITE

MAP 4



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
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2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1853 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM



Michael Blake Brown, P.S. No. 18329
NOVEMBER 30, 2015

SURFACE PAD SITE	REVISION:	
	MML	11/06/2015
	A.V.F.	11/24/2015
DATE:	08/21/2015	
FILE:	NO. 01-24S-28E RB #223H SURFACE PAD SITE, PER	
DRAWN BY:	GJU	
SHEET:	1 OF 1	

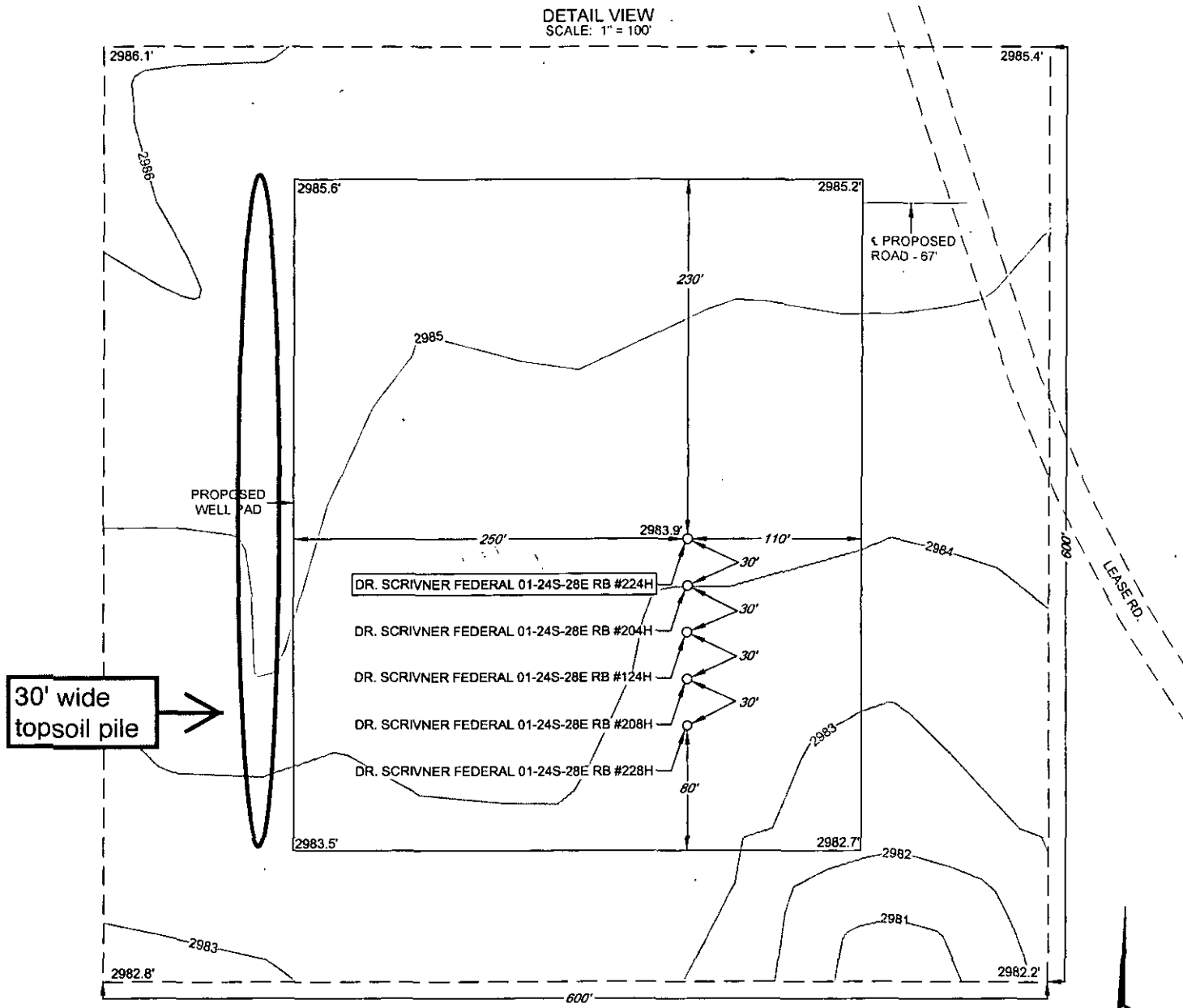
- NOTES:**
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
 3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
 4. P.O.B. = POINT OF BEGINNING



MAP 5

SECTION 1, TOWNSHIP 24-S, RANGE 28-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEGEND

--- PROPOSED ROAD
--- ARCH SITE

LEASE NAME & WELL NO.: DR. SCRIVNER FEDERAL 01-24S-28E RB #224H

#224H LATITUDE N 32.2415218 #224H LONGITUDE W 104.0339597

SCALE: 1" = 100'
0' 50' 100'

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID
BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE
NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER
MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY,
AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND
LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS
NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
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ORIGINAL DOCUMENT SIZE: 8.5" X 11"

Matador Production Company

DRILL PLAN PAGE 1

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

Drilling Program

1. ESTIMATED TOPS

Formation Name	TVD	Bearing
Quaternary	GL	Water
Eroded Salado/Rustler	500	Water/Salt
Castille	790	Salt
Base of Salt/Top of Anhydrite	2215	Barren
Lamar	2662	Barren
Bell Canyon	2692	Hydrocarbon
Cherry Canyon	3578	Hydrocarbon
Brushy Canyon	4783	Hydrocarbon
Bone Spring Lime	6565	Hydrocarbon
1st Bone Spring Sand	7416	Hydrocarbon
2nd Bone Spring Carbonate	7688	Hydrocarbon
2nd Bone Spring Sand	8189	Hydrocarbon
3rd Bone Spring Carbonate	8543	Hydrocarbon
3rd Bone Spring Sand	9320	Hydrocarbon
Wolfcamp	9663	Hydrocarbon
Wolfcamp B	10111	Target Formation
TD (MD = 15405)	10490	Hydrocarbon

2. NOTABLE ZONES

Closest water well (C 02184) is 2,358' to the northwest. Depth to water in that 87' deep well is 60'.

3. PRESSURE CONTROL See COA

A BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer will be installed. The BOP will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams.

Matador Production Company

DRILL PLAN PAGE 2

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

An accumulator that meets the requirements of Onshore Order 2 for the pressure rating of the BOP stack will be present. A rotating head will be installed as needed.

Pressure tests will be conducted before drilling out under all casing strings. BOP will be inspected and operated as recommended in Onshore Order 2. A Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs. Test pressures will be as follows: After surface casing is set and the BOP is nipped up, the BOP pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate #1, pressure tests will be made to 250 psi low and 3000 psi high. On the intermediate #2, pressure tests will be made to 250 psi low and 7500 psi high. The annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and ~~1500~~ ²⁵⁰⁰ psi high on the intermediate #1 and #2 casing. In the case of running a speed head with landing mandrel for 9-5/8" and 7" casing the initial, after surface casing is set, BOP test pressures will be 250 psi low and 3000 psi high with wellhead seals tested to 5000 psi once the 9-5/8" casing has been landed and cemented. The BOP will then be lifted to install the 'C-section' of the wellhead. Matador will nipple the BOP back up and the pressure tests will be made to 250 psi low and 7500 psi high and the annular will be tested to 250 psi low and ~~1500~~ ²⁵⁰⁰ psi high.

Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

4. CASING & CEMENT

Hole will extend west of the drilling window to allow for pump installation. All perforations will be $\geq 330'$ from the dedication perimeter.

Matador Production Company

DRILL PLAN PAGE 3

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

See COA

Hole O. D.	Set @ (MD)	Casing O. D.	Age	Weight (lb/ft)	Grade	Thread Collar	Collapse	Burst	Tension
17.5"	610' 3160'	13.375"	New	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	2700'	9.625"	New	40	J-55	BTC	1.125	1.125	1.8
8.75"	10700'	7"	New	29	P-110	BTC/TXP	1.125	1.125	1.8
6.125"	15405'	4.5"	New	13.5	P-110	BTC/TXP	1.125	1.125	1.8

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	230	1.82	418.6	12.8	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM
	Tail	350	1.38	483	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate	Lead	550	2.13	1171.5	12.6	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	270	1.38	372.6	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface	
Intermediate 2	Lead	530	2.35	1245.5	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	400	1.39	556	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 1500'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC)	
Production	Tail	500	1.17	585	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 9700'		10% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of curve	

additional cement required - See COA

Matador Production Company

DRILL PLAN PAGE 4

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

5. MUD PROGRAM

Mud monitoring system will be an electronic Pason system satisfying the requirements of Onshore Order 1. All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to the hole condition.

Name	Hole Size	Mud Weight	Visc	Fluid Loss	Type Mud
Surface	17-1/2"	8.30	28	NC	FW Spud Mud
Intermediate	12-1/4"	10.00	30-32	NC	Brine Water
Intermediate 2	8-3/4"	9.00	30-32	NC	FW/Cut Brine
Production	6-1/8"	12.5	50-60	<10	OBM

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud-logging program will be used from 5600' to TD.

No electric logs are planned. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

See COA

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 7900 psi. Expected bottom hole temperature is $\approx 170^\circ$ F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H_2S from the surface to the Bone Spring to meet the BLM's minimum requirements for the submission of an " H_2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since Matador has a H_2S safety package on all wells, attached is an " H_2S Drilling Operations Plan".

Matador Production Company

DRILL PLAN PAGE 5

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take 2-1/2 months to drill and complete the well.

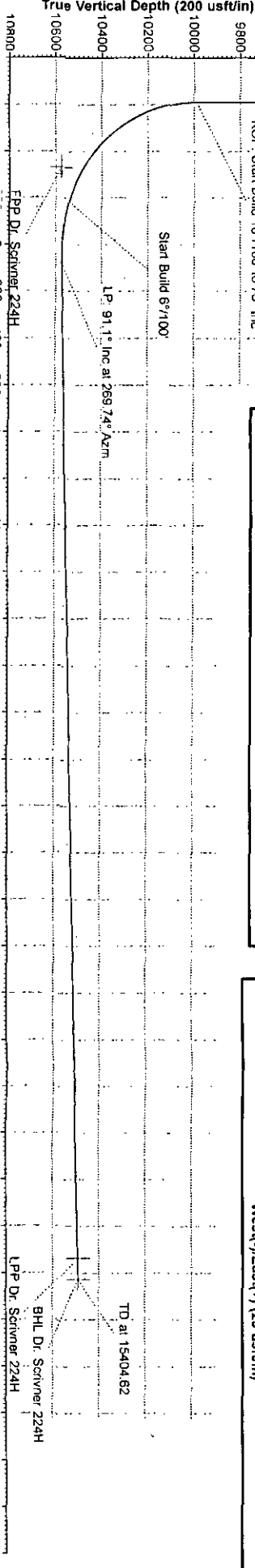
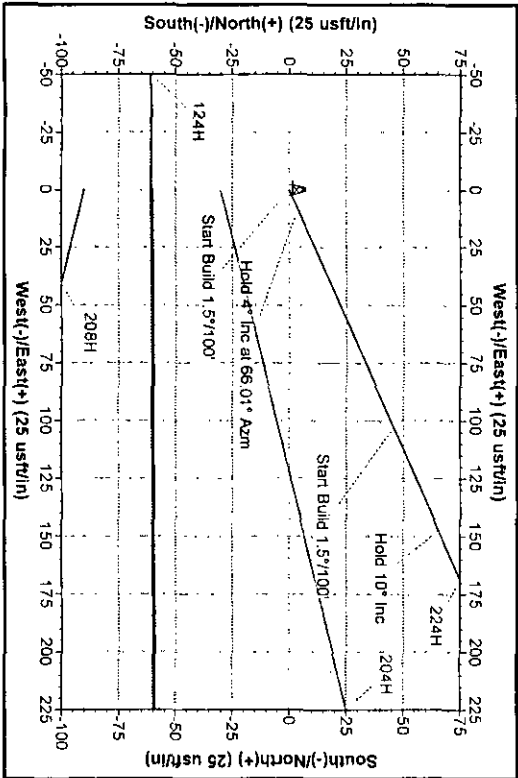
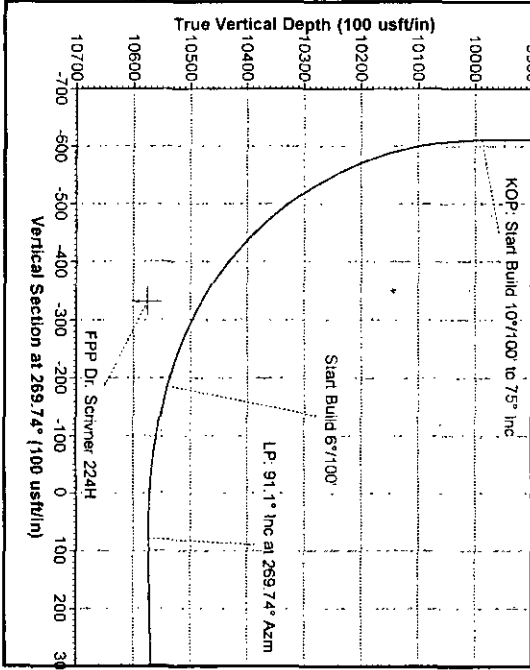
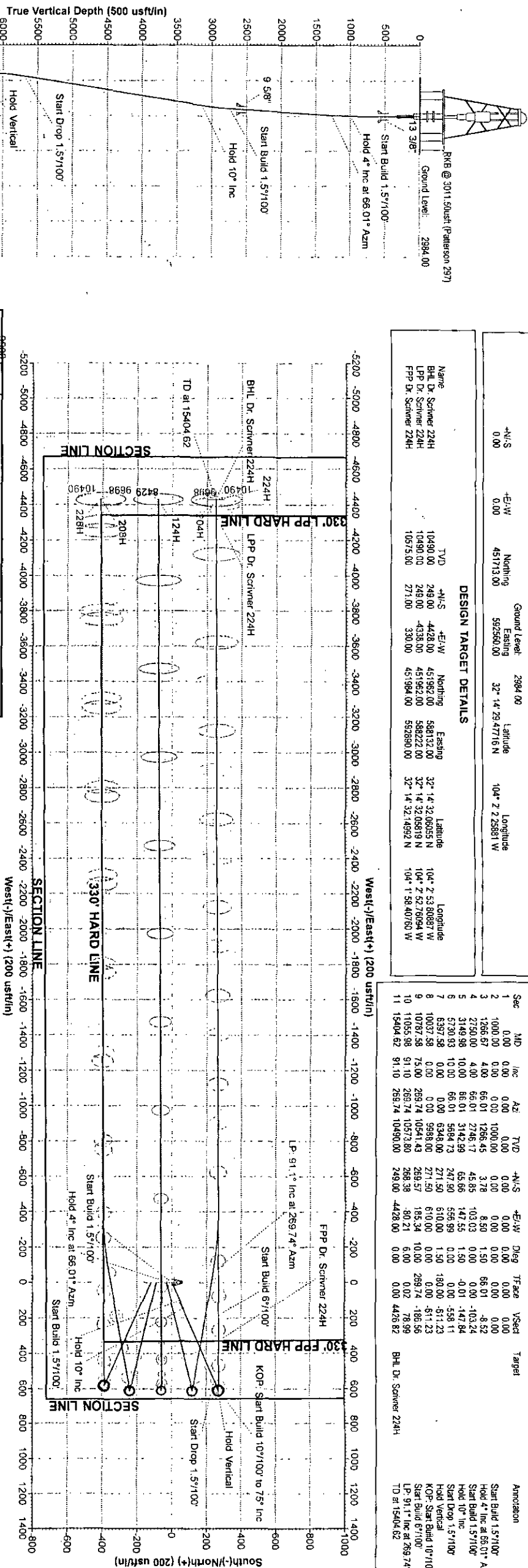


WELL DETAILS

	Ground Level	2984.00	Latitude	Longitude
N/S	0.00	451713.00	32° 14' 29.47716 N	104° 2' 2.25881 W
E/W	0.00	592560.00		
DESIGN TARGET DETAILS				
Name	TVD	N/S	E/W	North
BHL Dr. Schiner 224H	10490.00	249.00	4428.00	588132.00
LPP Dr. Schiner 224H	10490.00	249.00	4428.00	588132.00
FPP Dr. Schiner 224H	10490.00	249.00	4428.00	588132.00

SECTION DETAILS

Sec	MD	Inc	Az	TVD	N/S	E/W	Deg	TFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Start Build 1.5°/100'
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00		Hold 4° Inc at 66.01° Azm
3	1286.67	4.00	66.01	1286.45	3.78	8.50	1.50	66.01	-8.52		Start Build 1.5°/100'
4	2750.00	4.00	66.01	2746.17	45.65	103.03	0.00	0.00	-103.24		Hold 10° Inc
5	3149.98	10.00	66.01	3142.99	65.66	147.55	1.50	0.00	-147.84		Start Drop 1.5°/100'
6	5730.33	10.00	66.01	5684.73	247.50	556.99	0.00	0.00	-558.11		Hold Vertical
7	6397.58	0.00	0.00	6348.00	271.50	610.00	1.50	180.00	-611.23		KOP: Start Build 10°/100' to 75° Inc
8	10037.58	0.00	0.00	9988.00	289.57	183.94	10.00	0.00	-186.36		Start Build 6°/100'
9	10787.58	75.00	269.74	10573.80	269.74	10573.80	0.00	0.02	78.99		LP: 91.1° Inc at 269.74° Azm
10	11053.98	91.10	269.74	10490.00	249.00	4428.00	0.00	0.00	4426.82		TD at 15404.62
11	15404.62	91.10	269.74	10490.00	249.00	4428.00	0.00	0.00	4426.82		



Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

Local Origin: Well 224H, Grid North

Latitude: 32° 14' 29.47716 N

Longitude: 104° 2' 2.25881 W

Grid East: 592560.00

Grid North: 451713.00

Scale Factor: 1.000

Geomagnetic Model: HDGM

Sample Date: 14-Dec-15

Magnetic Declination: 7.38°

Dip Angle from Horizontal: 60.10°

Magnetic Field Strength: 48280

To convert a Magnetic Direction to a Grid Direction, Add 7.22°
To convert a Magnetic Direction to a True Direction, Add 7.38° East
To convert a True Direction to a Grid Direction, Subtract 0.16°

FORMATION TOP DETAILS

No formation data is available

CASING DETAILS

TVD	MD	Name	Size
600.00	600.00	13 3/8"	13.3/8
2646.41	2650.00	9 5/8"	9.5/8



Phoenix Technology Services Planning Report



Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well 224H
Company:	Matador Resources	TVD Reference:	RKB @ 3011.50usft (Patterson 297)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	RKB @ 3011.50usft (Patterson 297)
Site:	Dr. Scrivner Federal 01-24S-28E RB	North Reference:	Grid
Well:	224H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH / Job 1514201		
Design:	Preliminary Plan 1		

Project:	Eddy County, NM (NAD27 NME)		
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	Dr. Scrivner Federal 01-24S-28E RB				
Site Position:		Northing:	451,653.00 usft	Latitude:	32° 14' 28.88339 N
From:	Map	Easting:	592,560.00 usft	Longitude:	104° 2' 2.26075 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.16 °

Well	224H					
Well Position	+N/-S	60.00 usft	Northing:	451,713.00 usft	Latitude:	32° 14' 29.47716 N
	+E/-W	0.00 usft	Easting:	592,560.00 usft	Longitude:	104° 2' 2.25881 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	2,984.00 usft

Wellbore:	OH / Job 1514201			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/14/2015	7.38	60.10	48,280

Design:	Preliminary Plan 1			
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Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.74

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,266.67	4.00	66.01	1,266.45	3.78	8.50	1.50	1.50	0.00	66.01	
2,750.00	4.00	66.01	2,746.17	45.85	103.03	0.00	0.00	0.00	0.00	
3,149.98	10.00	66.01	3,142.99	65.66	147.55	1.50	1.50	0.00	-0.01	
5,730.93	10.00	66.01	5,684.73	247.90	556.99	0.00	0.00	0.00	0.00	
6,397.58	0.00	0.00	6,348.00	271.50	610.00	1.50	-1.50	0.00	180.00	
10,037.58	0.00	0.00	9,988.00	271.50	610.00	0.00	0.00	0.00	0.00	
10,787.58	75.00	269.74	10,541.43	269.57	185.34	10.00	10.00	0.00	269.74	
11,055.98	91.10	269.74	10,573.80	268.38	-80.21	6.00	6.00	0.00	0.02	
15,404.62	91.10	269.74	10,490.00	249.00	-4,428.00	0.00	0.00	0.00	0.00	BHL Dr. Scrivner 224H



Phoenix Technology Services Planning Report



Database: Compass 5000 GCR
Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Site: Dr. Scrivner Federal 01-24S-28E RB
Well: 224H
Wellbore: OH / Job 1514201
Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.5°/100'									
1,100.00	1.50	66.01	1,099.99	0.53	1.20	-1.20	1.50	1.50	0.00
1,200.00	3.00	66.01	1,199.91	2.13	4.78	-4.79	1.50	1.50	0.00
1,266.67	4.00	66.01	1,266.45	3.78	8.50	-8.52	1.50	1.50	0.00
Hold 4° Inc at 66.01° Azm									
1,300.00	4.00	66.01	1,299.70	4.73	10.63	-10.65	0.00	0.00	0.00
1,400.00	4.00	66.01	1,399.46	7.56	17.00	-17.03	0.00	0.00	0.00
1,500.00	4.00	66.01	1,499.22	10.40	23.37	-23.42	0.00	0.00	0.00
1,600.00	4.00	66.01	1,598.97	13.24	29.74	-29.80	0.00	0.00	0.00
1,700.00	4.00	66.01	1,698.73	16.07	36.12	-36.19	0.00	0.00	0.00
1,800.00	4.00	66.01	1,798.48	18.91	42.49	-42.58	0.00	0.00	0.00
1,900.00	4.00	66.01	1,898.24	21.75	48.86	-48.96	0.00	0.00	0.00
2,000.00	4.00	66.01	1,998.00	24.58	55.24	-55.35	0.00	0.00	0.00
2,100.00	4.00	66.01	2,097.75	27.42	61.61	-61.73	0.00	0.00	0.00
2,200.00	4.00	66.01	2,197.51	30.25	67.98	-68.12	0.00	0.00	0.00
2,300.00	4.00	66.01	2,297.27	33.09	74.36	-74.51	0.00	0.00	0.00
2,400.00	4.00	66.01	2,397.02	35.93	80.73	-80.89	0.00	0.00	0.00
2,500.00	4.00	66.01	2,496.78	38.76	87.10	-87.28	0.00	0.00	0.00
2,600.00	4.00	66.01	2,596.54	41.60	93.48	-93.66	0.00	0.00	0.00
2,650.00	4.00	66.01	2,646.41	43.02	96.66	-96.86	0.00	0.00	0.00
9 5/8"									
2,700.00	4.00	66.01	2,696.29	44.43	99.85	-100.05	0.00	0.00	0.00
2,750.00	4.00	66.01	2,746.17	45.85	103.03	-103.24	0.00	0.00	0.00
Start Build 1.5°/100'									
2,800.00	4.75	66.01	2,796.02	47.40	106.52	-106.73	1.50	1.50	0.00
2,900.00	6.25	66.01	2,895.56	51.30	115.28	-115.51	1.50	1.50	0.00
3,000.00	7.75	66.01	2,994.81	56.26	126.41	-126.66	1.50	1.50	0.00
3,100.00	9.25	66.01	3,093.71	62.27	139.91	-140.19	1.50	1.50	0.00
3,149.98	10.00	66.01	3,142.99	65.66	147.55	-147.84	1.50	1.50	0.00
Hold 10° Inc									
3,200.00	10.00	66.01	3,192.25	69.20	155.48	-155.79	0.00	0.00	0.00
3,300.00	10.00	66.01	3,290.73	76.26	171.35	-171.69	0.00	0.00	0.00
3,400.00	10.00	66.01	3,389.21	83.32	187.21	-187.59	0.00	0.00	0.00
3,500.00	10.00	66.01	3,487.69	90.38	203.07	-203.48	0.00	0.00	0.00
3,600.00	10.00	66.01	3,586.17	97.44	218.94	-219.38	0.00	0.00	0.00
3,700.00	10.00	66.01	3,684.65	104.50	234.80	-235.27	0.00	0.00	0.00
3,800.00	10.00	66.01	3,783.13	111.56	250.67	-251.17	0.00	0.00	0.00
3,900.00	10.00	66.01	3,881.61	118.62	266.53	-267.07	0.00	0.00	0.00
4,000.00	10.00	66.01	3,980.09	125.68	282.39	-282.96	0.00	0.00	0.00
4,100.00	10.00	66.01	4,078.58	132.74	298.26	-298.86	0.00	0.00	0.00
4,200.00	10.00	66.01	4,177.06	139.81	314.12	-314.75	0.00	0.00	0.00



Phoenix Technology Services Planning Report



Database: Compass 5000 GCR
Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Site: Dr. Scrivner Federal 01-24S-28E RB
Well: 224H
Wellbore: OH / Job 1514201
Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	10.00	66.01	4,275.54	146.87	329.99	-330.65	0.00	0.00	0.00
4,400.00	10.00	66.01	4,374.02	153.93	345.85	-346.54	0.00	0.00	0.00
4,500.00	10.00	66.01	4,472.50	160.99	361.71	-362.44	0.00	0.00	0.00
4,600.00	10.00	66.01	4,570.98	168.05	377.58	-378.34	0.00	0.00	0.00
4,700.00	10.00	66.01	4,669.46	175.11	393.44	-394.23	0.00	0.00	0.00
4,800.00	10.00	66.01	4,767.94	182.17	409.30	-410.13	0.00	0.00	0.00
4,900.00	10.00	66.01	4,866.42	189.23	425.17	-426.02	0.00	0.00	0.00
5,000.00	10.00	66.01	4,964.90	196.29	441.03	-441.92	0.00	0.00	0.00
5,100.00	10.00	66.01	5,063.38	203.35	456.90	-457.81	0.00	0.00	0.00
5,200.00	10.00	66.01	5,161.86	210.42	472.76	-473.71	0.00	0.00	0.00
5,300.00	10.00	66.01	5,260.35	217.48	488.62	-489.61	0.00	0.00	0.00
5,400.00	10.00	66.01	5,358.83	224.54	504.49	-505.50	0.00	0.00	0.00
5,500.00	10.00	66.01	5,457.31	231.60	520.35	-521.40	0.00	0.00	0.00
5,600.00	10.00	66.01	5,555.79	238.66	536.22	-537.29	0.00	0.00	0.00
5,700.00	10.00	66.01	5,654.27	245.72	552.08	-553.19	0.00	0.00	0.00
5,730.93	10.00	66.01	5,684.73	247.90	556.99	-558.11	0.00	0.00	0.00
Start Drop 1.5°/100'									
5,800.00	8.96	66.01	5,752.85	252.53	567.38	-568.52	1.50	-1.50	0.00
5,900.00	7.46	66.01	5,851.83	258.34	580.43	-581.60	1.50	-1.50	0.00
6,000.00	5.96	66.01	5,951.14	263.09	591.11	-592.30	1.50	-1.50	0.00
6,100.00	4.46	66.01	6,050.72	266.79	599.42	-600.62	1.50	-1.50	0.00
6,200.00	2.96	66.01	6,150.51	269.42	605.33	-606.55	1.50	-1.50	0.00
6,300.00	1.46	66.01	6,250.43	270.99	608.86	-610.08	1.50	-1.50	0.00
6,397.58	0.00	0.00	6,348.00	271.50	610.00	-611.23	1.50	-1.50	0.00
Hold Vertical									
6,400.00	0.00	0.00	6,350.42	271.50	610.00	-611.23	0.00	0.00	0.00
6,500.00	0.00	0.00	6,450.42	271.50	610.00	-611.23	0.00	0.00	0.00
6,600.00	0.00	0.00	6,550.42	271.50	610.00	-611.23	0.00	0.00	0.00
6,700.00	0.00	0.00	6,650.42	271.50	610.00	-611.23	0.00	0.00	0.00
6,800.00	0.00	0.00	6,750.42	271.50	610.00	-611.23	0.00	0.00	0.00
6,900.00	0.00	0.00	6,850.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,000.00	0.00	0.00	6,950.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,100.00	0.00	0.00	7,050.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,200.00	0.00	0.00	7,150.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,300.00	0.00	0.00	7,250.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,400.00	0.00	0.00	7,350.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,500.00	0.00	0.00	7,450.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,600.00	0.00	0.00	7,550.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,700.00	0.00	0.00	7,650.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,800.00	0.00	0.00	7,750.42	271.50	610.00	-611.23	0.00	0.00	0.00
7,900.00	0.00	0.00	7,850.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,000.00	0.00	0.00	7,950.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,100.00	0.00	0.00	8,050.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,200.00	0.00	0.00	8,150.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,300.00	0.00	0.00	8,250.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,400.00	0.00	0.00	8,350.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,500.00	0.00	0.00	8,450.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,600.00	0.00	0.00	8,550.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,700.00	0.00	0.00	8,650.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,800.00	0.00	0.00	8,750.42	271.50	610.00	-611.23	0.00	0.00	0.00
8,900.00	0.00	0.00	8,850.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,000.00	0.00	0.00	8,950.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,100.00	0.00	0.00	9,050.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,200.00	0.00	0.00	9,150.42	271.50	610.00	-611.23	0.00	0.00	0.00



Phoenix Technology Services
Planning Report



Database: Compass 5000 GCR
Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Site: Dr. Scrivner Federal 01-24S-28E RB
Well: 224H
Wellbore: OH / Job 1514201
Design: Preliminary Plan 1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Well 224H
RKB @ 3011.50usft (Patterson 297)
RKB @ 3011.50usft (Patterson 297)
Grid
Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,300.00	0.00	0.00	9,250.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,400.00	0.00	0.00	9,350.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,500.00	0.00	0.00	9,450.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,600.00	0.00	0.00	9,550.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,700.00	0.00	0.00	9,650.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,800.00	0.00	0.00	9,750.42	271.50	610.00	-611.23	0.00	0.00	0.00
9,900.00	0.00	0.00	9,850.42	271.50	610.00	-611.23	0.00	0.00	0.00
10,000.00	0.00	0.00	9,950.42	271.50	610.00	-611.23	0.00	0.00	0.00
10,037.58	0.00	0.00	9,988.00	271.50	610.00	-611.23	0.00	0.00	0.00
KOP: Start Build 10°/100' to 75° Inc									
10,050.00	1.24	269.74	10,000.42	271.50	609.87	-611.09	10.00	10.00	0.00
10,100.00	6.24	269.74	10,050.30	271.48	606.60	-607.83	10.00	10.00	0.00
10,150.00	11.24	269.74	10,099.70	271.45	599.01	-600.23	10.00	10.00	0.00
10,200.00	16.24	269.74	10,148.25	271.40	587.13	-588.36	10.00	10.00	0.00
10,250.00	21.24	269.74	10,195.59	271.32	571.07	-572.30	10.00	10.00	0.00
10,300.00	26.24	269.74	10,241.34	271.23	550.95	-552.17	10.00	10.00	0.00
10,350.00	31.24	269.74	10,285.17	271.12	526.91	-528.14	10.00	10.00	0.00
10,400.00	36.24	269.74	10,326.73	271.00	499.15	-500.37	10.00	10.00	0.00
10,450.00	41.24	269.74	10,365.72	270.86	467.87	-469.09	10.00	10.00	0.00
10,500.00	46.24	269.74	10,401.83	270.70	433.31	-434.53	10.00	10.00	0.00
10,550.00	51.24	269.74	10,434.79	270.53	395.73	-396.96	10.00	10.00	0.00
10,600.00	56.24	269.74	10,464.35	270.34	355.43	-356.65	10.00	10.00	0.00
10,650.00	61.24	269.74	10,490.29	270.15	312.70	-313.92	10.00	10.00	0.00
10,700.00	66.24	269.74	10,512.40	269.95	267.88	-269.10	10.00	10.00	0.00
10,750.00	71.24	269.74	10,530.53	269.74	221.29	-222.52	10.00	10.00	0.00
10,787.58	75.00	269.74	10,541.43	269.57	185.34	-186.56	10.00	10.00	0.00
Start Build 6°/100'									
10,800.00	75.75	269.74	10,544.57	269.52	173.32	-174.54	6.00	6.00	0.00
10,850.00	78.75	269.74	10,555.61	269.30	124.56	-125.78	6.00	6.00	0.00
10,900.00	81.75	269.74	10,564.08	269.08	75.29	-76.51	6.00	6.00	0.00
10,950.00	84.75	269.74	10,569.96	268.85	25.64	-26.86	6.00	6.00	0.00
11,000.00	87.75	269.74	10,573.23	268.63	-24.24	23.02	6.00	6.00	0.00
11,050.00	90.75	269.74	10,573.89	268.41	-74.23	73.01	6.00	6.00	0.00
11,055.98	91.10	269.74	10,573.80	268.38	-80.21	78.99	6.00	6.00	0.00
LP: 91.1° Inc at 269.74° Azm									
11,100.00	91.10	269.74	10,572.95	268.18	-124.22	123.00	0.00	0.00	0.00
11,200.00	91.10	269.74	10,571.02	267.74	-224.20	222.99	0.00	0.00	0.00
11,300.00	91.10	269.74	10,569.09	267.29	-324.18	322.97	0.00	0.00	0.00
11,400.00	91.10	269.74	10,567.17	266.85	-424.16	422.95	0.00	0.00	0.00
11,500.00	91.10	269.74	10,565.24	266.40	-524.14	522.93	0.00	0.00	0.00
11,600.00	91.10	269.74	10,563.31	265.95	-624.12	622.91	0.00	0.00	0.00
11,700.00	91.10	269.74	10,561.39	265.51	-724.11	722.89	0.00	0.00	0.00
11,800.00	91.10	269.74	10,559.46	265.06	-824.09	822.87	0.00	0.00	0.00
11,900.00	91.10	269.74	10,557.53	264.62	-924.07	922.86	0.00	0.00	0.00
12,000.00	91.10	269.74	10,555.61	264.17	-1,024.05	1,022.84	0.00	0.00	0.00
12,100.00	91.10	269.74	10,553.68	263.73	-1,124.03	1,122.82	0.00	0.00	0.00
12,200.00	91.10	269.74	10,551.75	263.28	-1,224.01	1,222.80	0.00	0.00	0.00
12,300.00	91.10	269.74	10,549.82	262.84	-1,323.99	1,322.78	0.00	0.00	0.00
12,400.00	91.10	269.74	10,547.90	262.39	-1,423.97	1,422.76	0.00	0.00	0.00
12,500.00	91.10	269.74	10,545.97	261.94	-1,523.95	1,522.74	0.00	0.00	0.00
12,600.00	91.10	269.74	10,544.04	261.50	-1,623.93	1,622.73	0.00	0.00	0.00
12,700.00	91.10	269.74	10,542.12	261.05	-1,723.91	1,722.71	0.00	0.00	0.00
12,800.00	91.10	269.74	10,540.19	260.61	-1,823.89	1,822.69	0.00	0.00	0.00



Phoenix Technology Services Planning Report



Database: Compass 5000 GCR
Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Site: Dr. Scrivner Federal 01-24S-28E RB
Well: 224H
Wellbore: OH / Job 1514201
Design: Preliminary Plan t

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,900.00	91.10	269.74	10,538.26	260.16	-1,923.87	1,922.67	0.00	0.00	0.00
13,000.00	91.10	269.74	10,536.34	259.72	-2,023.85	2,022.65	0.00	0.00	0.00
13,100.00	91.10	269.74	10,534.41	259.27	-2,123.83	2,122.63	0.00	0.00	0.00
13,200.00	91.10	269.74	10,532.48	258.82	-2,223.81	2,222.61	0.00	0.00	0.00
13,300.00	91.10	269.74	10,530.56	258.38	-2,323.79	2,322.60	0.00	0.00	0.00
13,400.00	91.10	269.74	10,528.63	257.93	-2,423.77	2,422.58	0.00	0.00	0.00
13,500.00	91.10	269.74	10,526.70	257.49	-2,523.75	2,522.56	0.00	0.00	0.00
13,600.00	91.10	269.74	10,524.77	257.04	-2,623.73	2,622.54	0.00	0.00	0.00
13,700.00	91.10	269.74	10,522.85	256.60	-2,723.71	2,722.52	0.00	0.00	0.00
13,800.00	91.10	269.74	10,520.92	256.15	-2,823.69	2,822.50	0.00	0.00	0.00
13,900.00	91.10	269.74	10,518.99	255.71	-2,923.67	2,922.48	0.00	0.00	0.00
14,000.00	91.10	269.74	10,517.07	255.26	-3,023.66	3,022.47	0.00	0.00	0.00
14,100.00	91.10	269.74	10,515.14	254.81	-3,123.64	3,122.45	0.00	0.00	0.00
14,200.00	91.10	269.74	10,513.21	254.37	-3,223.62	3,222.43	0.00	0.00	0.00
14,300.00	91.10	269.74	10,511.29	253.92	-3,323.60	3,322.41	0.00	0.00	0.00
14,400.00	91.10	269.74	10,509.36	253.48	-3,423.58	3,422.39	0.00	0.00	0.00
14,500.00	91.10	269.74	10,507.43	253.03	-3,523.56	3,522.37	0.00	0.00	0.00
14,600.00	91.10	269.74	10,505.50	252.59	-3,623.54	3,622.35	0.00	0.00	0.00
14,700.00	91.10	269.74	10,503.58	252.14	-3,723.52	3,722.34	0.00	0.00	0.00
14,800.00	91.10	269.74	10,501.65	251.69	-3,823.50	3,822.32	0.00	0.00	0.00
14,900.00	91.10	269.74	10,499.72	251.25	-3,923.48	3,922.30	0.00	0.00	0.00
15,000.00	91.10	269.74	10,497.80	250.80	-4,023.46	4,022.28	0.00	0.00	0.00
15,100.00	91.10	269.74	10,495.87	250.36	-4,123.44	4,122.26	0.00	0.00	0.00
15,200.00	91.10	269.74	10,493.94	249.91	-4,223.42	4,222.24	0.00	0.00	0.00
15,300.00	91.10	269.74	10,492.02	249.47	-4,323.40	4,322.22	0.00	0.00	0.00
15,404.62	91.10	269.74	10,490.00	249.00	-4,428.00	4,426.82	0.00	0.00	0.00

TD at 15404.62

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LPP Dr. Scrivner 224H	0.00	0.00	10,490.00	249.00	-4,338.00	451,962.00	588,222.00	32° 14' 32.05819 N	104° 2' 52.76094 W
- plan misses target center by 14.75usft at 15300.00usft MD (10492.02 TVD, 249.47 N, -4323.40 E)									
- Point									
BHL Dr. Scrivner 224H	0.00	0.00	10,490.00	249.00	-4,428.00	451,962.00	588,132.00	32° 14' 32.06055 N	104° 2' 53.80887 W
- plan hits target center									
- Point									
FPP Dr. Scrivner 224H	0.00	0.00	10,575.00	271.00	330.00	451,984.00	592,890.00	32° 14' 32.14992 N	104° 1' 58.40760 W
- plan misses target center by 83.09usft at 10671.97usft MD (10500.49-TVD, 270.06 N, 293.25 E)									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
600.00	600.00	13 3/8"	13-3/8	17-1/2
2,650.00	2,646.41	9 5/8"	9-5/8	12-1/4



Phoenix Technology Services
Planning Report



Database: Compass 5000 GCR
Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Site: Dr. Scrivner Federal 01-24S-28E RB
Well: 224H
Wellbore: OH / Job 1514201
Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.00	1,000.00	0.00	0.00	Start Build 1.5°/100'
1,266.67	1,266.45	3.78	8.50	Hold 4° Inc at 66.01° Azm
2,750.00	2,746.17	45.85	103.03	Start Build 1.5°/100'
3,149.98	3,142.99	65.66	147.55	Hold 10° Inc
5,730.93	5,684.73	247.90	556.99	Start Drop 1.5°/100'
6,397.58	6,348.00	271.50	610.00	Hold Vertical
10,037.58	9,988.00	271.50	610.00	KOP: Start Build 10°/100' to 75° Inc
10,787.58	10,541.43	269.57	185.34	Start Build 6°/100'
11,055.98	10,573.80	268.38	-80.21	LP: 91.1° Inc at 269.74° Azm
15,404.62	10,490.00	249.00	-4,428.00	TD at 15404.62



Matador Resources

Eddy County, NM (NAD27 NME)

Dr. Scrivner Federal 01-24S-28E RB
224H

OH / Job 1514201

Preliminary Plan 1

Anticollision Report

07 April, 2016





Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Reference: Preliminary Plan 1

Filter type: NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method: MD Interval 100.00usft
Depth Range: Unlimited
Results Limited by: Maximum center-center distance of 4,000.00 usft
Warning Levels Evaluated at: 2.00 Sigma
Error Model: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Casing Method: Not applied

Survey/Tool Program: PHX-MWD+HDGM Date: 4/7/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,404.54	Preliminary Plan 1 (OH / Job 1514201)	PHX-MWD+HDGM	PHX+OWSG MWD + HDGM

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Dr. Scrivner Federal 01-24S-28E RB						
124H - OH / Job 1514200 - Preliminary Plan 1	1,000.00	1,000.00	60.00	53.29	8.939	CC
124H - OH / Job 1514200 - Preliminary Plan 1	1,100.00	1,100.00	60.53	53.11	8.162	ES
124H - OH / Job 1514200 - Preliminary Plan 1	2,900.00	2,898.86	111.41	91.00	5.458	SF
204H - OH - Preliminary Plan 1	1,000.00	1,000.00	30.00	23.29	4.469	CC
204H - OH - Preliminary Plan 1	1,200.00	1,200.37	30.88	22.77	3.805	ES
204H - OH - Preliminary Plan 1	9,425.56	9,425.47	148.73	81.76	2.221	SF
208H - OH - Preliminary Plan 1	1,000.00	1,000.00	90.00	83.29	13.408	CC, ES
208H - OH - Preliminary Plan 1	15,404.62	14,606.39	1,030.98	837.41	5.326	SF
228H - OH / Job 1514202 - Preliminary Plan 1	1,000.00	1,000.00	120.00	113.29	17.877	CC, ES
228H - OH / Job 1514202 - Preliminary Plan 1	15,404.62	15,371.30	659.99	373.27	2.302	SF
Malaga 1 Federal 1						
1 - OH - Surveys	13,307.06	10,476.76	247.93	138.04	2.256	CC, ES, SF

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 124H - OH / Job 1514200 - Preliminary Plan 1														Offset Site Error: 0.00 usft	
Survey Program: 0-PHX-MWD+HDGM														Offset Well Error: 0.00 usft	
Reference	Offset	Semi Major Axis	Reference	Offset	Highside	Offset Wellbore	Centre	Distance	Between	Between	Minimum	Separation	Warning		
Measured	Vertical	Measured	Vertical	Reference	Offset	Toolface	N-S	Between	Between	Separation	Separation	Factor			
Depth	Depth	Depth	Depth	Depth	Depth	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)										
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-60.00	0.00	60.00						
100.00	100.00	100.00	100.00	0.13	0.13	180.00	-60.00	0.00	60.00	59.74	0.26	230.865			
200.00	200.00	200.00	200.00	0.49	0.49	180.00	-60.00	0.00	60.00	59.02	0.98	61.423			
300.00	300.00	300.00	300.00	0.85	0.85	180.00	-60.00	0.00	60.00	58.31	1.69	35.424			
400.00	400.00	400.00	400.00	1.21	1.21	180.00	-60.00	0.00	60.00	57.59	2.41	24.889			
500.00	500.00	500.00	500.00	1.56	1.56	180.00	-60.00	0.00	60.00	56.87	3.13	19.184			
600.00	600.00	600.00	600.00	1.92	1.92	180.00	-60.00	0.00	60.00	56.16	3.84	15.606			
700.00	700.00	700.00	700.00	2.28	2.28	180.00	-60.00	0.00	60.00	55.44	4.56	13.153			
800.00	800.00	800.00	800.00	2.64	2.64	180.00	-60.00	0.00	60.00	54.72	5.28	11.367			
900.00	900.00	900.00	900.00	3.00	3.00	180.00	-60.00	0.00	60.00	54.00	6.00	10.008			
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	180.00	-60.00	0.00	60.00	53.29	6.71	8.939	CC		
1,100.00	1,099.99	1,100.00	1,099.99	3.71	3.71	113.88	-60.00	1.31	60.53	53.11	7.42	8.162	ES		
1,200.00	1,199.91	1,199.99	1,199.90	4.06	4.05	113.54	-59.98	5.23	62.11	54.00	8.11	7.659			
1,300.00	1,299.70	1,299.94	1,299.65	4.41	4.40	113.05	-59.96	11.63	64.70	55.89	8.81	7.343			
1,400.00	1,399.46	1,399.90	1,399.36	4.77	4.75	112.58	-59.94	18.60	67.52	58.00	9.52	7.094			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 124H - OH / Job 1514200 - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: 0-PHX-MWD-HDGM														Offset Well Error: 0.00 usft
Reference	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Distance	Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	Reference	Offset	Toolface	Offset	Between	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
1,500.00	1,499.22	1,499.86	1,499.08	5.13	5.11	112.14	-59.92	25.57	70.35	60.12	10.23	6.876		
1,600.00	1,598.97	1,599.82	1,598.79	5.49	5.46	111.74	-59.89	32.54	73.18	62.24	10.95	6.885		
1,700.00	1,698.73	1,699.78	1,698.51	5.85	5.82	111.37	-59.87	39.52	76.02	64.35	11.67	6.517		
1,800.00	1,798.48	1,799.74	1,798.22	6.21	6.18	111.02	-59.85	46.49	78.86	66.47	12.39	6.366		
1,900.00	1,898.24	1,899.70	1,897.94	6.57	6.54	110.70	-59.82	53.46	81.70	68.59	13.11	6.232		
2,000.00	1,998.00	1,999.66	1,997.65	6.93	6.90	110.40	-59.80	60.44	84.54	70.71	13.83	6.111		
2,100.00	2,097.75	2,099.61	2,097.37	7.30	7.27	110.12	-59.78	67.41	87.39	72.83	14.56	6.001		
2,200.00	2,197.51	2,199.57	2,197.08	7.66	7.63	109.86	-59.75	74.38	90.24	74.95	15.29	5.902		
2,300.00	2,297.27	2,299.53	2,296.80	8.03	8.00	109.62	-59.73	81.35	93.08	77.07	16.02	5.811		
2,400.00	2,397.02	2,399.49	2,396.51	8.39	8.36	109.38	-59.71	88.33	95.94	79.19	16.75	5.728		
2,500.00	2,496.78	2,499.45	2,496.23	8.76	8.73	109.17	-59.68	95.30	98.79	81.31	17.48	5.652		
2,600.00	2,596.54	2,599.41	2,595.94	9.13	9.09	108.96	-59.66	102.27	101.64	83.43	18.21	5.582		
2,700.00	2,696.29	2,699.37	2,695.66	9.49	9.46	108.77	-59.64	109.24	104.50	85.56	18.94	5.517		
2,800.00	2,796.02	2,799.20	2,795.22	9.86	9.82	108.56	-59.61	116.52	107.49	87.81	19.67	5.464		
2,900.00	2,895.56	2,898.86	2,894.42	10.23	10.20	108.28	-59.58	126.05	111.41	91.00	20.41	5.458 SF		
3,000.00	2,994.81	2,998.44	2,993.27	10.61	10.57	107.95	-59.54	138.15	116.40	95.24	21.16	5.500		
3,100.00	3,093.71	3,097.94	3,091.68	11.00	10.96	107.58	-59.49	152.81	122.46	100.53	21.92	5.585		
3,200.00	3,192.25	3,197.52	3,189.81	11.39	11.35	107.23	-59.44	169.75	129.45	106.74	22.71	5.701		
3,300.00	3,290.73	3,297.26	3,286.03	11.79	11.75	106.94	-59.38	187.07	136.58	113.08	23.50	5.812		
3,400.00	3,389.21	3,397.01	3,386.26	12.19	12.15	106.68	-59.33	204.40	143.71	119.41	24.29	5.916		
3,500.00	3,487.89	3,496.75	3,484.49	12.59	12.55	106.45	-59.27	221.72	150.84	125.75	25.09	6.011		
3,600.00	3,586.17	3,596.49	3,582.72	12.99	12.96	106.23	-59.21	239.04	157.98	132.08	25.90	6.100		
3,700.00	3,684.65	3,696.24	3,680.94	13.39	13.36	106.04	-59.16	256.36	165.11	138.41	26.71	6.183		
3,800.00	3,783.13	3,795.98	3,778.17	13.80	13.77	105.86	-59.10	273.68	172.25	144.74	27.52	6.260		
3,900.00	3,881.61	3,895.72	3,877.40	14.21	14.18	105.69	-59.04	291.00	179.39	151.06	28.33	6.332		
4,000.00	3,980.09	3,995.47	3,975.63	14.62	14.59	105.54	-58.99	308.32	186.54	157.39	29.15	6.400		
4,100.00	4,078.58	4,095.21	4,073.86	15.03	15.01	105.40	-58.93	325.64	193.68	163.72	29.96	6.464		
4,200.00	4,177.06	4,194.95	4,172.08	15.44	15.42	105.27	-58.88	342.96	200.83	170.04	30.79	6.523		
4,300.00	4,275.54	4,294.70	4,270.31	15.85	15.83	105.15	-58.82	360.28	207.97	176.36	31.61	6.580		
4,400.00	4,374.02	4,394.44	4,368.54	16.27	16.25	105.03	-58.76	377.61	215.12	182.68	32.43	6.633		
4,500.00	4,472.50	4,494.18	4,466.77	16.68	16.67	104.93	-58.71	394.93	222.27	189.00	33.26	6.683		
4,600.00	4,570.98	4,593.93	4,565.00	17.10	17.08	104.83	-58.65	412.25	229.41	195.32	34.09	6.730		
4,700.00	4,669.46	4,693.67	4,663.22	17.51	17.50	104.73	-58.59	429.57	236.56	201.64	34.92	6.775		
4,800.00	4,767.94	4,793.41	4,761.45	17.93	17.92	104.64	-58.54	446.89	243.71	207.96	35.75	6.817		
4,900.00	4,866.42	4,893.16	4,859.68	18.35	18.34	104.56	-58.48	464.21	250.86	214.28	36.58	6.857		
5,000.00	4,964.90	4,992.90	4,957.91	18.77	18.76	104.48	-58.42	481.53	258.01	220.60	37.42	6.896		
5,100.00	5,063.38	5,092.64	5,056.14	19.18	19.18	104.41	-58.37	498.85	265.16	226.91	38.25	6.932		
5,200.00	5,161.86	5,192.39	5,154.36	19.60	19.60	104.34	-58.31	516.17	272.31	233.23	39.09	6.967		
5,300.00	5,260.35	5,292.13	5,252.59	20.02	20.03	104.27	-58.26	533.49	279.47	239.54	39.92	7.000		
5,400.00	5,358.83	5,391.87	5,350.82	20.44	20.45	104.20	-58.20	550.82	286.62	245.86	40.76	7.031		
5,500.00	5,457.31	5,492.63	5,450.20	20.86	20.87	104.12	-58.15	567.43	293.63	252.03	41.60	7.058		
5,600.00	5,555.79	5,593.58	5,550.15	21.29	21.28	104.92	-58.10	581.49	300.24	257.82	42.43	7.077		
5,700.00	5,654.27	5,694.34	5,650.27	21.71	21.87	105.98	-58.06	592.88	306.54	263.30	43.24	7.090		
5,800.00	5,752.85	5,794.85	5,750.40	22.13	22.05	107.44	-58.03	601.61	312.45	268.42	44.03	7.086		
5,900.00	5,851.83	5,895.22	5,850.58	22.53	22.41	108.89	-58.01	607.69	317.53	272.73	44.80	7.087		
6,000.00	5,951.14	5,995.44	5,950.73	22.92	22.76	110.32	-58.00	611.14	321.72	276.15	45.54	7.065		
6,100.00	6,050.72	6,095.43	6,050.72	23.30	23.09	111.71	-58.00	612.00	325.03	278.79	46.24	7.029		
6,200.00	6,150.51	6,195.22	6,150.51	23.66	23.41	112.80	-58.00	612.00	327.49	280.57	46.92	6.980		
6,300.00	6,250.43	6,295.14	6,250.43	24.01	23.73	113.44	-58.00	612.00	329.01	281.43	47.58	6.915		
6,400.00	6,350.42	6,395.13	6,350.42	24.34	24.06	119.65	-58.00	612.00	329.51	283.72	48.24	7.197		
6,500.00	6,450.42	6,495.13	6,450.42	24.67	24.38	119.65	-58.00	612.00	329.51	283.05	48.46	7.092		
6,600.00	6,550.42	6,595.13	6,550.42	24.99	24.71	119.65	-58.00	612.00	329.51	282.37	47.14	6.990		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services
Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 124H - OH / Job 1514200 - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: 0-PRX-HWD-HDGM														Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Between Centres		Minimum Separation	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	North (usft)	East (usft)	Centre (usft)	Ellipse (usft)	(usft)				
6,700.00	6,650.42	6,695.13	6,650.42	25.32	25.04	179.65	-58.00	612.00	329.51	281.69	47.82	6.891		
6,800.00	6,750.42	6,795.13	6,750.42	25.65	25.37	179.65	-58.00	612.00	329.51	281.01	48.50	6.794		
6,900.00	6,850.42	6,895.13	6,850.42	25.98	25.70	179.65	-58.00	612.00	329.51	280.32	49.18	6.700		
7,000.00	6,950.42	6,995.13	6,950.42	26.31	26.03	179.65	-58.00	612.00	329.51	279.64	49.86	6.608		
7,100.00	7,050.42	7,095.13	7,050.42	26.64	26.36	179.65	-58.00	612.00	329.51	278.96	50.55	6.519		
7,200.00	7,150.42	7,195.13	7,150.42	26.97	26.69	179.65	-58.00	612.00	329.51	278.27	51.23	6.431		
7,300.00	7,250.42	7,295.13	7,250.42	27.30	27.02	179.65	-58.00	612.00	329.51	277.59	51.92	6.346		
7,400.00	7,350.42	7,395.13	7,350.42	27.64	27.35	179.65	-58.00	612.00	329.51	276.90	52.61	6.264		
7,500.00	7,450.42	7,495.13	7,450.42	27.97	27.68	179.65	-58.00	612.00	329.51	276.21	53.29	6.183		
7,600.00	7,550.42	7,595.13	7,550.42	28.30	28.02	179.65	-58.00	612.00	329.51	275.52	53.98	6.104		
7,700.00	7,650.42	7,695.13	7,650.42	28.64	28.35	179.65	-58.00	612.00	329.51	274.84	54.67	6.027		
7,800.00	7,750.42	7,795.13	7,750.42	28.97	28.69	179.65	-58.00	612.00	329.51	274.15	55.36	5.952		
7,900.00	7,850.42	7,895.13	7,850.42	29.31	29.02	179.65	-58.00	612.00	329.51	273.46	56.05	5.879		
8,000.00	7,950.42	7,995.14	7,950.43	29.64	29.36	179.65	-58.00	611.94	329.51	272.77	56.74	5.807		
8,025.15	7,975.57	8,020.27	7,975.54	29.73	29.43	179.82	-58.00	611.02	329.51	272.60	56.91	5.790		
8,100.00	8,050.42	8,093.95	8,048.62	29.98	29.65	-178.61	-58.05	601.99	329.55	272.23	57.42	5.741		
8,200.00	8,150.42	8,186.76	8,138.01	30.32	29.89	-174.36	-58.16	577.43	331.50	273.41	58.09	5.707		
8,300.00	8,250.42	8,269.85	8,213.76	30.66	30.09	-168.59	-58.31	543.45	338.45	279.69	58.76	5.760		
8,400.00	8,350.42	8,341.77	8,274.77	30.99	30.27	-162.42	-58.49	505.46	354.32	294.90	59.42	5.993		
8,500.00	8,450.42	8,400.00	8,320.37	31.33	30.42	-156.92	-58.65	469.30	381.72	321.68	60.04	6.357		
8,600.00	8,550.42	8,450.00	8,356.43	31.67	30.56	-152.04	-58.81	434.68	421.28	360.63	60.65	6.946		
8,700.00	8,650.42	8,500.00	8,389.33	32.01	30.73	-147.20	-58.98	397.06	471.94	410.68	61.27	7.703		
8,800.00	8,750.42	8,533.68	8,409.59	32.35	30.87	-144.04	-59.10	370.16	531.96	470.16	61.80	8.607		
8,900.00	8,850.42	8,564.53	8,426.74	32.69	31.00	-141.24	-59.22	344.51	599.47	537.14	62.34	9.617		
9,000.00	8,950.42	8,600.00	8,444.71	33.03	31.16	-138.18	-59.35	313.94	672.95	610.05	62.90	10.698		
9,100.00	9,050.42	8,613.56	8,451.07	33.37	31.24	-137.05	-59.41	301.96	750.74	687.40	63.34	11.853		
9,200.00	9,150.42	8,633.23	8,459.80	33.72	31.35	-135.47	-59.49	284.34	832.21	766.40	63.81	13.041		
9,300.00	9,250.42	8,650.00	8,466.75	34.06	31.44	-134.16	-59.56	269.08	916.50	852.22	64.27	14.259		
9,400.00	9,350.42	8,650.00	8,466.75	34.40	31.44	-134.16	-59.56	269.08	1,003.34	938.73	64.62	15.528		
9,500.00	9,450.42	8,678.89	8,477.68	34.74	31.62	-132.01	-59.69	242.34	1,091.37	1,026.19	65.18	16.745		
9,600.00	9,550.42	8,700.00	8,484.80	35.08	31.76	-130.53	-59.78	222.47	1,181.30	1,115.62	65.68	17.986		
9,700.00	9,650.42	8,700.00	8,484.80	35.43	31.76	-130.53	-59.78	222.47	1,272.24	1,206.21	66.02	19.270		
9,800.00	9,750.42	8,700.00	8,484.80	35.77	31.76	-130.53	-59.78	222.47	1,364.44	1,298.08	66.37	20.559		
9,900.00	9,850.42	8,719.74	8,490.80	36.11	31.91	-129.20	-59.86	203.67	1,457.22	1,390.34	66.87	21.791		
10,000.00	9,950.42	8,727.62	8,493.01	36.46	31.98	-128.68	-59.90	196.10	1,550.86	1,483.58	67.28	23.050		
10,100.00	10,050.30	8,750.00	8,498.73	36.78	32.13	-128.78	-60.00	174.46	1,644.38	1,579.05	65.34	25.169		
10,200.00	10,148.25	8,750.00	8,498.73	37.07	32.13	-120.99	-60.00	174.46	1,732.36	1,669.35	63.01	27.495		
10,300.00	10,241.34	8,750.00	8,498.73	37.33	32.13	-116.54	-60.00	174.46	1,813.33	1,754.12	59.21	30.624		
10,400.00	10,326.73	8,777.16	8,504.52	37.57	32.36	-113.60	-60.12	147.93	1,885.06	1,831.01	54.05	34.878		
10,500.00	10,401.83	8,800.00	8,508.41	37.82	32.55	-111.77	-60.22	125.43	1,946.62	1,898.81	47.81	40.714		
10,600.00	10,464.35	8,800.00	8,508.41	38.13	32.55	-110.64	-60.22	125.43	1,996.97	1,956.00	40.97	48.738		
10,700.00	10,512.40	8,850.00	8,513.78	38.55	33.01	-9.80	-60.45	75.73	2,034.84	2,000.46	34.38	59.189		
10,800.00	10,544.57	8,850.00	8,513.78	39.11	33.01	-9.39	-60.45	75.73	2,059.73	2,030.34	29.40	70.068		
10,900.00	10,564.08	8,878.46	8,514.90	39.83	33.30	-9.21	-60.58	47.30	2,075.72	2,047.97	27.75	74.805		
11,000.00	10,573.23	8,908.83	8,514.64	40.72	33.52	-9.11	-60.72	16.93	2,085.18	2,057.58	27.60	75.543		
11,100.00	10,572.95	9,008.80	8,512.71	41.75	34.79	-9.09	-61.17	-83.02	2,086.80	2,058.13	28.67	72.784		
11,200.00	10,571.02	9,108.80	8,510.79	42.95	36.14	-9.09	-61.63	-183.00	2,085.80	2,057.36	29.45	70.865		
11,300.00	10,569.09	9,208.80	8,508.86	44.29	37.66	-9.09	-62.08	-282.98	2,086.81	2,056.50	30.31	68.848		
11,400.00	10,567.17	9,308.80	8,506.93	45.78	39.32	-9.09	-62.54	-382.96	2,086.81	2,055.56	31.25	66.776		
11,500.00	10,565.24	9,408.80	8,505.00	47.38	41.12	-9.09	-63.00	-482.94	2,086.81	2,054.55	32.26	64.681		
11,600.00	10,563.31	9,508.80	8,503.08	49.10	43.02	-9.09	-63.45	-582.92	2,086.81	2,053.47	33.34	62.592		
11,700.00	10,561.39	9,608.80	8,501.15	50.92	45.03	-9.09	-63.91	-682.90	2,086.81	2,052.34	34.47	60.531		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 124H - OH / Job 1514200 - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: O-PhX-MWD-HDGM														Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Between		Minimum	Separation	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference Offset (usft)	Offset (usft)	True-S	True-E	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor	Warning	Factor	
11,800.00	10,559.46	9,708.80	8,489.22	52.83	47.11	-9.09	-84.36	-782.88	2,086.81	2,051.15	35.66	58.515		
11,900.00	10,557.53	9,808.80	8,487.30	54.82	49.28	-9.09	-84.82	-882.86	2,086.81	2,049.92	36.90	56.556		
12,000.00	10,555.61	9,908.80	8,495.37	56.88	51.51	-9.09	-85.28	-982.84	2,086.82	2,048.64	38.18	54.663		
12,100.00	10,553.68	10,008.80	8,493.44	59.01	53.79	-9.09	-85.73	-1,082.82	2,086.82	2,047.32	39.49	52.840		
12,200.00	10,551.75	10,108.80	8,491.52	61.20	56.13	-9.09	-86.19	-1,182.80	2,086.82	2,045.97	40.85	51.091		
12,300.00	10,549.82	10,208.80	8,489.59	63.43	58.51	-9.09	-86.65	-1,282.78	2,086.82	2,044.59	42.23	49.417		
12,400.00	10,547.90	10,308.80	8,487.66	65.71	60.93	-9.09	-87.10	-1,382.76	2,086.82	2,043.18	43.64	47.818		
12,500.00	10,545.97	10,408.80	8,485.74	68.04	63.38	-9.09	-87.56	-1,482.74	2,086.82	2,041.74	45.08	46.292		
12,600.00	10,544.04	10,508.80	8,483.81	70.40	65.86	-9.09	-88.01	-1,582.72	2,086.82	2,040.28	46.54	44.837		
12,700.00	10,542.12	10,608.80	8,481.88	72.80	68.37	-9.09	-88.47	-1,682.70	2,086.83	2,038.80	48.03	43.452		
12,800.00	10,540.19	10,708.80	8,479.96	75.22	70.91	-9.09	-88.93	-1,782.68	2,086.83	2,037.30	49.53	42.133		
12,900.00	10,538.26	10,808.80	8,478.03	77.68	73.47	-9.09	-89.38	-1,882.66	2,086.83	2,035.78	51.05	40.878		
13,000.00	10,536.34	10,908.80	8,476.10	80.16	76.04	-9.09	-89.84	-1,982.64	2,086.83	2,034.24	52.59	39.683		
13,100.00	10,534.41	11,008.80	8,474.18	82.66	78.64	-9.09	-90.29	-2,082.62	2,086.83	2,032.69	54.14	38.545		
13,200.00	10,532.48	11,108.80	8,472.25	85.19	81.25	-9.09	-90.75	-2,182.60	2,086.83	2,031.13	55.71	37.461		
13,300.00	10,530.56	11,208.80	8,470.32	87.73	83.87	-9.09	-91.21	-2,282.58	2,086.84	2,029.55	57.29	36.428		
13,400.00	10,528.63	11,308.80	8,468.40	90.29	86.51	-9.09	-91.66	-2,382.56	2,086.84	2,027.96	58.88	35.444		
13,500.00	10,526.70	11,408.80	8,466.47	92.87	89.16	-9.09	-92.12	-2,482.55	2,086.84	2,026.36	60.48	34.505		
13,600.00	10,524.77	11,508.80	8,464.54	95.46	91.83	-9.09	-92.58	-2,582.53	2,086.84	2,024.75	62.09	33.609		
13,700.00	10,522.85	11,608.80	8,462.62	98.06	94.50	-9.09	-93.03	-2,682.51	2,086.84	2,023.13	63.71	32.754		
13,800.00	10,520.92	11,708.80	8,460.69	100.68	97.18	-9.09	-93.49	-2,782.49	2,086.84	2,021.50	65.34	31.938		
13,900.00	10,518.99	11,808.80	8,458.76	103.31	99.87	-9.09	-93.94	-2,882.47	2,086.84	2,019.87	66.98	31.157		
14,000.00	10,517.07	11,908.80	8,456.84	105.95	102.56	-9.09	-94.40	-2,982.45	2,086.85	2,018.22	68.62	30.410		
14,100.00	10,515.14	12,008.80	8,454.91	108.60	105.27	-9.09	-94.86	-3,082.43	2,086.85	2,016.57	70.28	29.685		
14,200.00	10,513.21	12,108.80	8,452.98	111.26	107.98	-9.09	-95.31	-3,182.41	2,086.85	2,014.92	71.93	29.011		
14,300.00	10,511.29	12,208.80	8,451.06	113.93	110.70	-9.09	-95.77	-3,282.39	2,086.85	2,013.25	73.60	28.355		
14,400.00	10,509.36	12,308.80	8,449.13	116.61	113.42	-9.10	-96.22	-3,382.37	2,086.85	2,011.58	75.27	27.726		
14,500.00	10,507.43	12,408.80	8,447.20	119.29	116.15	-9.10	-96.68	-3,482.35	2,086.85	2,009.91	76.94	27.123		
14,600.00	10,505.50	12,508.80	8,445.27	121.98	118.88	-9.10	-97.14	-3,582.33	2,086.85	2,008.23	78.62	26.543		
14,700.00	10,503.58	12,608.80	8,443.35	124.68	121.62	-9.10	-97.59	-3,682.31	2,086.86	2,006.55	80.31	25.986		
14,800.00	10,501.65	12,708.80	8,441.42	127.38	124.36	-9.10	-98.05	-3,782.29	2,086.86	2,004.86	81.99	25.451		
14,900.00	10,499.72	12,808.80	8,439.49	130.09	127.11	-9.10	-98.51	-3,882.27	2,086.86	2,003.17	83.69	24.936		
15,000.00	10,497.80	12,908.80	8,437.57	132.81	129.86	-9.10	-98.96	-3,982.25	2,086.86	2,001.48	85.38	24.441		
15,100.00	10,495.87	13,008.80	8,435.64	135.53	132.61	-9.10	-99.42	-4,082.23	2,086.86	1,999.78	87.08	23.964		
15,200.00	10,493.94	13,108.80	8,433.71	138.25	135.37	-9.10	-99.87	-4,182.21	2,086.86	1,998.08	88.79	23.504		
15,300.00	10,492.02	13,208.80	8,431.79	140.98	138.13	-9.10	-100.33	-4,282.19	2,086.87	1,996.37	90.49	23.061		
15,400.00	10,490.09	13,308.80	8,429.86	143.71	140.89	-9.10	-100.79	-4,382.17	2,086.87	1,994.66	92.20	22.633		
15,404.62	10,490.00	13,313.42	8,429.77	143.94	141.02	-9.10	-100.81	-4,386.79	2,086.87	1,994.58	92.28	22.614		



Phoenix Technology Services Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset, TVD Reference: Reference Datum

Offset Design Dr. Scrivner Federal 01-24S-28E RB - 204H - OH - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: 0-PHX-MWD-HDGM														Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference Depth (usft)	Offset Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Footface (")	Offset Wellbore Centre N-S (usft)	E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Warning Factor
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	-30.00	0.00	30.00			
100.00	100.00	100.00	100.00	0.13	0.13	0.13	0.13	180.00	-30.00	0.00	30.00	29.74	0.26	115.432
200.00	200.00	200.00	200.00	0.49	0.49	0.49	0.49	180.00	-30.00	0.00	30.00	29.02	0.98	30.711
300.00	300.00	300.00	300.00	0.85	0.85	0.85	0.85	180.00	-30.00	0.00	30.00	28.31	1.69	17.712
400.00	400.00	400.00	400.00	1.21	1.21	1.21	1.21	180.00	-30.00	0.00	30.00	27.59	2.41	12.444
500.00	500.00	500.00	500.00	1.56	1.56	1.56	1.56	180.00	-30.00	0.00	30.00	26.87	3.13	9.592
600.00	600.00	600.00	600.00	1.92	1.92	1.92	1.92	180.00	-30.00	0.00	30.00	26.16	3.84	7.803
700.00	700.00	700.00	700.00	2.28	2.28	2.28	2.28	180.00	-30.00	0.00	30.00	25.44	4.56	6.577
800.00	800.00	800.00	800.00	2.64	2.64	2.64	2.64	180.00	-30.00	0.00	30.00	24.72	5.28	5.683
900.00	900.00	900.00	900.00	3.00	3.00	3.00	3.00	180.00	-30.00	0.00	30.00	24.00	6.00	5.004
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	3.36	3.36	180.00	-30.00	0.00	30.00	23.29	6.71	4.469 CC
1,100.00	1,099.99	1,100.18	1,100.17	3.71	3.71	113.84	-29.69	1.28	30.22	22.80	7.42	4.074		
1,200.00	1,199.91	1,200.37	1,200.28	4.06	4.06	113.40	-28.75	5.10	30.88	22.77	8.12	3.805 ES		
1,300.00	1,299.70	1,300.48	1,300.19	4.41	4.41	112.73	-27.23	11.33	31.97	23.15	8.82	3.624		
1,400.00	1,399.46	1,400.48	1,399.93	4.77	4.76	112.08	-25.57	18.10	33.16	23.62	9.53	3.479		
1,500.00	1,499.22	1,500.47	1,499.68	5.13	5.12	111.48	-23.91	24.88	34.35	24.10	10.25	3.352		
1,600.00	1,598.97	1,600.46	1,599.43	5.49	5.48	110.91	-22.25	31.66	35.55	24.58	10.96	3.242		
1,700.00	1,598.73	1,700.45	1,699.18	5.85	5.84	110.38	-20.60	38.43	36.74	25.06	11.68	3.145		
1,800.00	1,798.48	1,800.45	1,798.93	6.21	6.20	109.89	-18.94	45.21	37.95	25.54	12.41	3.059		
1,900.00	1,898.24	1,900.44	1,898.68	6.57	6.56	109.42	-17.28	51.98	39.15	26.02	13.13	2.981		
2,000.00	1,998.00	2,000.43	1,998.43	6.93	6.93	108.98	-15.62	58.76	40.36	26.50	13.86	2.912		
2,100.00	2,097.75	2,100.42	2,098.17	7.30	7.29	108.57	-13.96	65.53	41.57	26.98	14.59	2.850		
2,200.00	2,197.51	2,200.41	2,197.92	7.66	7.65	108.18	-12.31	72.31	42.78	27.47	15.31	2.793		
2,300.00	2,297.27	2,300.41	2,297.67	8.03	8.02	107.82	-10.65	79.08	44.00	27.95	16.04	2.742		
2,400.00	2,397.02	2,400.40	2,397.42	8.39	8.38	107.47	-8.99	85.86	45.21	28.44	16.78	2.695		
2,500.00	2,496.78	2,500.39	2,497.17	8.76	8.75	107.14	-7.33	92.63	46.43	28.92	17.51	2.652		
2,600.00	2,596.54	2,600.38	2,596.92	9.13	9.12	106.83	-5.68	99.41	47.55	29.41	18.24	2.612		
2,700.00	2,696.29	2,700.38	2,696.67	9.49	9.48	106.53	-4.02	106.18	48.87	29.89	18.97	2.576		
2,800.00	2,796.02	2,800.44	2,796.46	9.86	9.85	106.22	-2.28	113.28	50.14	30.44	19.71	2.545		
2,900.00	2,895.56	2,900.56	2,896.12	10.23	10.22	105.82	0.00	122.62	51.82	31.37	20.45	2.534		
3,000.00	2,994.81	3,000.67	2,995.47	10.61	10.60	105.34	2.91	134.48	53.96	32.75	21.20	2.545		
3,100.00	3,093.71	3,100.76	3,094.46	11.00	10.99	104.81	5.43	148.87	56.56	34.58	21.97	2.574		
3,200.00	3,192.25	3,200.77	3,193.00	11.39	11.38	104.28	10.48	165.44	59.56	36.80	22.76	2.617		
3,300.00	3,290.73	3,300.72	3,291.44	11.79	11.78	103.82	14.61	182.30	62.62	39.07	23.55	2.659		
3,400.00	3,389.21	3,400.67	3,389.87	12.19	12.18	103.41	18.73	199.16	65.68	41.33	24.35	2.697		
3,500.00	3,487.69	3,500.62	3,488.30	12.59	12.58	103.03	22.86	216.02	68.75	43.60	25.15	2.733		
3,600.00	3,586.17	3,600.58	3,586.74	12.99	12.99	102.69	26.99	232.88	71.82	45.86	25.96	2.766		
3,700.00	3,684.65	3,700.53	3,685.17	13.39	13.39	102.37	31.11	249.74	74.90	48.12	26.77	2.798		
3,800.00	3,783.13	3,800.48	3,783.60	13.80	13.80	102.08	35.24	266.61	77.97	50.39	27.59	2.827		
3,900.00	3,881.61	3,900.43	3,882.03	14.21	14.21	101.81	39.36	283.47	81.05	52.65	28.40	2.854		
4,000.00	3,980.09	4,000.38	3,980.47	14.62	14.62	101.55	43.49	300.33	84.13	54.91	29.22	2.879		
4,100.00	4,078.58	4,100.33	4,078.90	15.03	15.03	101.32	47.62	317.19	87.21	57.17	30.04	2.903		
4,200.00	4,177.06	4,200.29	4,177.33	15.44	15.44	101.10	51.74	334.05	90.29	59.42	30.87	2.925		
4,300.00	4,275.54	4,300.24	4,275.77	15.85	15.86	100.90	55.87	350.91	93.37	61.68	31.69	2.946		
4,400.00	4,374.02	4,400.19	4,374.20	16.27	16.27	100.71	59.99	367.77	96.46	63.94	32.52	2.966		
4,500.00	4,472.50	4,500.14	4,472.63	16.68	16.69	100.53	64.12	384.64	99.54	66.19	33.35	2.985		
4,600.00	4,570.98	4,600.09	4,571.07	17.10	17.11	100.37	68.25	401.50	102.63	68.45	34.18	3.002		
4,700.00	4,669.46	4,700.05	4,669.50	17.51	17.52	100.21	72.37	418.36	105.72	70.70	35.02	3.019		
4,800.00	4,767.94	4,800.00	4,767.93	17.93	17.94	100.06	76.50	435.22	108.81	72.95	35.85	3.035		
4,900.00	4,866.42	4,899.95	4,866.36	18.35	18.36	99.92	80.62	452.08	111.89	75.21	36.69	3.050		
5,000.00	4,964.90	4,999.90	4,964.80	18.77	18.78	99.79	84.75	468.94	114.98	77.45	37.52	3.064		
5,100.00	5,063.38	5,099.85	5,063.23	19.18	19.20	99.66	88.88	485.80	118.07	79.71	38.36	3.078		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 204H - OH - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: O-PRX-MWD-RODM														Offset Well Error: 0.00 usft
Reference	Vertical	Offset	Reference	Vertical	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Between	Between	Minimum	Separation	Warning
Depth	Depth	Depth	Depth	Depth	Depth	Reference	Toolface	Centre	Centres	Centres	Ellipses	Separation	Factor	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)		
5,200.00	5,161.86	5,199.81	5,161.66	19.60	19.62	99.54	93.00	502.67	121.16	81.96	39.20	3.091		
5,300.00	5,260.35	5,299.76	5,260.10	20.02	20.04	99.43	97.13	519.53	124.25	84.21	40.04	3.103		
5,400.00	5,358.83	5,399.71	5,358.53	20.44	20.46	99.32	101.25	536.39	127.34	86.46	40.88	3.115		
5,500.00	5,457.31	5,499.66	5,456.96	20.86	20.89	99.22	105.38	553.25	130.44	88.71	41.73	3.126		
5,600.00	5,555.79	5,599.65	5,555.57	21.29	21.30	99.48	109.31	569.31	133.52	90.95	42.66	3.137		
5,700.00	5,654.27	5,699.55	5,654.49	21.71	21.71	100.81	112.64	582.91	136.61	93.22	43.38	3.149		
5,800.00	5,752.85	5,799.27	5,753.55	22.13	22.10	102.92	115.34	593.96	139.74	95.56	44.18	3.163		
5,900.00	5,851.83	5,899.85	5,852.74	22.53	22.47	105.02	117.43	602.49	142.63	97.68	44.95	3.173		
6,000.00	5,951.14	5,999.30	5,951.99	22.92	22.83	107.06	118.90	608.50	145.24	99.56	45.68	3.180		
6,100.00	6,050.72	6,097.62	6,051.25	23.30	23.18	109.06	119.75	612.00	147.57	101.20	46.37	3.182		
6,200.00	6,150.51	6,196.89	6,150.51	23.66	23.51	111.03	120.00	613.00	149.62	102.59	47.03	3.181		
6,300.00	6,250.43	6,296.81	6,250.43	24.01	23.83	112.42	120.00	613.00	151.05	103.38	47.67	3.159		
6,400.00	6,350.42	6,396.80	6,350.42	24.34	24.16	114.87	120.00	613.00	151.53	105.65	48.88	3.303		
6,500.00	6,450.42	6,496.80	6,450.42	24.67	24.48	117.87	120.00	613.00	151.53	104.97	46.56	3.255		
6,600.00	6,550.42	6,596.80	6,550.42	24.99	24.81	118.87	120.00	613.00	151.53	104.29	47.24	3.208		
6,700.00	6,650.42	6,696.80	6,650.42	25.32	25.14	118.87	120.00	613.00	151.53	103.61	47.92	3.162		
6,800.00	6,750.42	6,796.80	6,750.42	25.65	25.47	118.87	120.00	613.00	151.53	102.93	48.60	3.118		
6,900.00	6,850.42	6,896.80	6,850.42	25.98	25.80	118.87	120.00	613.00	151.53	102.24	49.29	3.074		
7,000.00	6,950.42	6,996.80	6,950.42	26.31	26.13	118.87	120.00	613.00	151.53	101.56	49.97	3.032		
7,100.00	7,050.42	7,096.80	7,050.42	26.64	26.46	118.87	120.00	613.00	151.53	100.87	50.66	2.991		
7,200.00	7,150.42	7,196.80	7,150.42	26.97	26.79	118.87	120.00	613.00	151.53	100.19	51.34	2.951		
7,300.00	7,250.42	7,296.80	7,250.42	27.30	27.13	118.87	120.00	613.00	151.53	99.50	52.03	2.912		
7,400.00	7,350.42	7,396.80	7,350.42	27.64	27.46	118.87	120.00	613.00	151.53	98.81	52.72	2.874		
7,500.00	7,450.42	7,496.80	7,450.42	27.97	27.79	118.87	120.00	613.00	151.53	98.12	53.41	2.837		
7,600.00	7,550.42	7,596.80	7,550.42	28.30	28.13	118.87	120.00	613.00	151.53	97.43	54.09	2.801		
7,700.00	7,650.42	7,696.80	7,650.42	28.64	28.46	118.87	120.00	613.00	151.53	96.74	54.78	2.766		
7,800.00	7,750.42	7,796.80	7,750.42	28.97	28.80	118.87	120.00	613.00	151.53	96.05	55.48	2.731		
7,900.00	7,850.42	7,896.80	7,850.42	29.31	29.14	118.87	120.00	613.00	151.53	95.36	56.17	2.698		
8,000.00	7,950.42	7,996.80	7,950.42	29.64	29.47	118.87	120.00	613.00	151.53	94.67	56.86	2.665		
8,100.00	8,050.42	8,096.80	8,050.42	29.98	29.81	118.87	120.00	613.00	151.53	93.98	57.55	2.633		
8,200.00	8,150.42	8,196.80	8,150.42	30.32	30.15	118.87	120.00	613.00	151.53	93.29	58.24	2.602		
8,300.00	8,250.42	8,296.80	8,250.42	30.66	30.49	118.87	120.00	613.00	151.53	92.59	58.94	2.571		
8,400.00	8,350.42	8,396.80	8,350.42	30.99	30.83	118.87	120.00	613.00	151.53	91.90	59.63	2.541		
8,500.00	8,450.42	8,496.80	8,450.42	31.33	31.17	118.87	120.00	613.00	151.53	91.20	60.33	2.512		
8,600.00	8,550.42	8,596.80	8,550.42	31.67	31.51	118.87	120.00	613.00	151.53	90.51	61.02	2.483		
8,700.00	8,650.42	8,696.80	8,650.42	32.01	31.85	118.87	120.00	613.00	151.53	89.81	61.72	2.455		
8,800.00	8,750.42	8,796.80	8,750.42	32.35	32.19	118.87	120.00	613.00	151.53	89.12	62.41	2.428		
8,900.00	8,850.42	8,896.80	8,850.42	32.69	32.53	118.87	120.00	613.00	151.53	88.42	63.11	2.401		
9,000.00	8,950.42	8,996.80	8,950.42	33.03	32.87	118.87	120.00	613.00	151.53	87.72	63.81	2.375		
9,100.00	9,050.42	9,096.80	9,050.42	33.37	33.21	118.87	120.00	613.00	151.53	87.02	64.51	2.349		
9,200.00	9,150.42	9,196.80	9,150.42	33.72	33.55	118.87	120.00	613.00	151.53	86.33	65.20	2.324		
9,300.00	9,250.42	9,296.80	9,250.42	34.06	33.89	118.87	120.49	610.20	151.03	85.12	65.92	2.291		
9,400.00	9,350.42	9,396.80	9,350.42	34.40	34.18	118.87	123.74	591.54	148.92	82.18	66.74	2.231		
9,425.56	9,375.98	9,425.47	9,375.98	34.49	34.25	-170.10	124.99	584.43	148.73	81.76	66.97	2.221 SF		
9,500.00	9,450.42	9,493.05	9,438.75	34.74	34.42	-160.57	129.28	569.84	151.26	83.55	67.71	2.234		
9,600.00	9,550.42	9,573.25	9,508.78	35.08	34.62	-146.85	135.97	521.48	167.15	98.42	68.73	2.432		
9,700.00	9,650.42	9,641.14	9,563.33	35.43	34.79	-135.07	142.91	481.74	201.42	131.80	69.62	2.893		
9,800.00	9,750.42	9,700.00	9,606.49	35.77	34.95	-125.98	149.78	442.34	252.27	181.91	70.36	3.586		
9,900.00	9,850.42	9,750.00	9,639.77	36.11	35.11	-118.43	156.20	405.60	315.35	244.38	70.98	4.443		
10,000.00	9,950.42	9,784.46	9,660.75	36.46	35.23	-115.55	160.90	378.68	386.85	315.36	71.49	5.411		
10,100.00	10,050.30	9,818.12	9,680.16	36.78	35.36	-119.48	165.83	350.39	462.39	393.29	69.10	6.692		
10,200.00	10,148.25	9,850.00	9,695.96	37.07	35.49	-14.74	170.39	324.26	532.80	465.95	66.85	7.970		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 204H - OH - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: O-PHX-MWD-HDGM														Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Semi Minor Axis		Highside	Distance	Minimum Separation		Warning Factor		Warning Factor		
Measured Vertical	Measured Vertical	Reference	Offset	Reference	Offset	Toolface	N-S	E-W	Centres	Ellipses	Separation	Factor	Factor	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	
10,300.00	10,241.34	9,900.00	9,718.45	37.33	35.73	-10.97	178.07	280.29	596.11	533.21	62.90	9.477		
10,400.00	10,326.73	9,932.03	9,730.78	37.57	35.91	-8.92	183.15	251.17	651.44	594.00	57.44	11.341		
10,500.00	10,401.83	9,971.79	9,743.75	37.82	36.16	-7.28	189.61	214.16	698.34	647.53	50.80	13.746		
10,600.00	10,464.35	10,017.85	9,755.70	38.13	36.48	-5.96	197.26	170.34	736.07	692.57	43.50	16.922		
10,700.00	10,512.40	10,070.84	9,766.61	38.55	36.89	-4.85	206.17	119.26	763.13	726.77	36.35	20.992		
10,800.00	10,544.57	10,124.57	9,774.71	39.11	37.36	-3.98	215.30	66.95	779.06	748.09	30.97	25.157		
10,900.00	10,564.08	10,178.44	9,779.83	39.83	37.88	-3.23	224.52	14.13	787.89	758.78	29.11	27.068		
11,000.00	10,573.23	10,232.26	9,781.92	40.72	38.44	-2.52	233.76	-38.84	792.22	763.35	28.87	27.440		
11,100.00	10,572.95	10,306.58	9,780.92	41.75	39.30	-1.81	245.00	-112.14	792.43	762.70	29.74	26.648		
11,200.00	10,571.02	10,405.02	9,779.02	42.95	40.58	-0.70	258.07	-209.81	792.19	761.81	30.38	26.078		
11,300.00	10,569.09	10,504.51	9,777.10	44.29	42.01	-0.16	265.14	-309.01	792.14	761.04	31.10	25.469		
11,400.00	10,567.17	10,604.50	9,775.18	45.78	43.58	0.01	267.04	-408.96	792.13	760.26	31.87	24.855		
11,500.00	10,565.24	10,704.50	9,773.26	47.38	45.26	0.01	266.59	-508.94	792.13	759.44	32.68	24.238		
11,600.00	10,563.31	10,804.50	9,771.34	49.10	47.06	0.01	266.15	-608.92	792.12	758.57	33.55	23.613		
11,700.00	10,561.39	10,904.50	9,769.42	50.92	48.95	0.01	265.70	-708.90	792.11	757.65	34.46	22.986		
11,800.00	10,559.46	11,004.50	9,767.50	52.83	50.92	0.01	265.25	-808.88	792.11	756.68	35.42	22.363		
11,900.00	10,557.53	11,104.50	9,765.58	54.82	52.98	0.01	264.80	-908.86	792.10	755.67	36.42	21.747		
12,000.00	10,555.61	11,204.50	9,763.66	56.88	55.10	0.01	264.35	-1,008.84	792.09	754.63	37.47	21.142		
12,100.00	10,553.68	11,304.50	9,761.74	59.01	57.29	0.01	263.90	-1,108.82	792.08	753.54	38.54	20.551		
12,200.00	10,551.75	11,404.50	9,759.82	61.20	59.53	0.01	263.45	-1,208.80	792.08	752.43	39.65	19.976		
12,300.00	10,549.82	11,504.50	9,757.90	63.43	61.82	0.01	263.00	-1,308.78	792.07	751.28	40.79	19.417		
12,400.00	10,547.90	11,604.50	9,755.98	65.71	64.15	0.01	262.55	-1,408.76	792.06	750.10	41.96	18.877		
12,500.00	10,545.97	11,704.50	9,754.06	68.04	66.52	0.01	262.11	-1,508.74	792.05	748.90	43.15	18.355		
12,600.00	10,544.04	11,804.50	9,752.14	70.40	68.93	0.01	261.66	-1,608.72	792.05	747.68	44.37	17.851		
12,700.00	10,542.12	11,904.50	9,750.22	72.80	71.37	0.01	261.21	-1,708.70	792.04	746.44	45.61	17.367		
12,800.00	10,540.19	12,004.50	9,748.30	75.22	73.83	0.01	260.76	-1,808.68	792.04	745.17	46.86	16.900		
12,900.00	10,538.26	12,104.50	9,746.38	77.68	76.33	0.01	260.31	-1,908.66	792.03	743.89	48.14	16.452		
13,000.00	10,536.34	12,204.50	9,744.46	80.16	78.84	0.01	259.86	-2,008.64	792.02	742.59	49.43	16.022		
13,100.00	10,534.41	12,304.50	9,742.54	82.66	81.38	0.01	259.41	-2,108.63	792.01	741.27	50.74	15.609		
13,200.00	10,532.48	12,404.50	9,740.62	85.19	83.93	0.01	258.96	-2,208.61	792.01	739.94	52.06	15.212		
13,300.00	10,530.56	12,504.50	9,738.70	87.73	86.51	0.00	258.51	-2,308.59	792.00	738.60	53.40	14.831		
13,400.00	10,528.63	12,604.50	9,736.78	90.29	89.09	0.00	258.07	-2,408.57	791.99	737.24	54.75	14.466		
13,500.00	10,526.70	12,704.50	9,734.86	92.87	91.70	0.00	257.62	-2,508.55	791.99	735.88	56.11	14.115		
13,600.00	10,524.77	12,804.50	9,732.94	95.46	94.32	0.00	257.17	-2,608.53	791.98	734.50	57.48	13.779		
13,700.00	10,522.85	12,904.50	9,731.02	98.06	96.94	0.00	256.72	-2,708.51	791.97	733.11	58.86	13.455		
13,800.00	10,520.92	13,004.50	9,729.10	100.68	99.59	0.00	256.27	-2,808.49	791.97	731.72	60.25	13.145		
13,900.00	10,518.99	13,104.50	9,727.18	103.31	102.24	0.00	255.82	-2,908.47	791.96	730.31	61.65	12.847		
14,000.00	10,517.07	13,204.50	9,725.26	105.95	104.90	0.00	255.37	-3,008.45	791.95	728.90	63.05	12.560		
14,100.00	10,515.14	13,304.50	9,723.34	108.60	107.57	0.00	254.92	-3,108.43	791.94	727.48	64.47	12.284		
14,200.00	10,513.21	13,404.50	9,721.42	111.26	110.25	0.00	254.48	-3,208.41	791.94	726.05	65.89	12.019		
14,300.00	10,511.29	13,504.50	9,719.50	113.93	112.93	0.00	254.03	-3,308.39	791.93	724.62	67.32	11.764		
14,400.00	10,509.36	13,604.50	9,717.58	116.61	115.62	0.00	253.58	-3,408.37	791.92	723.18	68.75	11.515		
14,500.00	10,507.43	13,704.50	9,715.66	119.29	118.32	0.00	253.13	-3,508.35	791.92	721.73	70.19	11.283		
14,600.00	10,505.50	13,804.50	9,713.74	121.98	121.03	0.00	252.68	-3,608.33	791.91	720.28	71.63	11.055		
14,700.00	10,503.58	13,904.50	9,711.82	124.68	123.74	0.00	252.23	-3,708.31	791.90	718.82	73.08	10.836		
14,800.00	10,501.65	14,004.50	9,709.90	127.38	126.46	0.00	251.78	-3,808.29	791.90	717.36	74.54	10.624		
14,900.00	10,499.72	14,104.50	9,707.98	130.09	129.18	0.00	251.33	-3,908.28	791.89	715.89	76.00	10.420		
15,000.00	10,497.80	14,204.50	9,706.06	132.81	131.91	0.00	250.88	-4,008.26	791.88	714.42	77.46	10.223		
15,100.00	10,495.87	14,304.50	9,704.14	135.53	134.64	0.00	250.44	-4,108.24	791.88	712.95	78.93	10.033		
15,200.00	10,493.94	14,404.50	9,702.22	138.25	137.36	0.00	249.99	-4,208.22	791.87	711.47	80.40	9.849		
15,300.00	10,492.02	14,504.50	9,700.30	140.98	140.12	0.00	249.54	-4,308.20	791.86	709.99	81.87	9.672		
15,400.00	10,490.09	14,604.50	9,698.38	143.71	142.85	0.00	249.09	-4,408.18	791.85	708.50	83.35	9.500		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design														Dr. Scrivner Federal 01-24S-28E RB - 204H - OH - Preliminary Plan 1		Offset Site Error:	0.00 usft		
Survey Program: 0-PHX-MWD-HDGM																Offset Well Error:	0.00 usft		
Reference														Offset		Distance			
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning							
Depth	Depth	Depth	Depth	Depth	Depth	Footface	N-S	Centres	Ellipses	Separation	Factor								
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)								
15,404.62	10,490.00	14,509.12	9,698.29	143.84	142.99	0.00	249.07	-4,412.80	791.85	708.43	83.42	9.482							



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design Dr. Scrivner Federal 01-24S-28E RB - 208H - OH - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: OPHX-MWD-HDGM														Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis	Distance	Offset Wellbore Centre	Between	Minimum	Separation	Warning						
Measured Vertical	Measured Vertical	Reference	Offset	Toolface	N-S	E-W	Centres	Ellipses	Separation	Factor				
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)					
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-90.00	0.00	90.00					
100.00	100.00	100.00	100.00	0.13	0.13	180.00	-90.00	0.00	90.00	89.74	0.26	346.297		
200.00	200.00	200.00	200.00	0.49	0.49	180.00	-90.00	0.00	90.00	89.02	0.98	92.134		
300.00	300.00	300.00	300.00	0.85	0.85	180.00	-90.00	0.00	90.00	88.31	1.69	53.136		
400.00	400.00	400.00	400.00	1.21	1.21	180.00	-90.00	0.00	90.00	87.59	2.41	37.333		
500.00	500.00	500.00	500.00	1.56	1.56	180.00	-90.00	0.00	90.00	86.87	3.13	28.775		
600.00	600.00	600.00	600.00	1.92	1.92	180.00	-90.00	0.00	90.00	86.16	3.84	23.409		
700.00	700.00	700.00	700.00	2.28	2.28	180.00	-90.00	0.00	90.00	85.44	4.56	19.730		
800.00	800.00	800.00	800.00	2.64	2.64	180.00	-90.00	0.00	90.00	84.72	5.28	17.050		
900.00	900.00	900.00	900.00	3.00	3.00	180.00	-90.00	0.00	90.00	84.00	6.00	15.011		
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	180.00	-90.00	0.00	90.00	83.29	6.71	13.408 CC, ES		
1,100.00	1,099.99	1,099.44	1,099.42	3.71	3.70	113.94	-90.31	1.26	90.84	83.43	7.41	12.256		
1,200.00	1,199.91	1,198.83	1,198.74	4.06	4.04	113.78	-91.23	5.03	93.37	85.27	8.10	11.526		
1,300.00	1,299.70	1,298.34	1,298.04	4.41	4.38	113.55	-92.74	11.18	97.48	88.68	8.80	11.082		
1,400.00	1,399.46	1,398.24	1,397.70	4.77	4.73	113.34	-94.39	17.95	101.98	92.48	9.50	10.734		
1,500.00	1,499.22	1,498.13	1,497.35	5.13	5.09	113.15	-96.05	24.72	106.47	96.27	10.21	10.429		
1,600.00	1,598.97	1,598.03	1,597.01	5.49	5.44	112.97	-97.71	31.49	110.97	100.05	10.92	10.160		
1,700.00	1,598.73	1,597.93	1,596.66	5.85	5.80	112.81	-99.36	38.26	115.47	103.83	11.64	9.921		
1,800.00	1,798.48	1,797.83	1,796.32	6.21	6.16	112.65	-101.02	45.03	119.97	107.62	12.36	9.708		
1,900.00	1,898.24	1,897.73	1,895.97	6.57	6.52	112.52	-102.67	51.80	124.48	111.40	13.08	9.517		
2,000.00	1,998.00	1,997.63	1,995.63	6.93	6.88	112.39	-104.33	58.57	128.98	115.18	13.80	9.345		
2,100.00	2,097.75	2,097.52	2,095.28	7.30	7.24	112.27	-105.99	65.33	133.48	118.95	14.53	9.189		
2,200.00	2,197.51	2,197.42	2,194.94	7.66	7.60	112.16	-107.64	72.10	137.98	122.73	15.25	9.047		
2,300.00	2,297.27	2,297.32	2,294.59	8.03	7.97	112.05	-109.30	78.87	142.49	126.51	15.98	8.917		
2,400.00	2,397.02	2,397.22	2,394.26	8.39	8.33	111.96	-110.96	85.64	146.99	130.28	16.71	8.798		
2,500.00	2,496.78	2,497.12	2,493.90	8.76	8.69	111.86	-112.61	92.41	151.50	134.06	17.44	8.689		
2,600.00	2,596.54	2,597.01	2,593.56	9.13	9.06	111.78	-114.27	99.18	156.00	137.84	18.16	8.588		
2,700.00	2,696.29	2,696.91	2,693.21	9.49	9.43	111.69	-115.93	105.95	160.51	141.61	18.90	8.495		
2,800.00	2,796.02	2,796.25	2,792.29	9.86	9.79	111.59	-117.64	112.95	165.21	145.59	19.62	8.419		
2,900.00	2,895.56	2,894.86	2,890.45	10.23	10.16	111.45	-119.86	122.02	171.37	151.01	20.35	8.419		
3,000.00	2,994.81	2,993.30	2,988.17	10.61	10.53	111.27	-122.67	133.52	179.19	158.10	21.09	8.495		
3,100.00	3,093.71	3,091.53	3,085.35	11.00	10.91	111.07	-126.08	147.44	188.68	166.83	21.85	8.637		
3,200.00	3,192.25	3,190.10	3,182.50	11.39	11.30	110.90	-130.04	163.64	199.64	177.03	22.62	8.828		
3,300.00	3,290.73	3,289.47	3,280.36	11.79	11.70	110.77	-134.14	180.40	210.85	187.45	23.40	9.011		
3,400.00	3,389.21	3,388.64	3,378.22	12.19	12.10	110.66	-138.24	197.16	222.06	197.87	24.19	9.180		
3,500.00	3,487.69	3,488.21	3,476.08	12.59	12.50	110.57	-142.34	213.92	233.27	208.28	24.98	9.337		
3,600.00	3,586.17	3,587.58	3,573.94	12.99	12.90	110.48	-146.45	230.68	244.47	218.69	25.78	9.483		
3,700.00	3,684.65	3,686.95	3,671.80	13.39	13.31	110.39	-150.55	247.44	255.68	229.10	26.58	9.619		
3,800.00	3,783.13	3,786.32	3,769.66	13.80	13.72	110.32	-154.65	264.20	266.89	239.51	27.38	9.746		
3,900.00	3,881.61	3,885.69	3,867.52	14.21	14.12	110.25	-158.75	280.95	278.10	249.91	28.19	9.865		
4,000.00	3,980.09	3,985.06	3,963.38	14.62	14.54	110.19	-162.85	297.71	289.31	260.31	29.00	9.976		
4,100.00	4,078.58	4,084.43	4,063.24	15.03	14.95	110.13	-166.95	314.47	300.53	270.71	29.81	10.081		
4,200.00	4,177.06	4,183.79	4,161.10	15.44	15.36	110.07	-171.05	331.23	311.74	281.11	30.63	10.179		
4,300.00	4,275.54	4,283.16	4,258.96	15.85	15.77	110.02	-175.15	347.99	322.95	291.51	31.44	10.271		
4,400.00	4,374.02	4,382.53	4,356.82	16.27	16.19	109.97	-179.25	364.75	334.16	301.90	32.25	10.359		
4,500.00	4,472.50	4,481.90	4,454.68	16.68	16.60	109.93	-183.36	381.51	345.37	312.29	33.08	10.441		
4,600.00	4,570.98	4,581.27	4,552.54	17.10	17.02	109.89	-187.46	398.27	356.58	322.69	33.90	10.519		
4,700.00	4,669.46	4,680.64	4,650.40	17.51	17.44	109.85	-191.56	415.03	367.80	333.08	34.72	10.593		
4,800.00	4,767.94	4,780.01	4,748.26	17.93	17.86	109.81	-195.66	431.79	379.01	343.46	35.55	10.663		
4,900.00	4,866.42	4,879.38	4,846.12	18.35	18.28	109.78	-199.76	448.55	390.22	353.85	36.37	10.729		
5,000.00	4,964.90	4,978.75	4,943.98	18.77	18.70	109.75	-203.86	465.31	401.44	364.24	37.20	10.792		
5,100.00	5,063.38	5,078.12	5,041.84	19.18	19.12	109.71	-207.96	482.07	412.65	374.62	38.02	10.852		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 224H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3011.50usft (Patterson 297)
Reference Site:	Dr. Scrivner Federal 01-24S-28E RB	MD Reference:	RKB @ 3011.50usft (Patterson 297)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	224H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH / Job 1514201	Database:	Compass 5000 GCR
Reference Design:	Preliminary Plan 1	Offset TVD Reference:	Reference Datum

Dr. Scrivner Federal 01-24S-28E RB - 208H - OH - Preliminary Plan 1														Offset Site Error:	0.00 usft
Survey Program: O-PHX MWD-HDGM														Offset Well Error:	0.00 usft
Reference	Vertical	Measured	Vertical	Measured	Semi Major Axis	Reference	Offset	Highside	Offset Wellbore Centre	Distance	Between	Between	Minimum	Separation	Warning
Depth	Depth	Depth	Depth	Depth	Reference	Offset	Offset	Toolface	N-S	E-W	Centres	Ellipses	Separation	Factor	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
5,200.00	5,161.86	5,177.49	5,139.70	19.60	19.54	109.69	-212.06	498.83	423.86	385.01	38.85	10.909			
5,300.00	5,260.35	5,276.85	5,237.56	20.02	19.96	109.66	-216.16	515.59	435.07	395.39	39.68	10.964			
5,400.00	5,358.83	5,376.22	5,335.41	20.44	20.38	109.63	-220.26	532.35	446.29	405.78	40.51	11.016			
5,500.00	5,457.31	5,475.59	5,433.27	20.86	20.80	109.61	-224.37	549.11	457.50	416.16	41.34	11.066			
5,600.00	5,555.79	5,577.07	5,533.28	21.29	21.23	109.63	-228.45	565.82	468.59	426.41	42.18	11.109			
5,700.00	5,654.27	5,680.34	5,635.45	21.71	21.66	109.94	-232.03	580.42	478.86	435.94	43.02	11.134			
5,800.00	5,752.85	5,783.64	5,738.01	22.13	22.06	110.57	-234.95	592.34	488.34	444.49	43.85	11.137			
5,900.00	5,851.83	5,887.01	5,840.95	22.53	22.45	111.23	-237.20	601.57	495.11	451.46	44.66	11.109			
6,000.00	5,951.14	5,990.44	5,944.15	22.92	22.83	111.87	-238.80	608.09	502.23	456.79	45.44	11.053			
6,100.00	6,050.72	6,093.86	6,047.49	23.30	23.19	112.49	-239.73	611.90	506.68	460.50	46.19	10.971			
6,200.00	6,150.51	6,196.88	6,150.51	23.66	23.53	113.10	-240.00	613.00	509.48	462.58	46.90	10.854			
6,300.00	6,250.43	6,296.81	6,250.43	24.01	23.85	113.52	-240.00	613.00	511.01	463.44	47.57	10.743			
6,400.00	6,350.42	6,396.80	6,350.42	24.34	24.17	179.66	-240.00	613.00	511.51	465.61	48.90	11.145			
6,500.00	6,450.42	6,496.80	6,450.42	24.67	24.49	179.66	-240.00	613.00	511.51	464.94	48.57	10.984			
6,600.00	6,550.42	6,596.80	6,550.42	24.99	24.81	179.66	-240.00	613.00	511.51	464.27	47.24	10.827			
6,700.00	6,650.42	6,696.80	6,650.42	25.32	25.13	179.66	-240.00	613.00	511.51	463.59	47.92	10.675			
6,800.00	6,750.42	6,796.80	6,750.42	25.65	25.46	179.66	-240.00	613.00	511.51	462.91	48.59	10.526			
6,900.00	6,850.42	6,896.80	6,850.42	25.98	25.78	179.66	-240.00	613.00	511.51	462.24	49.27	10.381			
7,000.00	6,950.42	6,996.80	6,950.42	26.31	26.10	179.66	-240.00	613.00	511.51	461.56	49.95	10.240			
7,100.00	7,050.42	7,096.80	7,050.42	26.64	26.43	179.66	-240.00	613.00	511.51	460.88	50.63	10.103			
7,200.00	7,150.42	7,196.80	7,150.42	26.97	26.76	179.66	-240.00	613.00	511.51	460.20	51.31	9.969			
7,300.00	7,250.42	7,296.80	7,250.42	27.30	27.09	179.66	-240.00	613.00	511.51	459.52	51.99	9.838			
7,400.00	7,350.42	7,396.80	7,350.42	27.64	27.41	179.66	-240.00	613.00	511.51	458.84	52.67	9.711			
7,500.00	7,450.42	7,496.80	7,450.42	27.97	27.74	179.66	-240.00	613.00	511.51	458.15	53.36	9.587			
7,600.00	7,550.42	7,596.80	7,550.42	28.30	28.07	179.66	-240.00	613.00	511.51	457.47	54.04	9.465			
7,700.00	7,650.42	7,696.80	7,650.42	28.64	28.40	179.66	-240.00	613.00	511.51	456.78	54.73	9.347			
7,800.00	7,750.42	7,796.80	7,750.42	28.97	28.73	179.66	-240.00	613.00	511.51	456.10	55.41	9.231			
7,900.00	7,850.42	7,896.80	7,850.42	29.31	29.07	179.66	-240.00	613.00	511.51	455.41	56.10	9.118			
8,000.00	7,950.42	7,996.80	7,950.42	29.64	29.40	179.66	-240.00	613.00	511.51	454.72	56.79	9.008			
8,100.00	8,050.42	8,096.80	8,050.42	29.98	29.73	179.66	-240.00	613.00	511.51	454.04	57.47	8.900			
8,200.00	8,150.42	8,196.80	8,150.42	30.32	30.07	179.66	-240.00	613.00	511.51	453.35	58.16	8.795			
8,300.00	8,250.42	8,296.80	8,250.42	30.66	30.40	179.66	-240.00	613.00	511.51	452.66	58.85	8.692			
8,400.00	8,350.42	8,396.80	8,350.42	30.99	30.73	179.66	-240.00	613.00	511.51	451.97	59.54	8.591			
8,500.00	8,450.42	8,496.80	8,450.42	31.33	31.07	179.66	-240.00	613.00	511.51	451.28	60.23	8.492			
8,600.00	8,550.42	8,596.80	8,550.42	31.67	31.41	179.66	-240.00	613.00	511.51	450.59	60.92	8.396			
8,700.00	8,650.42	8,696.80	8,650.42	32.01	31.74	179.66	-240.00	613.00	511.51	449.89	61.62	8.302			
8,800.00	8,750.42	8,796.80	8,750.42	32.35	32.08	179.66	-240.00	613.00	511.51	449.20	62.31	8.209			
8,900.00	8,850.42	8,896.80	8,850.42	32.69	32.42	179.66	-240.00	613.00	511.51	448.51	63.00	8.119			
9,000.00	8,950.42	8,996.80	8,950.42	33.03	32.75	179.66	-240.00	613.00	511.51	447.81	63.69	8.031			
9,100.00	9,050.42	9,096.80	9,050.42	33.37	33.09	179.66	-240.00	613.00	511.51	447.12	64.39	7.944			
9,200.00	9,150.42	9,196.80	9,150.42	33.72	33.43	179.66	-240.00	613.00	511.51	446.43	65.08	7.859			
9,227.00	9,177.42	9,223.80	9,177.42	33.81	33.52	179.66	-240.00	613.00	511.51	446.24	65.27	7.837			
9,300.00	9,250.42	9,289.40	9,242.97	34.06	33.73	179.88	-240.35	611.06	511.90	446.16	65.74	7.787			
9,400.00	9,350.42	9,373.85	9,325.32	34.40	33.98	-178.67	-242.68	598.10	514.88	448.53	66.35	7.760			
9,500.00	9,450.42	9,450.00	9,393.08	34.74	34.18	-176.27	-246.62	576.20	521.75	454.83	66.93	7.796			
9,600.00	9,550.42	9,524.36	9,465.68	35.08	34.36	-173.01	-252.08	545.84	534.11	466.62	67.49	7.914			
9,700.00	9,650.42	9,587.41	9,520.47	35.43	34.51	-169.67	-257.90	513.52	553.59	485.58	68.01	8.140			
9,800.00	9,750.42	9,650.00	9,569.98	35.77	34.66	-165.96	-264.67	475.89	581.40	512.86	68.53	8.483			
9,900.00	9,850.42	9,689.41	9,598.89	36.11	34.76	-163.48	-269.41	449.55	617.73	548.73	69.00	8.953			
10,000.00	9,950.42	9,730.00	9,626.69	36.46	34.87	-160.86	-274.65	420.44	662.58	593.11	69.47	9.537			
10,100.00	10,050.30	9,766.32	9,649.72	36.78	34.98	-64.83	-279.62	392.82	714.06	643.03	71.03	10.053			
10,200.00	10,148.25	9,800.00	9,669.45	37.07	35.09	-57.85	-284.45	365.96	786.25	695.88	70.37	10.889			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset/TVD Reference: Reference Datum

Offset Design - Dr. Scrivner Federal 01-24S-28E RB - 208H - OH - Preliminary Plan 1															Offset Site Error: 0.00 usft
Survey Program: 30-PHX-MWD-HDGM															Offset Well Error: 0.00 usft
Reference	Vertical	Measured	Vertical	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore	Centre	Distance	Between	Between	Minimum	Separation	Warning
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Centres (usft)	Centres (usft)	Separation (usft)	Factor	
10,300.00	10,241.34	9,850.00	9,695.71	37.33	35.27	-51.51	-291.98	324.10	815.33	747.72	68.61	11.898			
10,400.00	10,326.73	9,882.02	9,710.53	37.57	35.41	-46.93	-297.01	296.17	852.28	796.55	65.74	13.117			
10,500.00	10,401.83	9,922.22	9,726.87	37.82	35.60	-43.27	-303.51	260.02	902.95	840.99	61.96	14.572			
10,600.00	10,484.35	9,962.87	9,740.72	38.13	35.82	-40.59	-310.28	222.42	937.26	879.42	57.84	16.204			
10,700.00	10,512.40	10,000.00	9,751.00	38.55	36.04	-38.75	-316.59	187.31	964.49	910.39	54.10	17.828			
10,800.00	10,544.57	10,050.00	9,762.25	39.11	36.38	-37.77	-325.22	139.37	983.30	931.48	51.81	18.978			
10,900.00	10,564.08	10,114.71	9,773.02	39.83	36.89	-37.72	-336.52	76.58	996.25	944.45	51.80	19.232			
11,000.00	10,573.23	10,168.37	9,778.65	40.72	37.36	-37.81	-345.96	24.07	1,005.70	953.11	52.59	19.124			
11,100.00	10,572.95	10,222.06	9,781.27	41.75	37.87	-38.19	-355.46	-28.70	1,012.33	958.27	54.06	18.725			
11,200.00	10,571.02	10,303.66	9,780.46	42.95	38.74	-38.82	-369.42	-109.09	1,021.86	965.83	55.94	18.269			
11,300.00	10,569.09	10,454.62	9,777.56	44.29	40.69	-39.55	-386.85	-258.96	1,028.92	970.19	58.73	17.520			
11,400.00	10,567.17	10,601.77	9,774.74	45.78	42.89	-39.76	-392.42	-405.95	1,030.97	969.61	61.36	16.802			
11,500.00	10,565.24	10,701.77	9,772.82	47.38	44.56	-39.76	-392.88	-505.93	1,030.97	967.44	63.53	16.228			
11,600.00	10,563.31	10,801.77	9,770.91	49.10	46.34	-39.76	-393.34	-605.91	1,030.97	965.12	65.85	15.656			
11,700.00	10,561.39	10,901.77	9,768.99	50.92	48.22	-39.76	-393.80	-705.89	1,030.97	962.67	68.31	15.093			
11,800.00	10,559.46	11,001.77	9,767.08	52.83	50.19	-39.76	-394.26	-805.87	1,030.97	960.09	70.88	14.545			
11,900.00	10,557.53	11,101.77	9,765.17	54.82	52.24	-39.76	-394.73	-905.85	1,030.97	957.41	73.57	14.014			
12,000.00	10,555.61	11,201.77	9,763.25	56.88	54.36	-39.76	-395.19	-1,005.84	1,030.97	954.62	76.35	13.503			
12,100.00	10,553.68	11,301.77	9,761.34	59.01	56.55	-39.76	-395.65	-1,105.82	1,030.97	951.76	79.22	13.014			
12,200.00	10,551.75	11,401.77	9,759.43	61.20	58.79	-39.77	-396.11	-1,205.80	1,030.97	948.81	82.16	12.548			
12,300.00	10,549.82	11,501.77	9,757.51	63.43	61.07	-39.77	-396.57	-1,305.78	1,030.97	945.79	85.18	12.103			
12,400.00	10,547.90	11,601.77	9,755.60	65.71	63.41	-39.77	-397.03	-1,405.76	1,030.97	942.72	88.26	11.681			
12,500.00	10,545.97	11,701.77	9,753.69	68.04	65.78	-39.77	-397.50	-1,505.74	1,030.97	939.58	91.39	11.281			
12,600.00	10,544.04	11,801.77	9,751.77	70.40	68.18	-39.77	-397.96	-1,605.72	1,030.97	936.40	94.58	10.901			
12,700.00	10,542.12	11,901.77	9,749.86	72.80	70.62	-39.77	-398.42	-1,705.70	1,030.97	933.17	97.81	10.541			
12,800.00	10,540.19	12,001.77	9,747.94	75.22	73.09	-39.77	-398.88	-1,805.68	1,030.98	929.90	101.08	10.200			
12,900.00	10,538.26	12,101.77	9,746.03	77.68	75.58	-39.77	-399.34	-1,905.66	1,030.98	926.59	104.39	9.876			
13,000.00	10,536.34	12,201.77	9,744.12	80.16	78.10	-39.78	-399.81	-2,005.64	1,030.98	923.24	107.73	9.570			
13,100.00	10,534.41	12,301.77	9,742.20	82.66	80.64	-39.78	-400.27	-2,105.62	1,030.98	919.87	111.11	9.279			
13,200.00	10,532.48	12,401.77	9,740.29	85.19	83.19	-39.78	-400.73	-2,205.60	1,030.98	916.47	114.51	9.004			
13,300.00	10,530.55	12,501.77	9,738.38	87.73	85.77	-39.78	-401.19	-2,305.58	1,030.98	913.04	117.94	8.742			
13,400.00	10,528.63	12,601.77	9,736.46	90.29	88.35	-39.78	-401.65	-2,405.56	1,030.98	909.59	121.39	8.493			
13,500.00	10,526.70	12,701.77	9,734.55	92.87	90.96	-39.78	-402.11	-2,505.54	1,030.98	906.11	124.86	8.257			
13,600.00	10,524.77	12,801.77	9,732.64	95.46	93.58	-39.78	-402.58	-2,605.53	1,030.98	902.62	128.35	8.032			
13,700.00	10,522.85	12,901.77	9,730.72	98.06	96.21	-39.78	-403.04	-2,705.51	1,030.98	899.11	131.87	7.818			
13,800.00	10,520.92	13,001.77	9,728.81	100.68	98.85	-39.78	-403.50	-2,805.49	1,030.98	895.58	135.40	7.615			
13,900.00	10,518.99	13,101.77	9,726.90	103.31	101.51	-39.79	-403.96	-2,905.47	1,030.98	892.04	138.94	7.420			
14,000.00	10,517.07	13,201.77	9,724.98	105.95	104.17	-39.79	-404.42	-3,005.45	1,030.98	888.48	142.50	7.235			
14,100.00	10,515.14	13,301.77	9,723.07	108.60	106.84	-39.79	-404.89	-3,105.43	1,030.98	884.90	146.07	7.058			
14,200.00	10,513.21	13,401.77	9,721.15	111.26	109.52	-39.79	-405.35	-3,205.41	1,030.98	881.32	149.66	6.889			
14,300.00	10,511.29	13,501.77	9,719.24	113.93	112.21	-39.79	-405.81	-3,305.39	1,030.98	877.72	153.25	6.727			
14,400.00	10,509.36	13,601.77	9,717.33	116.61	114.90	-39.79	-406.27	-3,405.37	1,030.98	874.12	156.86	6.573			
14,500.00	10,507.43	13,701.77	9,715.41	119.29	117.60	-39.79	-406.73	-3,505.35	1,030.98	870.50	160.48	6.424			
14,600.00	10,505.50	13,801.77	9,713.50	121.98	120.31	-39.79	-407.20	-3,605.33	1,030.98	866.87	164.11	6.282			
14,700.00	10,503.58	13,901.77	9,711.59	124.68	123.02	-39.80	-407.66	-3,705.31	1,030.98	863.24	167.74	6.146			
14,800.00	10,501.65	14,001.77	9,709.67	127.38	125.74	-39.80	-408.12	-3,805.29	1,030.98	859.59	171.39	6.016			
14,900.00	10,499.72	14,101.77	9,707.76	130.09	128.46	-39.80	-408.58	-3,905.27	1,030.98	855.94	175.04	5.890			
15,000.00	10,497.80	14,201.77	9,705.85	132.81	131.19	-39.80	-409.04	-4,005.25	1,030.98	852.28	178.70	5.769			
15,100.00	10,495.87	14,301.77	9,703.93	135.53	133.92	-39.80	-409.50	-4,105.23	1,030.98	848.61	182.36	5.653			
15,200.00	10,493.94	14,401.77	9,702.02	138.25	136.66	-39.80	-409.97	-4,205.22	1,030.98	844.94	186.04	5.542			
15,300.00	10,492.02	14,501.77	9,700.10	140.98	139.40	-39.80	-410.43	-4,305.20	1,030.98	841.26	189.72	5.434			
15,400.00	10,490.09	14,601.77	9,698.19	143.71	142.15	-39.80	-410.89	-4,405.18	1,030.98	837.58	193.40	5.331			

CC - Min centre to center distance or covergent point. SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 224H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3011.50ust (Patterson 297)
Reference Site:	Dr. Scrivner Federal 01-24S-28E RB	MD Reference:	RKB @ 3011.50ust (Patterson 297)
Site Error:	0.00 ust	North Reference:	Grid
Reference Well:	224H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ust	Output errors are at:	2.00 sigma
Reference Wellbore:	OH / Job 1514201	Database:	Compass 5000 GCR
Reference Design:	Preliminary Plan 1	Offset TVD Reference:	Reference Datum

Offset Design:	Dr. Scrivner Federal 01-24S-28E RB - 208H - OH - Preliminary Plan 1												Offset Site Error:	0.00 ust
Survey Program:	0-PTX-MWD-HDGM												Offset Well Error:	0.00 ust
Reference	Offset	Semi Major Axis	Distance	Between	Between	Minimum	Separation	Warning						
Measured Vertical	Measured Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning				
Depth (ust)	Depth (ust)	Depth (ust)	Depth (ust)	Toolface	N-S	E-W	Centres	Ellipses	Separation	Factor				
15,404.62	10,490.00	14,606.39	9,698.10	143.84	142.27	-39.80	-410.91	-4,409.80	1,030.98	837.41	193.57	5.326	SF	



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design Dr. Scrivner Federal 01-24S-28E RB - 228H - OH / Job 1514202 - Preliminary Plan 1															Offset Site Error: 0.00 usft
Survey Program: C-PRX-MWD-HDGM															Offset Well Error: 0.00 usft
Reference	Vertical	Measured	Vertical	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	Toolface (°)	N-S (usft)	E-W (usft)	Centres (usft)	Centres (usft)	Centres (usft)	Centres (usft)	Centres (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	180.00	180.00	-120.00	0.00	120.00	120.00	119.74	0.26	461.730	
100.00	100.00	100.00	100.00	0.13	0.13	180.00	180.00	-120.00	0.00	120.00	119.02	0.98	122.846		
200.00	200.00	200.00	200.00	0.49	0.49	180.00	180.00	-120.00	0.00	120.00	118.31	1.69	70.848		
300.00	300.00	300.00	300.00	0.85	0.85	180.00	180.00	-120.00	0.00	120.00	117.59	2.41	49.778		
400.00	400.00	400.00	400.00	1.21	1.21	180.00	180.00	-120.00	0.00	120.00	116.87	3.13	38.367		
500.00	500.00	500.00	500.00	1.56	1.56	180.00	180.00	-120.00	0.00	120.00	116.16	3.84	31.213		
600.00	600.00	600.00	600.00	1.92	1.92	180.00	180.00	-120.00	0.00	120.00	115.44	4.56	26.307		
700.00	700.00	700.00	700.00	2.28	2.28	180.00	180.00	-120.00	0.00	120.00	114.72	5.28	22.734		
800.00	800.00	800.00	800.00	2.64	2.64	180.00	180.00	-120.00	0.00	120.00	114.00	6.00	20.015		
900.00	900.00	900.00	900.00	3.00	3.00	180.00	180.00	-120.00	0.00	120.00	113.29	6.71	17.877	CC, ES	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	180.00	180.00	-120.00	0.00	120.00	112.57	7.41	16.344		
1,100.00	1,099.99	1,098.69	1,098.68	3.71	3.70	113.99	113.99	-120.53	1.16	121.07	111.85	8.09	15.351		
1,200.00	1,199.91	1,197.32	1,197.23	4.06	4.03	113.97	113.97	-122.13	4.63	124.29	111.13	8.78	14.749		
1,300.00	1,299.70	1,296.23	1,295.94	4.41	4.37	113.96	113.96	-124.75	10.33	129.53	110.41	9.48	14.264		
1,400.00	1,399.46	1,395.06	1,395.53	4.77	4.72	113.98	113.98	-127.66	16.66	135.28	109.69	10.19	13.840		
1,500.00	1,499.22	1,495.90	1,495.12	5.13	5.07	113.99	113.99	-130.57	22.98	141.03	108.97	10.90	13.465		
1,600.00	1,598.97	1,595.73	1,594.71	5.49	5.42	114.00	114.00	-133.47	29.31	146.77	108.25	11.61	13.133		
1,700.00	1,598.73	1,595.57	1,594.31	5.85	5.78	114.01	114.01	-136.38	35.64	152.52	107.53	12.33	12.836		
1,800.00	1,798.48	1,795.40	1,793.90	6.21	6.13	114.02	114.02	-139.29	41.96	158.27	106.81	13.05	12.569		
1,900.00	1,898.24	1,895.24	1,893.49	6.57	6.49	114.03	114.03	-142.20	48.29	164.02	106.09	13.77	12.329		
2,000.00	1,998.00	1,995.07	1,993.08	6.93	6.85	114.04	114.04	-145.11	54.62	169.76	105.37	14.49	12.111		
2,100.00	2,097.75	2,094.91	2,092.67	7.30	7.21	114.05	114.05	-148.02	60.95	175.51	104.65	15.22	11.913		
2,200.00	2,197.51	2,194.74	2,192.26	7.66	7.57	114.06	114.06	-150.93	67.27	181.26	103.93	15.94	11.732		
2,300.00	2,297.27	2,294.57	2,291.85	8.03	7.94	114.06	114.06	-153.84	73.60	187.01	103.21	16.67	11.565		
2,400.00	2,397.02	2,394.41	2,391.45	8.39	8.30	114.07	114.07	-156.75	79.93	192.75	102.49	17.39	11.412		
2,500.00	2,496.78	2,494.24	2,491.04	8.76	8.68	114.08	114.08	-159.66	86.26	198.50	101.77	18.12	11.271		
2,600.00	2,596.54	2,594.08	2,590.63	9.13	9.03	114.08	114.08	-162.56	92.58	204.25	101.05	18.85	11.141		
2,700.00	2,696.29	2,693.91	2,690.22	9.49	9.39	114.09	114.09	-165.47	98.91	210.00	100.33	19.57	11.034		
2,800.00	2,796.02	2,793.74	2,788.79	9.86	9.76	114.07	114.07	-168.45	105.39	215.88	99.61	20.30	11.026		
2,900.00	2,895.56	2,893.12	2,885.73	10.23	10.12	114.02	114.02	-172.26	113.67	223.78	98.89	21.03	11.115		
3,000.00	2,994.81	2,992.22	2,982.15	10.61	10.49	113.96	113.96	-177.08	124.17	233.69	98.17	21.76	11.289		
3,100.00	3,093.71	3,084.00	3,077.92	11.00	10.86	113.89	113.89	-182.91	136.84	245.70	97.45	22.50	11.527		
3,200.00	3,192.25	3,181.26	3,173.79	11.39	11.25	113.85	113.85	-189.73	151.67	259.61	96.73	23.23	11.755		
3,300.00	3,290.73	3,280.23	3,271.26	11.79	11.64	113.86	113.86	-196.91	167.29	273.89	96.01	24.00	11.966		
3,400.00	3,389.21	3,379.21	3,368.73	12.19	12.04	113.87	113.87	-204.08	182.91	288.16	95.29	24.87	12.163		
3,500.00	3,487.69	3,478.18	3,466.20	12.59	12.44	113.88	113.88	-211.26	198.52	302.44	94.57	25.66	12.345		
3,600.00	3,586.17	3,577.16	3,563.67	12.99	12.84	113.88	113.88	-218.44	214.14	316.72	93.85	26.45	12.515		
3,700.00	3,684.65	3,676.13	3,661.15	13.39	13.25	113.89	113.89	-225.62	229.76	331.00	93.13	27.24	12.673		
3,800.00	3,783.13	3,775.11	3,758.62	13.80	13.65	113.89	113.89	-232.80	245.38	345.27	92.41	28.04	12.822		
3,900.00	3,881.61	3,874.08	3,856.09	14.21	14.06	113.90	113.90	-239.98	260.99	359.55	91.69	28.84	12.961		
4,000.00	3,980.09	3,973.06	3,953.56	14.62	14.47	113.90	113.90	-247.16	276.61	373.83	90.97	29.65	13.091		
4,100.00	4,078.58	4,072.03	4,051.03	15.03	14.88	113.90	113.90	-254.34	292.23	388.11	90.25	30.45	13.214		
4,200.00	4,177.06	4,171.01	4,148.50	15.44	15.29	113.91	113.91	-261.52	307.85	402.39	89.53	31.26	13.329		
4,300.00	4,275.54	4,269.99	4,245.97	15.85	15.70	113.91	113.91	-268.70	323.46	416.66	88.81	32.07	13.438		
4,400.00	4,374.02	4,368.96	4,343.45	16.27	16.11	113.91	113.91	-275.88	339.08	430.94	88.09	32.88	13.541		
4,500.00	4,472.50	4,467.94	4,440.92	16.68	16.53	113.92	113.92	-283.05	354.70	445.22	87.37	33.69	13.638		
4,600.00	4,570.98	4,566.91	4,538.39	17.10	16.94	113.92	113.92	-290.23	370.32	459.50	86.65	34.51	13.731		
4,700.00	4,669.46	4,665.89	4,635.86	17.51	17.36	113.92	113.92	-297.41	385.93	473.78	85.93	35.32	13.818		
4,800.00	4,767.94	4,764.86	4,733.33	17.93	17.78	113.92	113.92	-304.59	401.55	488.05	85.21	36.14	13.901		
4,900.00	4,866.42	4,863.84	4,830.80	18.35	18.20	113.93	113.93	-311.77	417.17	502.33	84.49	36.95	13.980		
5,000.00	4,964.90	4,962.81	4,928.28	18.77	18.61	113.93	113.93	-318.95	432.79	516.61	83.77	37.77	14.055		
5,100.00	5,063.38	5,061.79	5,025.75	19.18	19.03	113.93	113.93	-326.13	448.40	530.89	83.05				

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 228H - OH / Job 1514202 - Preliminary Plan 1															Offset Site Error: 0.00 usft
Survey Program: O-PHX-MWD-HDGM															Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis	Distance	Minimum Separation	Warning										
Measured Vertical	Measured Vertical	Reference	Offset	Toolface	Highside	Offset Wellbore Centre	Between Centres	Between Ellipses	Separation	Factor					
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)						
5,200.00	5,161.86	5,160.77	5,123.22	19.60	19.45	113.93	-333.31	464.02	545.16	506.57	38.59	14.126			
5,300.00	5,260.35	5,259.74	5,220.69	20.02	19.87	113.93	-340.49	479.64	559.44	520.03	39.41	14.194			
5,400.00	5,358.83	5,358.72	5,318.16	20.44	20.29	113.94	-347.67	495.26	573.72	533.49	40.23	14.259			
5,500.00	5,457.31	5,457.69	5,415.63	20.86	20.71	113.94	-354.84	510.87	588.00	546.94	41.06	14.322			
5,600.00	5,555.79	5,556.67	5,513.10	21.29	21.14	113.94	-362.02	526.49	602.28	560.40	41.88	14.381			
5,700.00	5,654.27	5,660.92	5,615.92	21.71	21.57	114.01	-369.24	542.18	616.23	573.51	42.72	14.426			
5,800.00	5,752.85	5,767.10	5,721.06	22.13	22.01	114.39	-375.41	555.61	628.85	585.28	43.58	14.431			
5,900.00	5,851.83	5,873.60	5,828.89	22.53	22.42	114.80	-380.37	566.40	639.35	594.64	44.41	14.396			
6,000.00	5,951.14	5,980.36	5,933.27	22.92	22.82	115.19	-384.11	574.53	647.66	602.44	45.22	14.322			
6,100.00	6,050.72	6,087.28	6,040.02	23.30	23.21	115.57	-386.60	579.95	653.77	607.77	46.00	14.213			
6,200.00	6,150.51	6,194.29	6,146.98	23.66	23.57	115.92	-387.85	582.67	657.67	610.93	46.74	14.071			
6,300.00	6,250.43	6,297.74	6,250.43	24.01	23.91	116.23	-388.00	583.00	659.50	612.07	47.43	13.904			
6,400.00	6,350.42	6,397.73	6,350.42	24.34	24.22	-177.66	-388.00	583.00	660.05	613.95	46.09	14.321			
6,500.00	6,450.42	6,497.73	6,450.42	24.67	24.54	-177.66	-388.00	583.00	660.05	613.30	46.76	14.117			
6,600.00	6,550.42	6,597.73	6,550.42	24.99	24.85	-177.66	-388.00	583.00	660.05	612.63	47.42	13.918			
6,700.00	6,650.42	6,697.73	6,650.42	25.32	25.17	-177.66	-388.00	583.00	660.05	611.96	48.09	13.725			
6,800.00	6,750.42	6,797.73	6,750.42	25.65	25.49	-177.66	-388.00	583.00	660.05	611.29	48.76	13.536			
6,900.00	6,850.42	6,897.73	6,850.42	25.98	25.81	-177.66	-388.00	583.00	660.05	610.62	49.44	13.352			
7,000.00	6,950.42	6,997.73	6,950.42	26.31	26.13	-177.66	-388.00	583.00	660.05	609.94	50.11	13.172			
7,100.00	7,050.42	7,097.73	7,050.42	26.64	26.46	-177.66	-388.00	583.00	660.05	609.27	50.78	12.997			
7,200.00	7,150.42	7,197.73	7,150.42	26.97	26.78	-177.66	-388.00	583.00	660.05	608.59	51.46	12.827			
7,300.00	7,250.42	7,297.73	7,250.42	27.30	27.10	-177.66	-388.00	583.00	660.05	607.92	52.14	12.660			
7,400.00	7,350.42	7,397.73	7,350.42	27.64	27.43	-177.66	-388.00	583.00	660.05	607.24	52.81	12.498			
7,500.00	7,450.42	7,497.73	7,450.42	27.97	27.76	-177.66	-388.00	583.00	660.05	606.56	53.49	12.339			
7,600.00	7,550.42	7,597.73	7,550.42	28.30	28.08	-177.66	-388.00	583.00	660.05	605.88	54.17	12.184			
7,700.00	7,650.42	7,697.73	7,650.42	28.64	28.41	-177.66	-388.00	583.00	660.05	605.20	54.85	12.033			
7,800.00	7,750.42	7,797.73	7,750.42	28.97	28.74	-177.66	-388.00	583.00	660.05	604.52	55.53	11.885			
7,900.00	7,850.42	7,897.73	7,850.42	29.31	29.07	-177.66	-388.00	583.00	660.05	603.84	56.22	11.741			
8,000.00	7,950.42	7,997.73	7,950.42	29.64	29.40	-177.66	-388.00	583.00	660.05	603.15	56.90	11.600			
8,100.00	8,050.42	8,097.73	8,050.42	29.98	29.73	-177.66	-388.00	583.00	660.05	602.47	57.58	11.462			
8,200.00	8,150.42	8,197.73	8,150.42	30.32	30.06	-177.66	-388.00	583.00	660.05	601.78	58.27	11.328			
8,300.00	8,250.42	8,297.73	8,250.42	30.66	30.39	-177.66	-388.00	583.00	660.05	601.10	58.96	11.196			
8,400.00	8,350.42	8,397.73	8,350.42	30.99	30.72	-177.66	-388.00	583.00	660.05	600.41	59.64	11.067			
8,500.00	8,450.42	8,497.73	8,450.42	31.33	31.06	-177.66	-388.00	583.00	660.05	599.72	60.33	10.941			
8,600.00	8,550.42	8,597.73	8,550.42	31.67	31.39	-177.66	-388.00	583.00	660.05	599.04	61.02	10.818			
8,700.00	8,650.42	8,697.73	8,650.42	32.01	31.72	-177.66	-388.00	583.00	660.05	598.35	61.71	10.697			
8,800.00	8,750.42	8,797.73	8,750.42	32.35	32.06	-177.66	-388.00	583.00	660.05	597.66	62.39	10.579			
8,900.00	8,850.42	8,897.73	8,850.42	32.69	32.39	-177.66	-388.00	583.00	660.05	596.97	63.08	10.463			
9,000.00	8,950.42	8,997.73	8,950.42	33.03	32.73	-177.66	-388.00	583.00	660.05	596.28	63.77	10.350			
9,100.00	9,050.42	9,097.73	9,050.42	33.37	33.06	-177.66	-388.00	583.00	660.05	595.59	64.47	10.239			
9,200.00	9,150.42	9,197.73	9,150.42	33.72	33.40	-177.66	-388.00	583.00	660.05	594.89	65.16	10.130			
9,300.00	9,250.42	9,297.73	9,250.42	34.06	33.74	-177.66	-388.00	583.00	660.05	594.20	65.85	10.024			
9,400.00	9,350.42	9,397.73	9,350.42	34.40	34.08	-177.66	-388.00	583.00	660.05	593.51	66.54	9.919			
9,500.00	9,450.42	9,497.73	9,450.42	34.74	34.41	-177.66	-388.00	583.00	660.05	592.82	67.24	9.817			
9,600.00	9,550.42	9,597.73	9,550.42	35.08	34.75	-177.66	-388.00	583.00	660.05	592.12	67.93	9.717			
9,700.00	9,650.42	9,697.73	9,650.42	35.43	35.09	-177.66	-388.00	583.00	660.05	591.43	68.62	9.619			
9,800.00	9,750.42	9,797.73	9,750.42	35.77	35.43	-177.66	-388.00	583.00	660.05	590.73	69.32	9.522			
9,900.00	9,850.42	9,897.73	9,850.42	36.11	35.77	-177.66	-388.00	583.00	660.05	590.04	70.01	9.428			
10,000.00	9,950.42	9,997.73	9,950.42	36.46	36.11	-177.66	-388.00	583.00	660.05	589.34	70.71	9.335			
10,100.00	10,050.30	10,094.57	10,047.15	36.78	36.42	-87.40	-388.01	579.83	660.05	588.65	71.41	9.245			
10,200.00	10,148.25	10,189.66	10,140.45	37.07	36.70	-87.47	-388.09	562.07	660.01	588.66	72.11	9.155			
10,300.00	10,241.34	10,284.93	10,229.70	37.33	36.95	-87.51	-388.24	529.06	659.94	588.98	72.81	9.065			

CC - Min centre to center distance or covergent point. SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 228H - OH / Job 1514202 - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: O-PHX-MWD-HDGM														Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Between Centres		Minimum Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	N-S (usft)	E-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor	Warning	
10,400.00	10,326.73	10,380.51	10,312.52	37.57	37.18	-87.83	-388.46	481.55	659.85	585.40	74.45	8.863		
10,500.00	10,401.83	10,476.52	10,386.60	37.82	37.43	-88.10	-388.74	420.65	659.73	584.75	74.98	8.799		
10,600.00	10,464.35	10,573.08	10,449.81	38.13	37.71	-88.44	-389.07	347.81	659.62	584.00	75.62	8.723		
10,700.00	10,512.40	10,670.30	10,500.20	38.55	38.08	-88.82	-389.44	264.81	659.51	583.05	76.47	8.625		
10,800.00	10,544.57	10,768.26	10,536.07	39.11	38.58	-89.23	-389.86	173.78	659.43	581.85	77.58	8.500		
10,900.00	10,564.08	10,867.35	10,558.42	39.83	39.26	-89.50	-390.30	77.29	659.40	580.38	79.02	8.345		
11,000.00	10,573.23	10,966.85	10,570.59	40.72	40.09	-89.77	-390.75	-21.41	659.39	578.62	80.77	8.164		
11,006.32	10,573.47	10,973.15	10,571.02	40.78	40.15	-89.79	-390.78	-27.89	659.39	578.50	80.89	8.152		
11,100.00	10,572.95	11,066.68	10,572.53	41.75	41.09	-89.95	-391.20	-121.18	659.39	576.58	82.81	7.963		
11,200.00	10,571.02	11,166.68	10,570.61	42.95	42.26	-89.95	-391.66	-221.16	659.41	574.22	85.19	7.740		
11,300.00	10,569.09	11,266.68	10,568.69	44.29	43.58	-89.97	-392.12	-321.15	659.42	571.56	87.86	7.505		
11,400.00	10,567.17	11,366.68	10,566.78	45.78	45.03	-89.97	-392.58	-421.13	659.44	568.63	90.80	7.252		
11,500.00	10,565.24	11,466.68	10,564.86	47.38	46.62	-89.97	-393.04	-521.11	659.45	565.45	94.00	7.016		
11,600.00	10,563.31	11,566.68	10,562.94	49.10	48.32	-89.97	-393.50	-621.09	659.46	562.04	97.42	6.769		
11,700.00	10,561.39	11,666.68	10,561.03	50.92	50.12	-89.97	-393.96	-721.07	659.48	558.43	101.04	6.527		
11,800.00	10,559.46	11,766.68	10,559.11	52.83	52.02	-89.97	-394.42	-821.05	659.48	554.64	104.85	6.290		
11,900.00	10,557.53	11,866.68	10,557.19	54.82	53.99	-89.97	-394.88	-921.03	659.50	550.69	108.82	6.061		
12,000.00	10,555.61	11,966.68	10,555.27	56.88	56.05	-89.97	-395.34	-1,021.01	659.52	546.59	112.93	5.840		
12,100.00	10,553.68	12,066.68	10,553.36	59.01	58.16	-89.97	-395.80	-1,120.99	659.53	542.36	117.17	5.629		
12,200.00	10,551.75	12,166.68	10,551.44	61.20	60.34	-89.97	-396.26	-1,220.97	659.55	538.01	121.53	5.427		
12,300.00	10,549.82	12,266.68	10,549.52	63.43	62.57	-89.97	-396.72	-1,320.95	659.56	533.56	126.00	5.235		
12,400.00	10,547.90	12,366.68	10,547.61	65.71	64.85	-89.97	-397.18	-1,420.93	659.57	529.01	130.56	5.052		
12,500.00	10,545.97	12,466.68	10,545.69	68.04	67.16	-89.98	-397.64	-1,520.91	659.59	524.38	135.20	4.879		
12,600.00	10,544.04	12,566.68	10,543.77	70.40	69.52	-89.98	-398.10	-1,620.89	659.60	519.68	139.92	4.714		
12,700.00	10,542.12	12,666.68	10,541.86	72.80	71.91	-89.98	-398.56	-1,720.87	659.61	514.91	144.71	4.558		
12,800.00	10,540.19	12,766.68	10,539.94	75.22	74.34	-89.98	-399.01	-1,820.85	659.63	510.07	149.56	4.410		
12,900.00	10,538.26	12,866.68	10,538.02	77.68	76.79	-89.98	-399.47	-1,920.83	659.64	505.18	154.47	4.270		
13,000.00	10,536.34	12,966.68	10,536.10	80.16	79.25	-89.98	-399.93	-2,020.82	659.66	500.23	159.42	4.138		
13,100.00	10,534.41	13,066.68	10,534.19	82.66	81.76	-89.98	-400.39	-2,120.80	659.67	495.24	164.43	4.012		
13,200.00	10,532.48	13,166.68	10,532.27	85.19	84.29	-89.98	-400.85	-2,220.78	659.68	490.21	169.47	3.893		
13,300.00	10,530.56	13,266.68	10,530.35	87.73	86.83	-89.98	-401.31	-2,320.76	659.70	485.14	174.55	3.779		
13,400.00	10,528.63	13,366.68	10,528.44	90.29	89.38	-89.98	-401.77	-2,420.74	659.71	480.04	179.67	3.672		
13,500.00	10,526.70	13,466.68	10,526.52	92.87	91.96	-89.98	-402.23	-2,520.72	659.73	474.90	184.82	3.569		
13,600.00	10,524.77	13,566.68	10,524.60	95.46	94.55	-89.98	-402.69	-2,620.70	659.74	469.73	190.01	3.472		
13,700.00	10,522.85	13,666.68	10,522.69	98.06	97.15	-89.99	-403.15	-2,720.68	659.75	464.54	195.21	3.380		
13,800.00	10,520.92	13,766.68	10,520.77	100.68	99.77	-89.99	-403.61	-2,820.66	659.77	459.32	200.45	3.291		
13,900.00	10,518.99	13,866.68	10,518.85	103.31	102.39	-89.99	-404.07	-2,920.64	659.78	454.08	205.71	3.207		
14,000.00	10,517.07	13,966.68	10,518.93	105.95	105.03	-89.99	-404.53	-3,020.62	659.79	448.81	210.98	3.127		
14,100.00	10,515.14	14,066.68	10,515.02	108.60	107.68	-89.99	-404.99	-3,120.60	659.81	443.53	216.28	3.051		
14,200.00	10,513.21	14,166.68	10,513.10	111.26	110.34	-89.99	-405.45	-3,220.58	659.82	438.22	221.60	2.978		
14,300.00	10,511.29	14,266.68	10,511.18	113.93	113.00	-89.99	-405.91	-3,320.56	659.84	432.90	226.93	2.908		
14,400.00	10,509.36	14,366.68	10,509.27	116.61	115.68	-89.99	-406.37	-3,420.54	659.85	427.57	232.28	2.841		
14,500.00	10,507.43	14,466.68	10,507.35	119.29	118.36	-89.99	-406.83	-3,520.52	659.86	422.21	237.65	2.777		
14,600.00	10,505.50	14,566.68	10,505.43	121.98	121.05	-89.99	-407.28	-3,620.50	659.88	416.85	243.03	2.715		
14,700.00	10,503.58	14,666.68	10,503.52	124.68	123.74	-89.99	-407.74	-3,720.48	659.89	411.47	248.42	2.656		
14,800.00	10,501.65	14,766.68	10,501.60	127.38	126.44	-90.00	-408.20	-3,820.47	659.90	406.08	253.82	2.600		
14,900.00	10,499.72	14,866.68	10,499.68	130.09	129.15	-90.00	-408.66	-3,920.45	659.92	400.68	259.24	2.546		
15,000.00	10,497.80	14,966.68	10,497.76	132.81	131.86	-90.00	-409.12	-4,020.43	659.93	395.27	264.67	2.493		
15,100.00	10,495.87	15,066.68	10,495.85	135.53	134.58	-90.00	-409.58	-4,120.41	659.95	389.84	270.10	2.443		
15,200.00	10,493.94	15,166.68	10,493.93	138.25	137.30	-90.00	-410.04	-4,220.39	659.96	384.41	275.55	2.395		
15,300.00	10,492.02	15,266.68	10,492.01	140.98	140.03	-90.00	-410.50	-4,320.37	659.97	378.97	281.01	2.349		
15,400.00	10,490.09	15,366.68	10,490.10	143.71	142.76	-90.00	-410.96	-4,420.35	659.99	373.52	286.47	2.304		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Dr. Scrivner Federal 01-24S-28E RB - 228H - OH / Job 1514202 - Preliminary Plan 1														Offset Site Error: 0.00 usft
Survey Program: 0-PHX-MWD-HDGM														Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Warning						
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centres	Between	Between	Minimum	Separation	Factor	Warning	
Depth	Depth	Depth	Depth	Depth	Depth	Toolface	N-S	E-W	Centres	Ellipses	Separation	Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
15,404.52	10,480.00	15,371.30	10,490.01	143.84	142.88	-90.00	-410.98	-4,424.97	559.99	373.27	286.72	2,302 SF		



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Malaga 1 Federal 1 - 1 - OH - Surveys														Offset Site Error: 0.00 usft	
Survey Program: 143-MWD														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum Separation		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	N-S (usft)	E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Separation Factor			
0.00	0.00	0.00	48.50	0.00	0.00	-83.41	269.50	-2,331.80	2,347.82						
100.00	100.00	50.26	98.76	0.13	0.06	-83.40	269.62	-2,331.80	2,347.34	2,347.15	0.19	N/A			
200.00	200.00	147.93	196.42	0.49	0.17	-83.38	270.50	-2,331.80	2,347.44	2,346.78	0.66	3,550.497			
300.00	300.00	247.17	295.65	0.85	0.40	-83.35	271.95	-2,331.80	2,347.61	2,346.37	1.24	1,887.968			
400.00	400.00	346.92	395.39	1.21	0.61	-83.31	273.64	-2,331.80	2,347.81	2,345.99	1.82	1,292.321			
500.00	500.00	447.26	495.71	1.56	0.82	-83.27	275.27	-2,331.80	2,348.00	2,345.62	2.38	986.647			
600.00	600.00	547.60	596.04	1.92	1.02	-83.23	276.76	-2,331.80	2,348.17	2,345.23	2.94	797.930			
700.00	700.00	647.92	696.36	2.28	1.23	-83.20	278.13	-2,331.80	2,348.33	2,344.83	3.51	669.783			
800.00	800.00	747.91	796.34	2.64	1.44	-83.17	279.44	-2,331.80	2,348.49	2,344.41	4.07	576.632			
900.00	900.00	847.91	896.32	3.00	1.65	-83.13	280.75	-2,331.80	2,348.64	2,344.00	4.64	506.236			
1,000.00	1,000.00	947.90	996.31	3.36	1.86	-83.10	282.06	-2,331.80	2,348.80	2,343.59	5.21	451.164			
1,100.00	1,099.99	1,047.44	1,095.85	3.71	2.07	-149.09	283.43	-2,331.80	2,350.09	2,344.31	5.78	406.339			
1,200.00	1,199.91	1,146.90	1,195.29	4.06	2.29	-149.07	284.97	-2,331.80	2,353.64	2,347.29	6.35	370.680			
1,300.00	1,299.70	1,246.41	1,294.78	4.41	2.51	-149.08	286.67	-2,331.80	2,359.34	2,352.42	6.92	341.095			
1,400.00	1,399.46	1,346.20	1,394.56	4.77	2.73	-149.13	288.42	-2,331.80	2,365.53	2,358.04	7.49	315.809			
1,500.00	1,499.22	1,445.99	1,494.33	5.13	2.96	-149.17	290.16	-2,331.80	2,371.73	2,363.67	8.07	294.061			
1,600.00	1,598.97	1,545.78	1,594.11	5.49	3.18	-149.21	291.90	-2,331.80	2,377.93	2,369.29	8.64	275.168			
1,700.00	1,698.73	1,644.60	1,692.91	5.85	3.40	-149.25	293.78	-2,331.80	2,384.15	2,374.93	9.22	258.602			
1,800.00	1,798.48	1,743.37	1,791.65	6.21	3.62	-149.29	295.04	-2,331.80	2,390.42	2,380.62	9.80	243.972			
1,900.00	1,898.24	1,842.13	1,890.38	6.57	3.85	-149.31	296.55	-2,331.80	2,396.73	2,386.35	10.38	230.961			
2,000.00	1,998.00	1,940.93	1,989.14	6.93	4.07	-149.32	301.64	-2,331.80	2,403.08	2,392.12	10.96	219.296			
2,100.00	2,097.75	2,039.73	2,087.88	7.30	4.29	-149.33	304.97	-2,331.80	2,409.47	2,397.93	11.54	208.770			
2,200.00	2,197.51	2,138.36	2,186.44	7.66	4.52	-149.32	308.69	-2,331.80	2,415.91	2,403.78	12.13	199.236			
2,300.00	2,297.27	2,237.28	2,285.27	8.03	4.75	-149.31	312.77	-2,331.80	2,422.39	2,409.67	12.71	190.538			
2,400.00	2,397.02	2,336.19	2,384.08	8.39	4.98	-149.29	317.15	-2,331.80	2,428.90	2,415.60	13.30	182.606			
2,500.00	2,496.78	2,434.71	2,482.50	8.76	5.21	-149.26	321.86	-2,331.80	2,435.45	2,421.56	13.89	175.346			
2,600.00	2,596.54	2,536.65	2,584.32	9.13	5.43	-149.23	326.81	-2,331.80	2,442.02	2,427.55	14.47	168.762			
2,700.00	2,696.29	2,636.95	2,686.54	9.49	5.63	-149.23	330.74	-2,331.80	2,448.46	2,433.44	15.03	162.938			
2,800.00	2,796.02	2,736.73	2,787.27	9.86	5.83	-149.21	333.89	-2,331.80	2,455.11	2,439.52	15.59	157.526			
2,900.00	2,895.56	2,839.34	2,886.83	10.23	6.04	-149.19	336.93	-2,331.80	2,463.70	2,447.57	16.14	152.668			
3,000.00	2,994.81	2,938.70	2,986.14	10.61	6.25	-149.18	339.96	-2,331.80	2,474.54	2,457.86	16.68	148.326			
3,100.00	3,093.71	3,038.30	3,085.70	11.00	6.46	-149.18	342.97	-2,331.80	2,487.61	2,470.39	17.22	144.446			
3,200.00	3,192.25	3,138.62	3,185.99	11.39	6.67	-149.27	345.53	-2,331.80	2,502.59	2,484.82	17.78	140.774			
3,300.00	3,290.73	3,238.84	3,286.19	11.79	6.88	-149.43	347.51	-2,331.80	2,517.80	2,499.45	18.36	137.170			
3,400.00	3,389.21	3,338.59	3,385.93	12.19	7.08	-149.60	348.91	-2,331.80	2,532.98	2,514.05	18.93	133.819			
3,500.00	3,487.69	3,437.66	3,485.00	12.59	7.27	-149.77	350.04	-2,331.80	2,548.14	2,528.65	19.49	130.725			
3,600.00	3,586.17	3,536.71	3,584.04	12.99	7.47	-149.95	350.87	-2,331.80	2,563.31	2,543.25	20.06	127.801			
3,700.00	3,684.65	3,636.74	3,683.06	13.39	7.66	-150.12	351.70	-2,331.80	2,578.48	2,557.86	20.62	125.033			
3,800.00	3,783.13	3,734.73	3,782.06	13.80	7.85	-150.30	352.24	-2,331.80	2,593.66	2,572.47	21.19	122.409			
3,900.00	3,881.61	3,832.84	3,880.16	14.21	8.05	-150.48	352.76	-2,331.80	2,608.86	2,587.09	21.77	119.864			
4,000.00	3,980.09	3,930.92	3,978.24	14.62	8.26	-150.65	353.46	-2,331.80	2,624.10	2,601.76	22.34	117.445			
4,100.00	4,078.58	4,029.02	4,076.34	15.03	8.46	-150.81	354.35	-2,331.80	2,639.38	2,616.46	22.92	115.147			
4,200.00	4,177.06	4,127.15	4,174.46	15.44	8.67	-150.97	355.44	-2,331.80	2,654.70	2,631.19	23.50	112.962			
4,300.00	4,275.54	4,225.32	4,272.62	15.85	8.87	-151.12	356.72	-2,331.80	2,670.05	2,645.96	24.09	110.856			
4,400.00	4,374.02	4,323.54	4,370.83	16.27	9.09	-151.27	358.16	-2,331.80	2,685.43	2,660.75	24.68	108.822			
4,500.00	4,472.50	4,421.78	4,469.06	16.68	9.31	-151.41	359.78	-2,331.80	2,700.84	2,675.57	25.27	106.883			
4,600.00	4,570.98	4,520.04	4,567.30	17.10	9.52	-151.55	361.56	-2,331.80	2,716.28	2,690.42	25.86	105.032			
4,700.00	4,669.46	4,618.32	4,665.56	17.51	9.74	-151.68	363.51	-2,331.80	2,731.75	2,705.29	26.45	103.264			
4,800.00	4,767.94	4,716.78	4,764.00	17.93	9.95	-151.81	365.62	-2,331.80	2,747.24	2,720.20	27.04	101.583			
4,900.00	4,866.42	4,815.57	4,862.77	18.35	10.16	-151.93	367.69	-2,331.80	2,762.74	2,735.11	27.63	99.991			
5,000.00	4,964.90	4,914.34	4,961.52	18.77	10.37	-152.06	369.67	-2,331.80	2,778.25	2,750.03	28.22	98.465			
5,100.00	5,063.38	5,013.11	5,060.27	19.18	10.57	-152.19	371.54	-2,331.80	2,793.77	2,764.96	28.80	97.001			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services
Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset, TVD Reference: Reference Datum

Offset Design: Malaga 1 Federal 1 - 1 - OH - Surveys														Offset Site Error: 0.00 usft
Survey Program: 143-MWD														Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,161.86	5,111.86	5,159.01	19.60	10.78	-152.32	373.32	-2,331.80	2,809.29	2,779.90	29.39	95.595		
5,300.00	5,260.35	5,210.34	5,257.47	20.02	10.99	-152.45	375.08	-2,331.80	2,824.83	2,794.85	29.97	94.245		
5,400.00	5,358.83	5,308.79	5,355.91	20.44	11.20	-152.57	376.92	-2,331.80	2,840.38	2,809.82	30.56	92.947		
5,500.00	5,457.31	5,407.26	5,454.35	20.86	11.40	-152.69	378.85	-2,331.80	2,855.95	2,824.81	31.15	91.698		
5,600.00	5,555.79	5,505.74	5,552.81	21.29	11.61	-152.81	380.87	-2,331.80	2,871.54	2,839.81	31.73	90.495		
5,700.00	5,654.27	5,604.25	5,651.30	21.71	11.82	-152.92	382.98	-2,331.80	2,887.15	2,854.83	32.32	89.336		
5,800.00	5,752.85	5,702.52	5,750.55	22.13	12.03	-153.11	384.92	-2,331.80	2,902.20	2,869.26	32.95	88.081		
5,900.00	5,851.83	5,801.13	5,850.15	22.53	12.23	-153.29	386.44	-2,331.80	2,915.05	2,881.47	33.57	86.822		
6,000.00	5,951.14	5,901.03	5,950.04	22.92	12.44	-153.44	387.53	-2,331.80	2,925.56	2,891.38	34.18	85.583		
6,100.00	6,050.72	6,002.65	6,049.66	23.30	12.65	-153.56	388.40	-2,331.80	2,933.74	2,898.97	34.77	84.379		
6,200.00	6,150.51	6,102.45	6,149.45	23.66	12.86	-153.64	389.27	-2,331.80	2,939.58	2,904.25	35.33	83.200		
6,300.00	6,250.43	6,201.94	6,248.93	24.01	13.08	-153.67	390.33	-2,331.80	2,943.08	2,907.20	35.88	82.022		
6,400.00	6,350.42	6,301.48	6,348.46	24.34	13.29	-87.66	391.77	-2,331.80	2,944.26	2,908.97	37.29	78.982		
6,500.00	6,450.42	6,401.01	6,447.98	24.67	13.51	-87.62	393.57	-2,331.80	2,944.33	2,908.50	37.83	77.827		
6,600.00	6,550.42	6,500.53	6,547.48	24.99	13.73	-87.58	395.74	-2,331.80	2,944.42	2,908.05	38.38	76.723		
6,700.00	6,650.42	6,600.11	6,647.02	25.32	13.95	-87.53	398.28	-2,331.80	2,944.53	2,905.51	38.92	75.648		
6,800.00	6,750.42	6,699.83	6,746.71	25.65	14.17	-87.48	401.04	-2,331.80	2,944.65	2,905.18	39.47	74.599		
6,900.00	6,850.42	6,799.55	6,846.39	25.98	14.40	-87.42	403.98	-2,331.80	2,944.78	2,904.76	40.02	73.578		
7,000.00	6,950.42	6,899.26	6,946.04	26.31	14.62	-87.36	407.11	-2,331.80	2,944.93	2,904.35	40.57	72.584		
7,100.00	7,050.42	6,998.95	7,045.68	26.64	14.84	-87.30	410.41	-2,331.80	2,945.08	2,903.96	41.12	71.615		
7,200.00	7,150.42	7,099.26	7,145.93	26.97	15.06	-87.23	413.80	-2,331.80	2,945.24	2,903.57	41.67	70.680		
7,300.00	7,250.42	7,200.11	7,246.74	27.30	15.27	-87.17	416.67	-2,331.80	2,945.38	2,903.17	42.21	69.773		
7,400.00	7,350.42	7,300.69	7,347.30	27.64	15.48	-87.13	418.95	-2,331.80	2,945.49	2,902.74	42.75	68.895		
7,500.00	7,450.42	7,400.90	7,447.49	27.97	15.68	-87.09	420.99	-2,331.80	2,945.60	2,902.31	43.29	68.049		
7,600.00	7,550.42	7,501.12	7,547.69	28.30	15.88	-87.05	422.88	-2,331.80	2,945.69	2,901.87	43.82	67.223		
7,700.00	7,650.42	7,600.80	7,647.35	28.64	16.09	-87.02	424.71	-2,331.80	2,945.79	2,901.43	44.36	66.406		
7,800.00	7,750.42	7,700.12	7,746.64	28.97	16.30	-86.98	426.91	-2,331.80	2,945.90	2,901.00	44.90	65.604		
7,900.00	7,850.42	7,799.42	7,845.91	29.31	16.51	-86.93	429.53	-2,331.80	2,946.05	2,900.60	45.45	64.822		
8,000.00	7,950.42	7,898.70	7,945.14	29.64	16.72	-86.87	432.58	-2,331.80	2,946.21	2,900.22	45.99	64.058		
8,100.00	8,050.42	7,998.15	8,044.53	29.98	16.94	-86.80	436.01	-2,331.80	2,946.40	2,899.86	46.54	63.304		
8,200.00	8,150.42	8,097.79	8,144.11	30.32	17.17	-86.73	439.66	-2,331.80	2,946.61	2,899.51	47.10	62.561		
8,300.00	8,250.42	8,197.42	8,243.67	30.66	17.39	-86.65	443.48	-2,331.80	2,946.83	2,899.17	47.66	61.835		
8,400.00	8,350.42	8,298.02	8,344.20	30.99	17.61	-86.58	447.24	-2,331.80	2,947.05	2,898.85	48.21	61.134		
8,500.00	8,450.42	8,398.68	8,444.80	31.33	17.82	-86.52	450.60	-2,331.80	2,947.25	2,898.50	48.76	60.448		
8,600.00	8,550.42	8,498.34	8,544.41	31.67	18.04	-86.45	453.75	-2,331.80	2,947.45	2,898.14	49.31	59.780		
8,700.00	8,650.42	8,597.72	8,643.73	32.01	18.25	-86.39	457.18	-2,331.80	2,947.66	2,897.81	49.85	59.127		
8,800.00	8,750.42	8,597.07	8,743.01	32.35	18.46	-86.32	460.91	-2,331.80	2,947.90	2,897.50	50.40	58.488		
8,900.00	8,850.42	8,799.02	8,844.90	32.69	18.68	-86.25	464.40	-2,331.80	2,948.12	2,897.17	50.96	57.856		
9,000.00	8,950.42	8,900.31	8,946.16	33.03	18.90	-86.20	466.81	-2,331.80	2,948.28	2,896.77	51.51	57.237		
9,100.00	9,050.42	9,000.28	9,046.11	33.37	19.11	-86.16	468.99	-2,331.80	2,948.43	2,896.36	52.06	56.634		
9,200.00	9,150.42	9,100.26	9,146.06	33.72	19.32	-86.12	471.17	-2,331.80	2,948.57	2,895.96	52.61	56.044		
9,300.00	9,250.42	9,200.30	9,246.08	34.06	19.53	-86.07	473.35	-2,331.80	2,948.72	2,895.56	53.16	55.465		
9,400.00	9,350.42	9,300.54	9,346.29	34.40	19.74	-86.03	475.44	-2,331.80	2,948.86	2,895.15	53.72	54.897		
9,500.00	9,450.42	9,400.78	9,446.52	34.74	19.96	-86.00	477.41	-2,331.80	2,949.00	2,894.73	54.27	54.340		
9,600.00	9,550.42	9,501.02	9,546.74	35.08	20.17	-85.96	479.25	-2,331.80	2,949.13	2,894.31	54.82	53.794		
9,700.00	9,650.42	9,600.59	9,646.29	35.43	20.38	-85.93	481.08	-2,331.80	2,949.26	2,893.88	55.37	53.260		
9,800.00	9,750.42	9,699.98	9,745.66	35.77	20.59	-85.88	483.17	-2,331.80	2,949.41	2,893.48	55.93	52.737		
9,900.00	9,850.42	9,799.36	9,845.02	36.11	20.80	-85.84	485.54	-2,331.80	2,949.58	2,893.10	56.48	52.224		
10,000.00	9,950.42	9,898.73	9,944.35	36.46	21.01	-85.79	488.19	-2,331.80	2,949.78	2,892.74	57.03	51.722		
10,100.00	10,050.30	9,998.01	10,043.59	36.78	21.22	4.56	491.10	-2,331.80	2,949.61	2,892.96	56.65	52.018		
10,200.00	10,148.25	10,095.92	10,141.45	37.07	21.44	4.81	494.09	-2,331.80	2,927.42	2,872.14	55.29	52.948		
10,300.00	10,241.34	10,188.96	10,234.45	37.33	21.65	5.27	496.93	-2,331.80	2,891.58	2,838.88	52.60	54.975		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services

Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
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Reference Design: Preliminary Plan 1

Local Co-ordinate Reference
TVD Reference: Well 224H
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: RKB @ 3011.50usft (Patterson 297)
Survey Calculation Method: Grid
Output errors are at: Minimum Curvature
Database: 2.00 sigma
Offset TVD Reference: Compass 5000 GCR
Reference Datum: Reference Datum

Offset Design Malaga 1 Federal 1 - 1 - OH - Surveys												Offset Site Error: 0.00 usft
Survey Program 143-MWD												Offset Well Error: 0.00 usft
Reference												
Measured	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation
Depth	Depth	Depth	Depth	Reference	Offset	Toolface	N-S	E-W	Centres	Ellipses	Separation	Factor
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
10,400.00	10,326.73	10,274.12	10,319.56	37.57	21.84	6.03	499.56	-2,331.80	2,840.17	2,791.41	48.76	58.248
10,500.00	10,401.83	10,348.98	10,394.39	37.82	22.00	7.25	501.94	-2,331.80	2,774.77	2,730.67	44.11	62.910
10,600.00	10,464.35	10,411.30	10,456.68	38.13	22.14	9.31	503.97	-2,331.80	2,697.38	2,658.14	39.24	68.742
10,700.00	10,512.40	10,459.19	10,504.54	38.55	22.25	13.21	505.55	-2,331.80	2,610.34	2,574.91	35.43	73.676
10,800.00	10,544.57	10,491.24	10,536.57	39.11	22.32	21.70	506.63	-2,331.80	2,516.33	2,480.33	36.00	69.903
10,900.00	10,564.08	10,510.67	10,555.99	39.83	22.36	35.17	507.28	-2,331.80	2,418.86	2,375.66	43.20	55.995
11,000.00	10,573.23	10,519.78	10,565.10	40.72	22.39	58.37	507.59	-2,331.80	2,319.91	2,260.15	59.77	38.815
11,100.00	10,572.95	10,519.48	10,564.80	41.75	22.38	97.85	507.58	-2,331.80	2,220.54	2,157.39	63.15	35.164
11,200.00	10,571.02	10,517.55	10,562.96	42.95	22.38	97.42	507.52	-2,331.80	2,121.21	2,056.82	64.39	32.941
11,300.00	10,569.09	10,515.61	10,560.93	44.29	22.38	96.98	507.45	-2,331.80	2,021.95	1,956.16	65.79	30.734
11,400.00	10,567.17	10,513.68	10,558.99	45.78	22.37	96.54	507.39	-2,331.80	1,922.76	1,855.44	67.32	28.562
11,500.00	10,565.24	10,511.74	10,557.06	47.38	22.37	96.11	507.32	-2,331.80	1,823.66	1,754.69	68.97	26.441
11,600.00	10,563.31	10,509.80	10,555.12	49.10	22.36	95.67	507.25	-2,331.80	1,724.66	1,653.92	70.73	24.382
11,700.00	10,561.39	10,507.87	10,553.19	50.92	22.36	95.23	507.19	-2,331.80	1,625.78	1,553.18	72.60	22.395
11,800.00	10,559.46	10,505.93	10,551.26	52.83	22.35	94.79	507.12	-2,331.80	1,527.04	1,452.50	74.55	20.484
11,900.00	10,557.53	10,504.00	10,549.32	54.82	22.35	94.34	507.06	-2,331.80	1,428.48	1,351.90	76.58	18.654
12,000.00	10,555.61	10,502.06	10,547.39	56.88	22.35	93.90	506.99	-2,331.80	1,330.13	1,251.45	78.68	16.906
12,100.00	10,553.68	10,500.12	10,545.45	59.01	22.34	93.46	506.93	-2,331.80	1,232.04	1,151.20	80.84	15.240
12,200.00	10,551.75	10,498.19	10,543.52	61.20	22.34	93.02	506.86	-2,331.80	1,134.29	1,051.22	83.06	13.656
12,300.00	10,549.82	10,496.25	10,541.58	63.43	22.33	92.57	506.80	-2,331.80	1,036.95	951.62	85.33	12.152
12,400.00	10,547.90	10,494.32	10,539.65	65.71	22.33	92.13	506.73	-2,331.80	940.18	852.53	87.64	10.728
12,500.00	10,545.97	10,492.38	10,537.71	68.04	22.32	91.68	506.66	-2,331.80	844.14	754.15	89.99	9.380
12,600.00	10,544.04	10,490.45	10,535.78	70.40	22.32	91.24	506.60	-2,331.80	749.15	656.78	92.37	8.110
12,700.00	10,542.12	10,488.51	10,533.84	72.80	22.32	90.79	506.53	-2,331.80	655.64	560.85	94.79	6.917
12,800.00	10,540.19	10,486.57	10,531.91	75.22	22.31	90.34	506.47	-2,331.80	564.35	467.12	97.23	5.804
12,900.00	10,538.26	10,484.64	10,529.97	77.68	22.31	89.90	506.40	-2,331.80	476.56	376.87	99.69	4.780
13,000.00	10,536.34	10,482.70	10,528.04	80.16	22.30	89.45	506.34	-2,331.80	394.62	292.45	102.17	3.362
13,100.00	10,534.41	10,480.77	10,526.11	82.66	22.30	89.00	506.27	-2,331.80	323.00	218.33	104.67	3.086
13,200.00	10,532.48	10,478.83	10,524.17	85.19	22.29	88.56	506.21	-2,331.80	270.06	162.87	107.19	2.519
13,300.00	10,530.56	10,476.90	10,522.24	87.73	22.29	88.11	506.14	-2,331.80	248.03	138.32	109.72	2.261
13,307.06	10,530.42	10,476.76	10,522.10	87.91	22.29	88.08	506.14	-2,331.80	247.93	138.04	109.90	2.256 CC, ES, SF
13,400.00	10,528.63	10,474.96	10,520.30	90.29	22.29	87.66	506.08	-2,331.80	264.77	152.52	112.25	2.359
13,500.00	10,526.70	10,473.03	10,518.37	92.87	22.28	87.21	506.01	-2,331.80	314.14	199.33	114.80	2.736
13,600.00	10,524.77	10,471.09	10,516.43	95.46	22.28	86.77	505.95	-2,331.80	383.73	266.38	117.35	3.270
13,700.00	10,522.85	10,469.15	10,514.50	98.06	22.27	86.32	505.88	-2,331.80	464.55	344.64	119.91	3.874
13,800.00	10,520.92	10,467.22	10,512.56	100.68	22.27	85.87	505.82	-2,331.80	551.69	429.22	122.48	4.505
13,900.00	10,518.99	10,465.28	10,510.63	103.31	22.26	85.43	505.76	-2,331.80	642.58	517.54	125.04	5.139
14,000.00	10,517.07	10,463.35	10,508.69	105.95	22.26	84.98	505.69	-2,331.80	735.83	608.23	127.61	5.765
14,100.00	10,515.14	10,461.41	10,506.76	108.60	22.26	84.54	505.63	-2,331.80	830.65	700.48	130.17	6.381
14,200.00	10,513.21	10,459.48	10,504.83	111.26	22.25	84.09	505.56	-2,331.80	926.55	793.82	132.74	6.980
14,300.00	10,511.29	10,457.54	10,502.89	113.93	22.25	83.65	505.50	-2,331.80	1,023.24	887.94	135.30	7.563
14,400.00	10,509.36	10,455.61	10,500.96	116.61	22.24	83.20	505.43	-2,331.80	1,120.50	982.65	137.86	8.128
14,500.00	10,507.43	10,453.67	10,499.02	119.29	22.24	82.76	505.37	-2,331.80	1,218.21	1,077.80	140.41	8.676
14,600.00	10,505.50	10,451.74	10,497.09	121.98	22.23	82.31	505.30	-2,331.80	1,316.25	1,173.29	142.96	9.207
14,700.00	10,503.58	10,449.80	10,495.15	124.68	22.23	81.87	505.24	-2,331.80	1,414.57	1,269.07	145.50	9.722
14,800.00	10,501.65	10,447.86	10,493.22	127.38	22.22	81.43	505.17	-2,331.80	1,513.11	1,365.07	148.04	10.221
14,900.00	10,499.72	10,445.93	10,491.29	130.09	22.22	80.99	505.11	-2,331.80	1,611.82	1,461.25	150.57	10.705
15,000.00	10,497.80	10,443.99	10,489.35	132.81	22.22	80.55	505.05	-2,331.80	1,710.68	1,557.59	153.09	11.174
15,100.00	10,495.87	10,442.06	10,487.42	135.53	22.21	80.11	504.98	-2,331.80	1,809.66	1,654.06	155.60	11.630
15,200.00	10,493.94	10,440.12	10,485.48	138.25	22.21	79.67	504.92	-2,331.80	1,908.75	1,750.55	158.10	12.073
15,300.00	10,492.02	10,438.19	10,483.55	140.98	22.20	79.24	504.85	-2,331.80	2,007.93	1,847.33	160.59	12.503
15,400.00	10,490.09	10,436.25	10,481.62	143.71	22.20	78.80	504.79	-2,331.80	2,107.18	1,944.10	163.08	12.921

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Phoenix Technology Services
Anticollision Report



Company: Matador Resources
Project: Eddy County, NM (NAD27 NME)
Reference Site: Dr. Scrivner Federal 01-24S-28E RB
Site Error: 0.00 usft
Reference Well: 224H
Well Error: 0.00 usft
Reference Wellbore: OH / Job 1514201
Reference Design: Preliminary Plan 1

Local Co-ordinate Reference: Well 224H
TVD Reference: RKB @ 3011.50usft (Patterson 297)
MD Reference: RKB @ 3011.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass 5000 GCR
Offset TVD Reference: Reference Datum

Offset Design: Malaga 1 Federal 1 - 1 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 143-MWD													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Between		Minimum Separation		Warning			
Measured Vertical	Measured Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Factor	Warning		
Depth	Depth	Depth	Depth	Toolface	N-S	E-W	Centres	Ellipses	Separation	Factor	Warning		
(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)				
15,404.62	10,490.00	10,436.16	10,481.53	143.84	22.20	78.78	504.79	-2,331.80	2,111.77	1,848.58	163.19	12.941	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Project: Eddy County, NM (NAD27 NME)
Site: Dr. Scriver Federal 01-24S-28E RB
Well: 224H
Wellbore: OH / Job 1514201
Design: Preliminary Plan 1
Rtg: Patterson 297

Phoenix
TECHNOLOGY SERVICES

Asimuth to Grid North
True North: 0.18°
Magnetic North: 7.18°
Magnetic Field
Strength: 40245.0 nT
Dip Angle: 60.10°
Date: 4/15/2016
Model: HDGM

WELL DETAILS

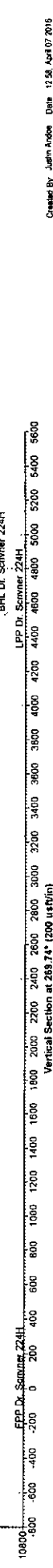
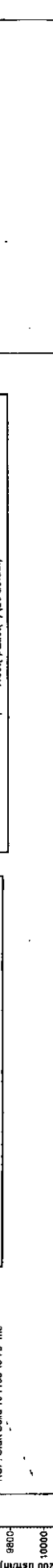
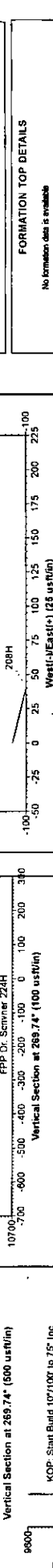
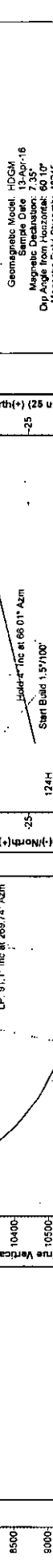
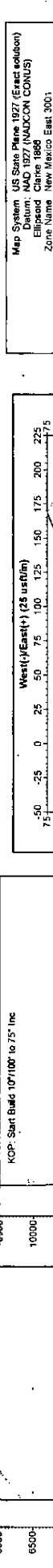
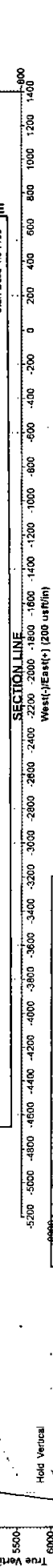
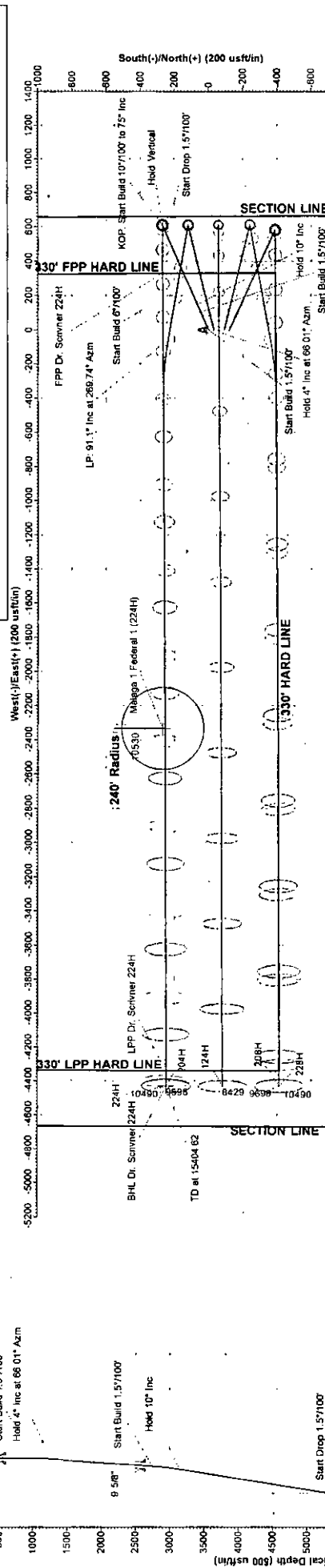
WGS	451W	Nothing	Ground Level	2984.00
0.00	0.00	451713.00	592580.00	32° 14' 29.47718" N
				104° 2' 25.681" W

DESIGN TARGET DETAILS

Name	WGS	451W	Nothing	Ground Level	2984.00
BHL Dr. Scriver 224H	0.00	0.00	451713.00	592580.00	32° 14' 29.47718" N
BHL Dr. Scriver 224H	0.00	0.00	451713.00	592580.00	32° 14' 29.47718" N
FPP Dr. Scriver 224H	0.00	0.00	451713.00	592580.00	32° 14' 29.47718" N

SECTION DETAILS

Sec	MD	Inc	Az	TVD	+N/S	+E/W	Deg	T Face	VFace	Amidation
1	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 157100'
2	1200.00	0.00	8.00	1020.00	0.00	0.00	0.00	0.00	0.00	Hold 157100' Azim
3	1300.00	4.00	66.61	1266.45	3.78	8.50	5.51	-8.52	0.00	Start Build 157100'
4	2750.00	4.00	66.61	2745.17	45.85	103.23	0.00	103.24	0.00	Hold 157100'
5	3169.96	10.00	66.61	3142.99	62.96	155.25	0.00	155.24	0.00	Hold 157100'
6	3360.00	0.00	0.00	3360.00	0.00	0.00	0.00	0.00	0.00	Hold 157100'
7	3367.58	0.00	0.00	6348.00	271.50	610.00	1.50	180.00	411.23	Hold Vertical
8	10037.35	0.00	0.00	8888.00	271.50	610.00	0.00	-411.23	0.00	KOP Start Build 107100' to 75' Inc
9	10040.52	75.00	263.74	10541.43	268.57	195.34	10.00	263.74	-168.56	Start Build 57100'
10	10040.52	75.00	263.74	10541.43	268.57	195.34	10.00	263.74	-168.56	Hold 57100' Azim
11	15604.92	0.00	0.00	15392.00	249.00	4328.90	0.00	0.00	4328.90	DO at 15404.92
										BH, Dr. Sumner 2744'



Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well 224H, Grid North
Latitude: 32° 14' 29.47718" N
Longitude: 104° 2' 25.681" W
Grid East: 592580.00
Grid North: 451713.00
Scale Factor: 1.000
Geographic Model: HDGM
Sample Date: 4/15/2016
Magnetic Declination: 7.18°
Op Angle from Horizontal: 60.10°
Magnetic Field Strength: 40245

To convert a Magnetic Direction to a Grid Direction, Add 7.18°
To convert a Magnetic Direction to a True Direction, Add 7.35°
To convert a True Direction to a Grid Direction, Subtract 0.16°

FORMATION TOP DETAILS

No formation data is available

CASING DETAILS

TVD	MD	Name	Size
5925.00	5900.00	13.375	13.375
2984.41	2950.00	8.500	8.500

December 31 2015



Connection: TenarisXP® BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

Size: 4.500 in.
Wall: 0.290 in.
Weight: 13.50 lbs/ft
Grade: P110-ICY
Min. Wall Thickness: 87.5 %



PIPE BODY DATA

GEOMETRY			
Nominal OD	4.500 in.	Nominal Weight	13.50 lbs/ft
Nominal ID	3.920 in.	Wall Thickness	0.290 in.
Plain End Weight	13.05 lbs/ft	Standard Drift Diameter	3.795 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	479 x 1000 lbs	Internal Yield	14100 psi
Collapse	11620 psi	SMYS	125000 psi

TENARISXP® BTC CONNECTION DATA

GEOMETRY			
Connection OD	5.000 in.	Coupling Length	9.075 in.
Critical Section Area	3.836 sq. in.	Threads per in.	5.00
		Connection ID	3.908 in.
		Make-Up Loss	4.016 in.
PERFORMANCE			
Tension Efficiency	100 %	Joint Yield Strength	479 x 1000 lbs
Structural Compression Efficiency	100 %	Structural Compression Strength	479 x 1000 lbs
External Pressure Capacity	11620 psi	Internal Pressure Capacity ⁽¹⁾	14100 psi
		Structural Bending ⁽²⁾	127 °/100 ft
ESTIMATED MAKE-UP TORQUES ³⁾			
Minimum	6950 ft-lbs	Optimum	7720 ft-lbs
		Maximum	8490 ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	10500 ft-lbs	Yield Torque	12200 ft-lbs
------------------	--------------	--------------	--------------

BLANKING DIMENSIONS

Blanking Dimensions

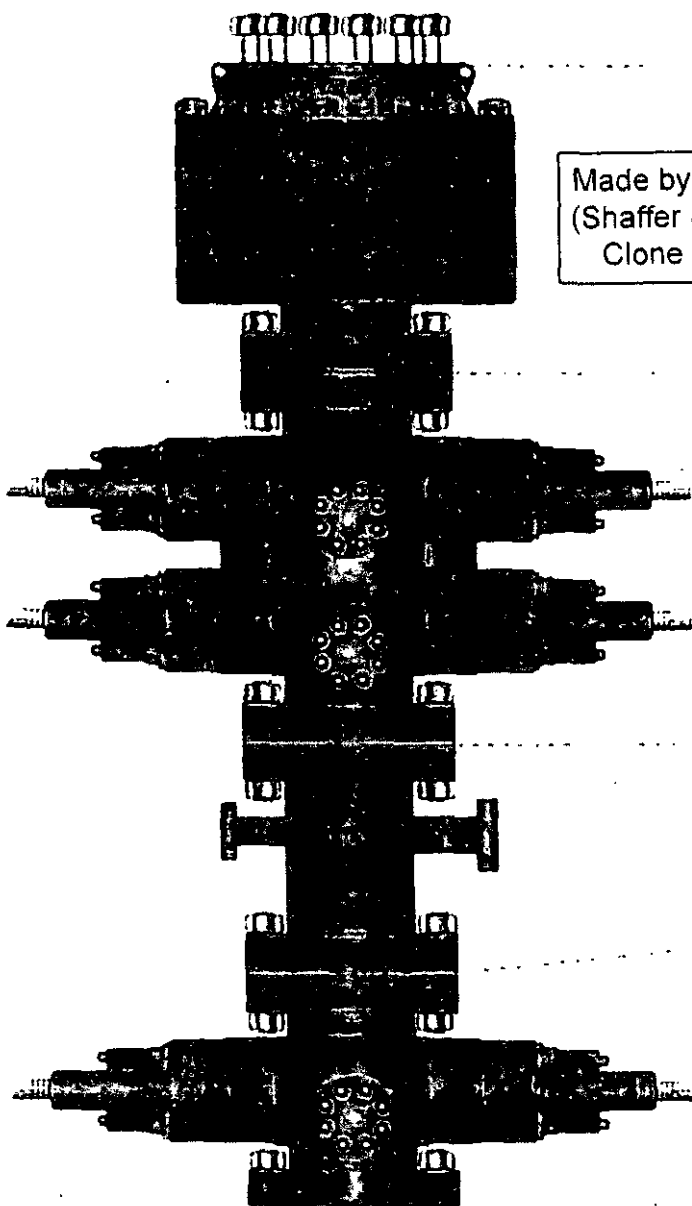


PATTERSON-UTI

Well Control

RIG:

297



Made by Cameron
(Shaffer Spherical)
Clone Annular

PATTERSON-UTI # PS2-628

STYLE: New Shaffer Spherical

BORE 13 5/8" PRESSURE 5,000

HEIGHT: 48 1/2" WEIGHT: 13,800 lbs

PATTERSON-UTI # PC2-128

STYLE: New Cameron Type U

BORE 13 5/8" PRESSURE 10,000

RAMS: TOP 5" Pipe BTM Blinds

HEIGHT: 66 5/8" WEIGHT: 24,000 lbs

Length 40" Outlets 4" 10M

DSA 4" 10M x 2" 10M

PATTERSON-UTI # PC2-228

STYLE: New Cameron Type U

BORE 13 5/8" PRESSURE 10,000

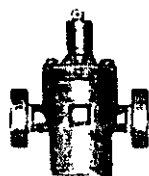
RAMS: 5" Pipe

HEIGHT: 41 5/8" WEIGHT: 13,000 lbs

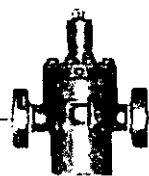
WING VALVES



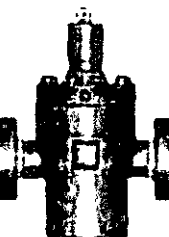
2" Check Valve



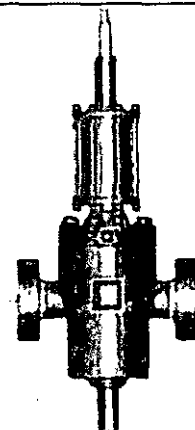
2" Manual Valve



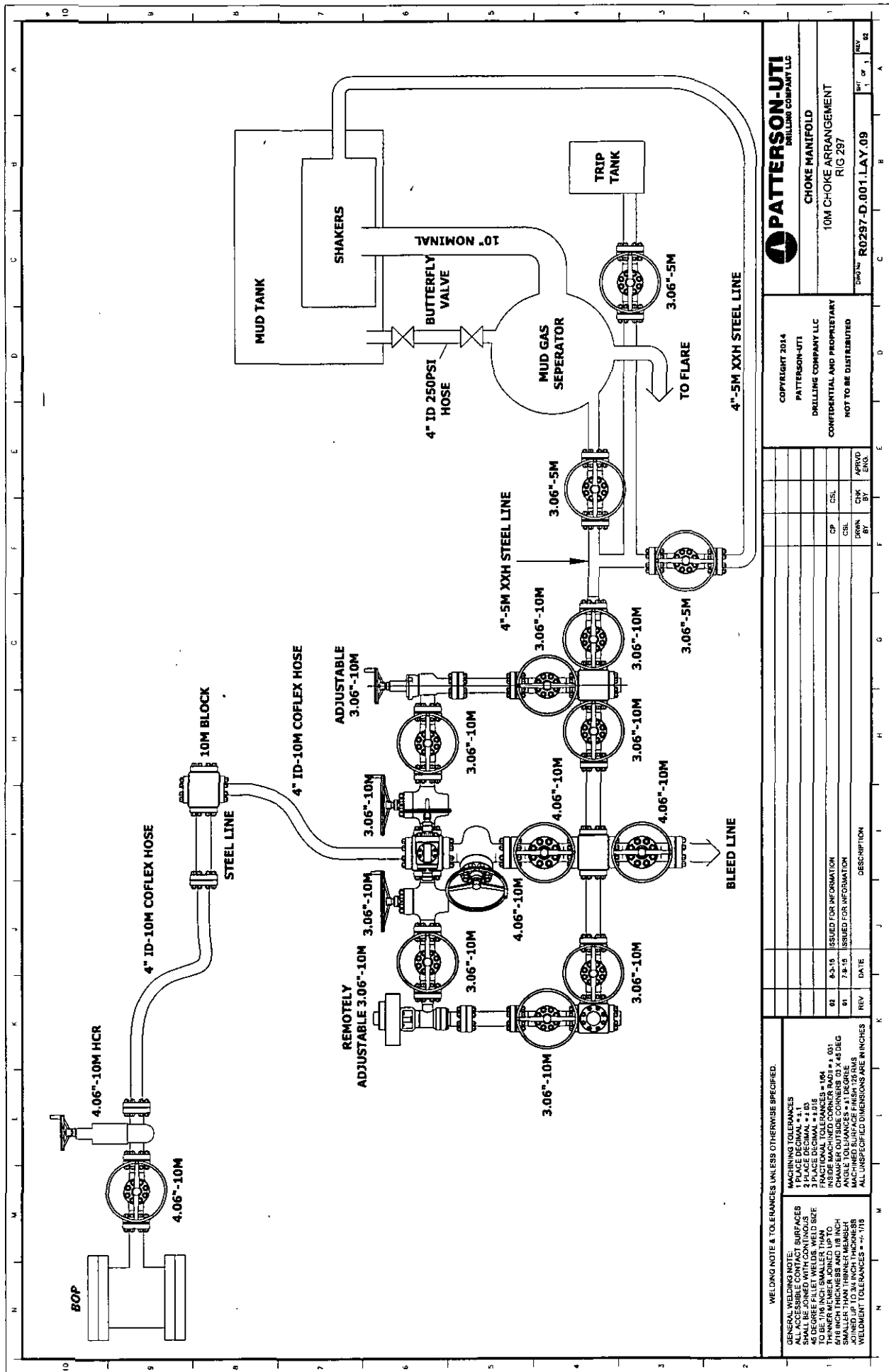
2" Manual Valve



4" Manual Valve



4" Hydraulic Valve



PATTERSON-UTI
DRILLING COMPANY LLC

CHOKE MANIFOLD
10M CHOKE ARRANGEMENT
RIG 297

NOT TO BE DISTRIBUTED

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PATTERSON-UTI
DRILLING COMPANY LLC

CONFIDENTIAL AND PROPRIETARY

NOT TO BE DISTRIBUTED

REV 01

DATE 8-2-19

DESCRIPTION

REV 02

DATE 8-2-19

DESCRIPTION

REV 03

DATE 8-2-19

DESCRIPTION

REV 04

DATE 8-2-19

DESCRIPTION

REV 05

DATE 8-2-19

DESCRIPTION

REV 06

DATE 8-2-19

DESCRIPTION

GENERAL WELDING NOTE:
ALL ACCESSIBLE CONTACT SURFACES
SHALL BE JOINED WITH CONTINUOUS
WELDS. WELDS SHALL BE TO SIZE
TO BE 1/16 INCH SMALLER THAN
THINNER MEMBER JOINED UP TO
3/16 INCH THICKNESS AND 1/8 INCH
SMALLER THAN THICKNESS
JOINED UP TO 3/4 INCH THICKNESS
WELDMENT TOLERANCES = +/- .118

WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED:
MACHINING TOLERANCES
1 PLACE DECIMAL = ± .1
2 PLACE DECIMAL = ± .01
3 PLACE DECIMAL = ± .005
FRACTIONAL TOLERANCES = 1/16
1/32 OF MACHINED CORNER RADIUS ± .031
CHAMFER OUTSIDE CORNERS 12 X 45 DEG
MACHINED SURFACE FINISH 125 RMS
ALL UNSPECIFIED DIMENSIONS ARE IN INCHES

December 8, 2014

Internal Hydrostatic Test Graph



Midwest Hose
& Specialty, Inc.

Customer: Patterson

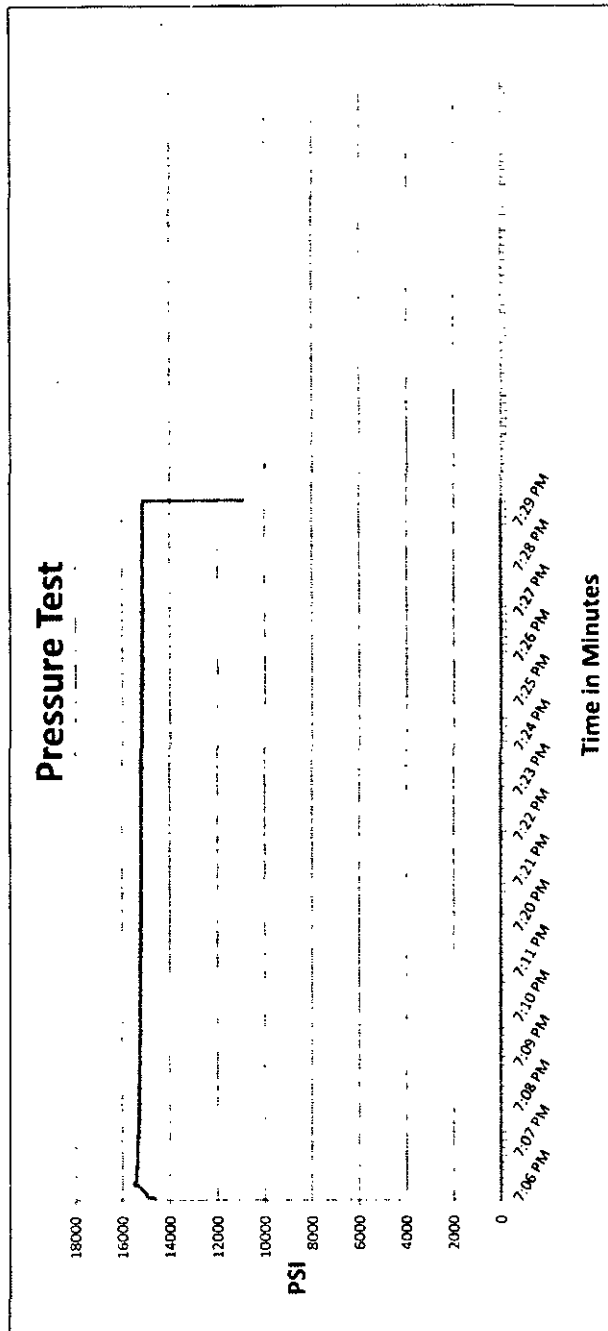
Pick Ticket #: 284918

Hose Specifications

Hose Type Ck
I.D. 3"
Working Pressure 10000 PSI
Length 10'
O.D. 4.79"
Burst Pressure Standard Safety Multiplier Applies

Verification

Type of Fitting 4-1/16 10K
Die Size 5.37"
Coupling Method Swage
Final O.D. 5.37"
Hose Serial # 10490
Hose Assembly Serial # 284918-2



Test Pressure 15000 PSI
Time Held at Test Pressure 15 2/4 Minutes
Actual Burst Pressure
Peak Pressure 15732 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tyler Hill

Approved By: Ryan Adams

[Signature]

[Signature]



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-2	Hose O.D. (Inches)	5.30"
Hose Assembly Length	10'	Aarmor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	91996	Stem (Heat #)	91996
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	15 1/2		
Date Tested	Tested By		Approved By
12/8/2014			



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: PATTERSON B&E

Customer P.O.# 260471

Sales Order # 236404

Date Assembled: 12/8/2014

Specifications

Hose Assembly Type: Choke & Kill

Assembly Serial # 287918-2

Hose Lot # and Date Code 10490-01/13

Hose Working Pressure (psi) 10000

Test Pressure (psi) 15000

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

Approved By

Date

12/9/2014

December 9, 2014

Internal Hydrostatic Test Graph



Midwest Hose
& Specialty, Inc.

Customer: Patterson

Pick Ticket #: 284918

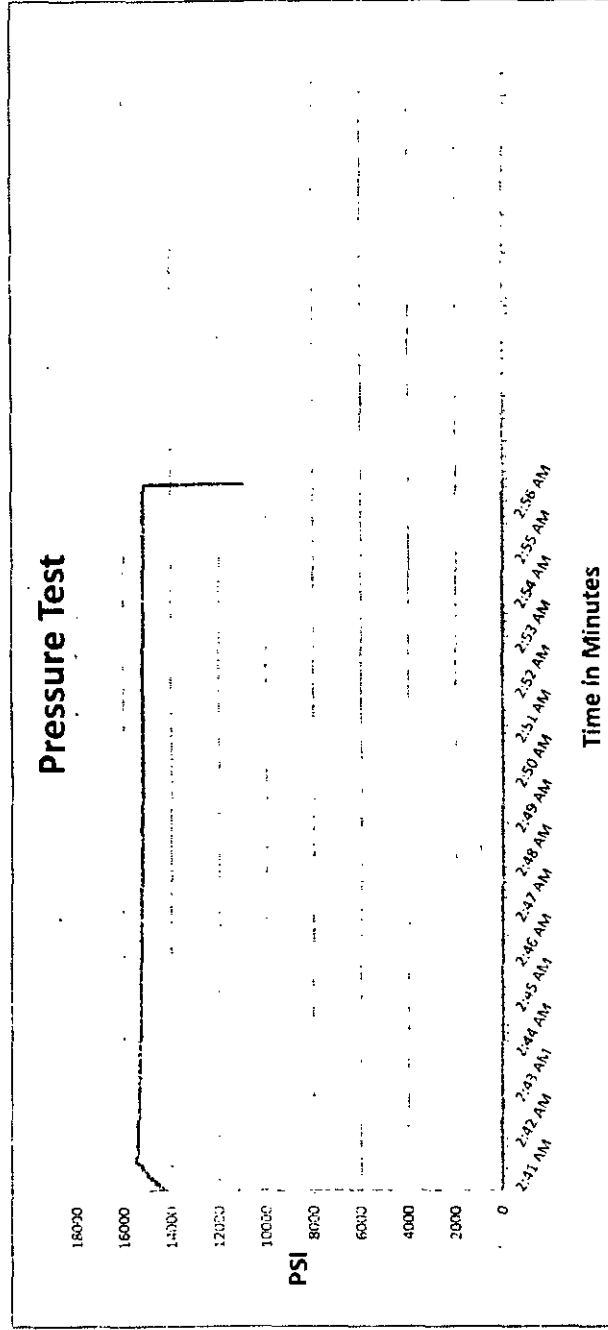
Hose Specifications

Hose Type
Ck
I.D.
3"
Working Pressure
10000 PSI

Length
20'
O.D.
4.77"

Verification

Type of Fitting
4-1/16 10K
Die Size
5.37"
Coupling Method
Swage
Final O.D.
5.40"
Hose Serial #
10490
Hose Assembly Serial #
284918-1



Test Pressure 15000 PSI
Time Held at Test Pressure 15 2/4 Minutes
Actual Burst Pressure
Peak Pressure 15893 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tyler Hill

Approved By: Ryan Adams

[Signature]

[Signature]



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-1	Hose O.D. (Inches)	5.30"
Hose Assembly Length	20'	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)	V3579	Connection (Heat #)	V3579
Dies Used	5.37	Dies Used	5.37
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	15 1/2		
Date Tested	Tested By		Approved By
12/9/2014			



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**

Customer P.O.# **260471**

Sales Order # **236404**

Date Assembled: **12/8/2014**

Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **287918-1**

Hose Lot # and Date Code **10490-01/13**

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

Approved By

Date

12/9/2014

Internal Hydrostatic Test Graph

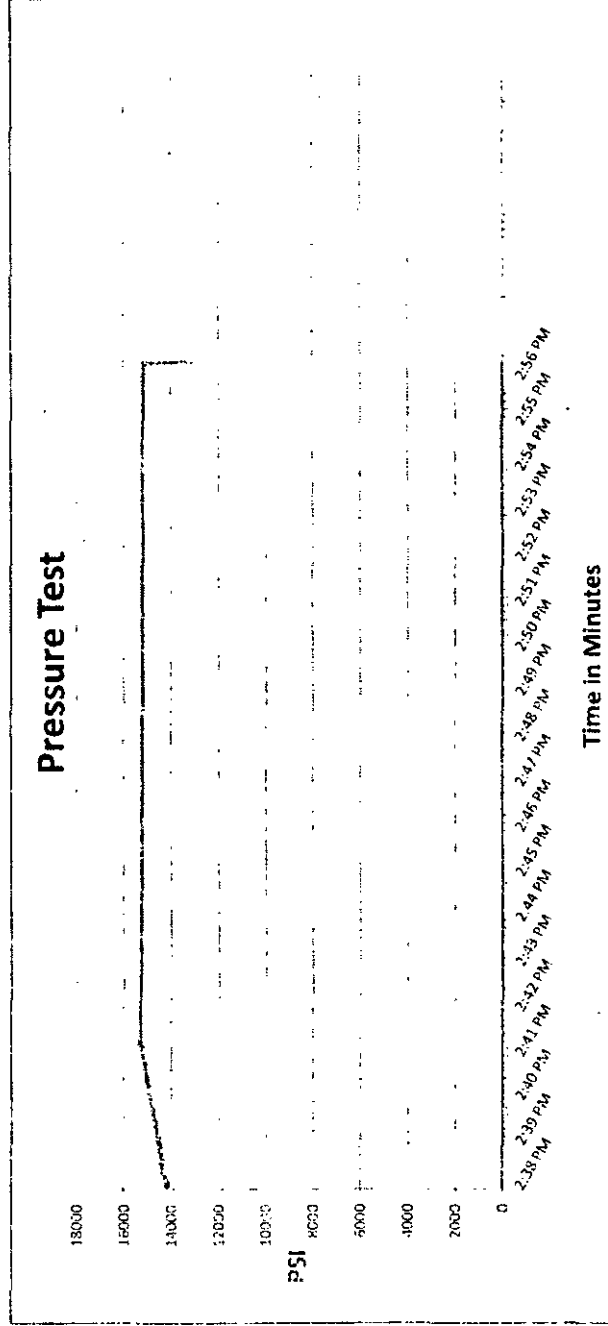


Midwest Hose
& Specialty, Inc.

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications		Verification	
Hose Type	Length	Type of Fitting	Coupling Method
Mud	70'	4 1/16 10K	Swage
I.D.	O.D.	Die Size	Final O.D.
3"	4.79"	5.37"	5.37"
Working Pressure	Burst Pressure	Hose Serial #	Hose Assembly Serial #
10000 PSI	Standard Safety Multiplier Applies	10490	284918-3



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	16 3/4 Minutes		15410 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tyler Hill

Approved By: Ryan Adams

[Signature]

[Signature]



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-3	Hose O.D. (Inches)	5.23"
Hose Assembly Length	70'	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	16 3/4		
Date Tested	Tested By		Approved By
12/9/2014			



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**

Customer P.O.# **260471**

Sales Order # **236404**

Date Assembled: **12/8/2014**

Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **287918-3**

Hose Lot # and Date Code **10490-01/13**

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

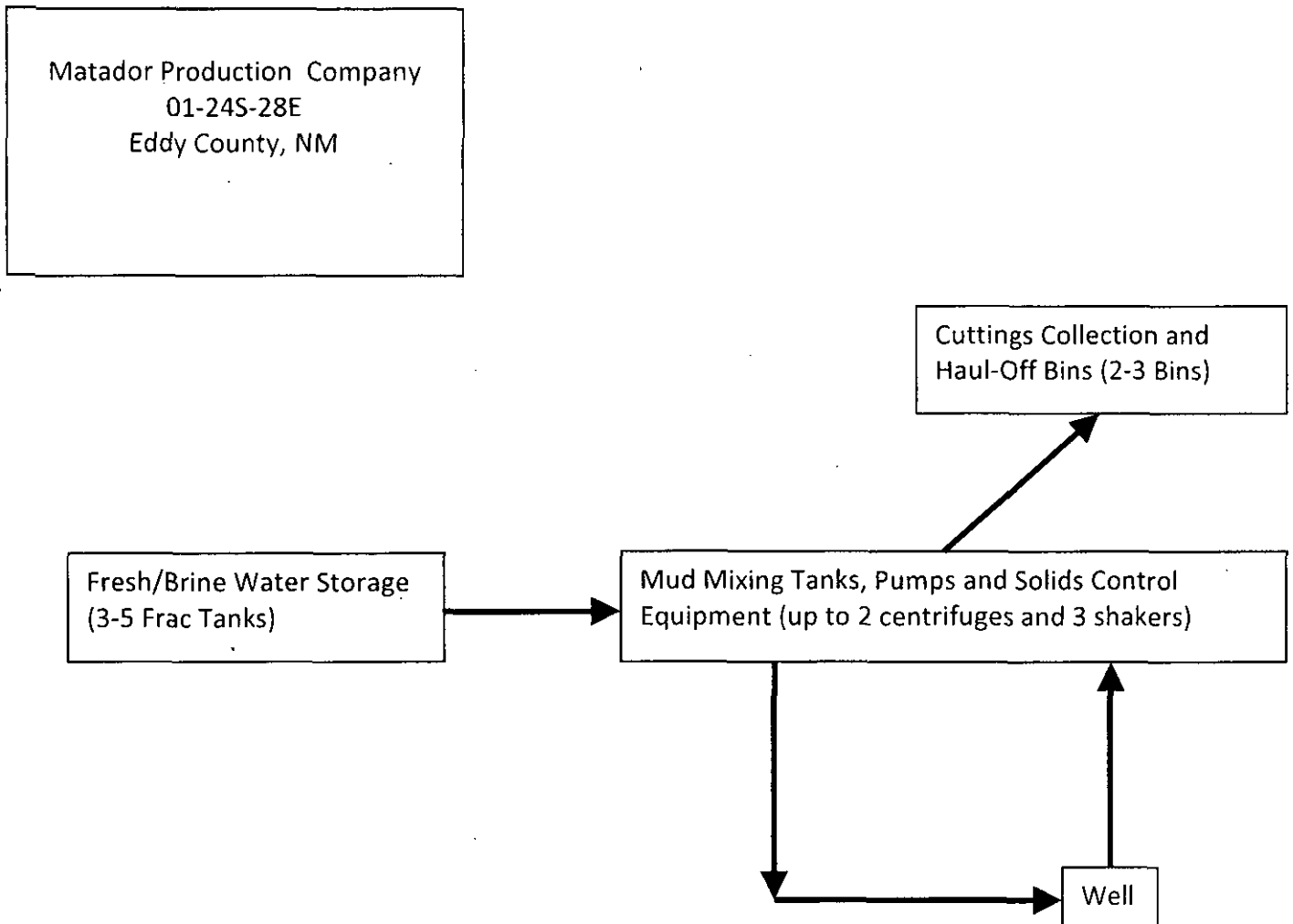
Comments:

Approved By

Date

12/9/2014

Closed-Loop System

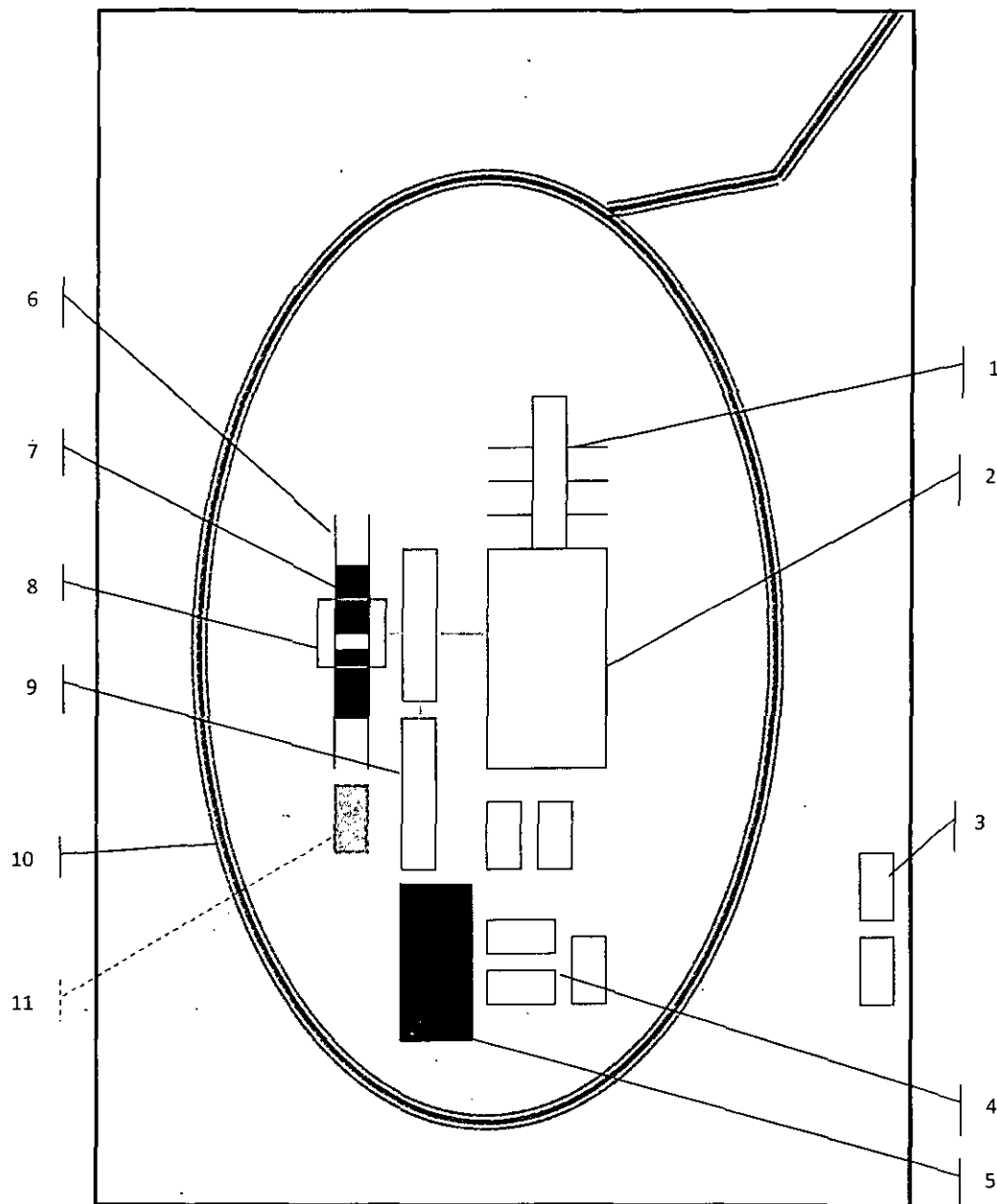


Operating and Maintenance Plan:

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluids and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

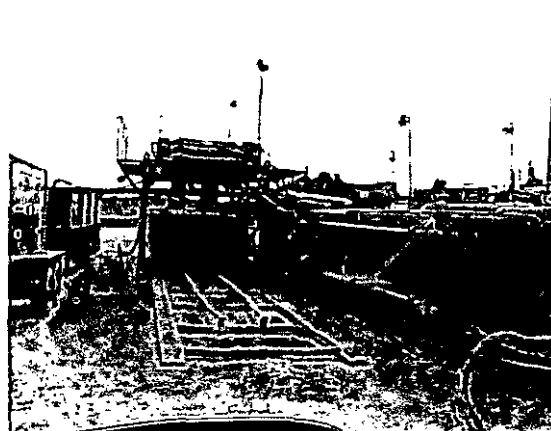
During drilling operations, third party service companies will haul off drill solids and fluids to an approved disposal facility. At the end of the well, all closed loop equipment will be removed from the location.



Schematic Closed Loop Drilling Rig*

1. Pipe Rack
2. Drill Rig
3. House Trailers/ Offices
4. Generator/Fuel/Storage
5. Overflow-Frac Tank
6. Skids
7. Roll Offs
8. Hopper or Centrifuge
9. Mud Tanks
10. Loop Drive
11. Generator (only for use with centrifuge)

**Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available*

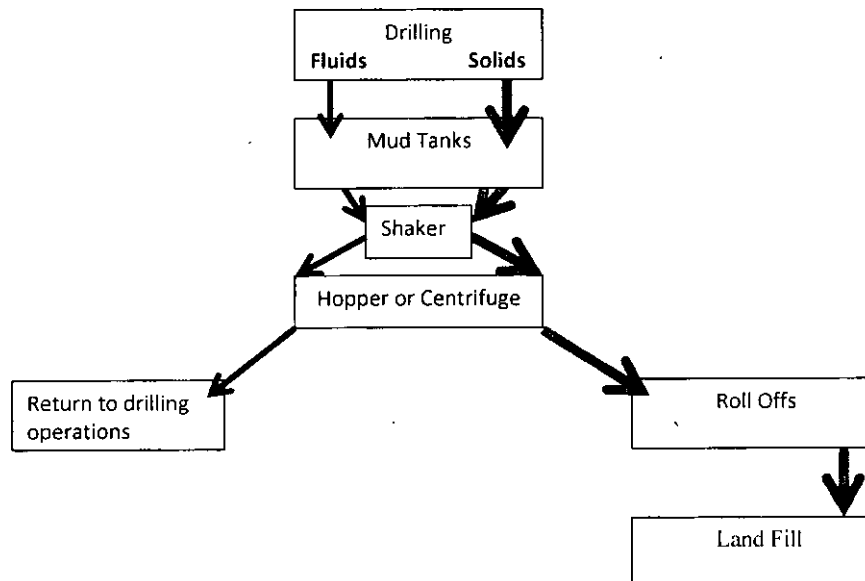


Above: Centrifugal Closed Loop System



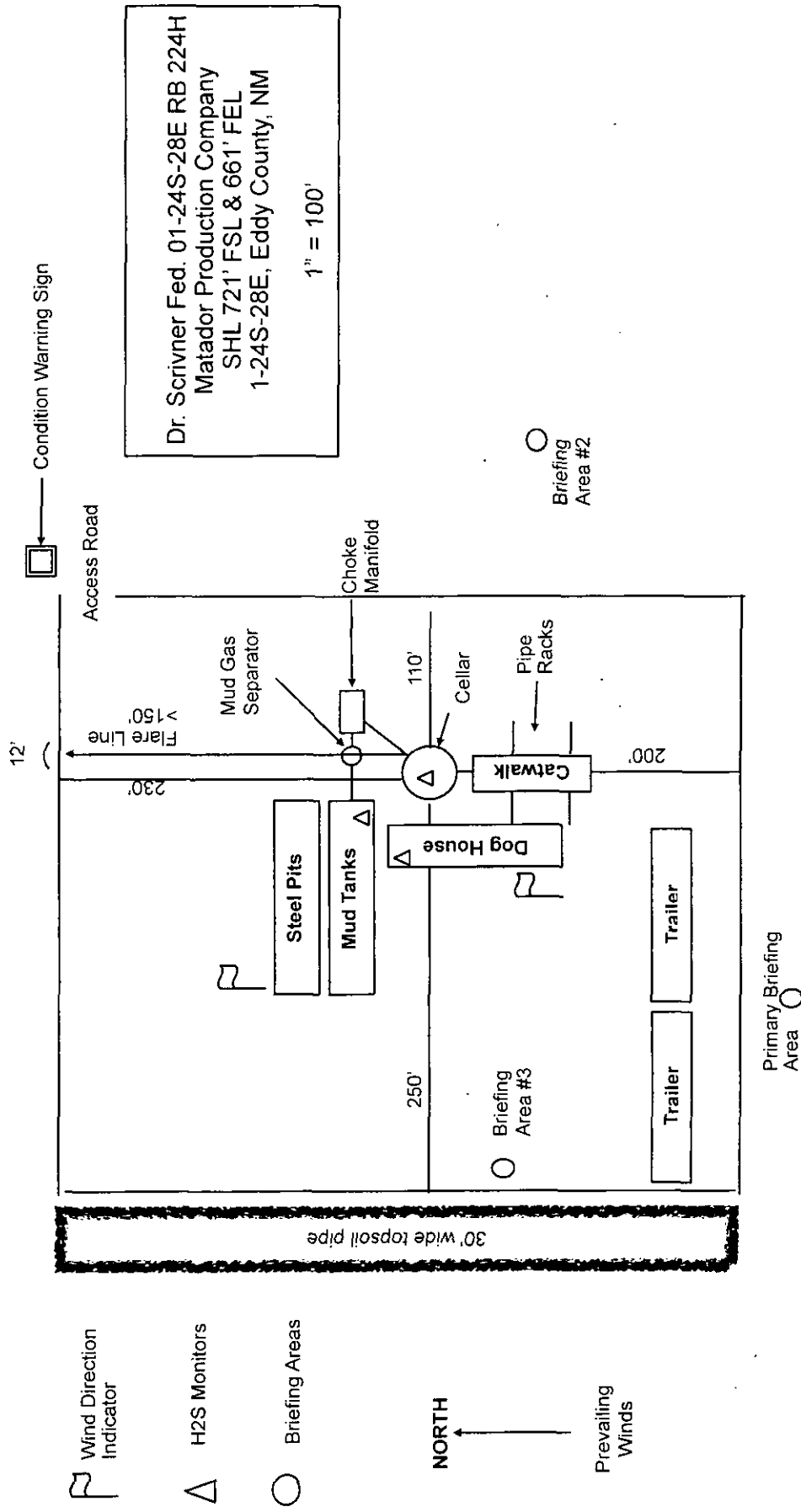
Closed Loop Drilling System: Mud tanks to right (1)
 Hopper in air to settle out solids (2)
 Water return pipe (3)
 Shaker between hopper and mud tanks (4)
 Roll offs on skids (5)

Flow Chart for Drilling Fluids and Solids



Photos Courtesy of Gandy Corporation Oil
 Field Service

Rig Diagram



Dr. Scrivner Fed. 01-24S-28E RB 224H
Matador Production Company
SHL 721' FSL & 661' FEL
1-24S-28E, Eddy County, NM

1" = 100'



Hydrogen Sulfide Drilling Operations Plan

Matador Production Company

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible
- Windsock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
 - Green Flag – Normal Safe Operation Condition
 - Yellow Flag – Potential Pressure and Danger
 - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See APD

6 Communications:

- While working under masks, chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at drilling foreman's trailer or living quarters.



7 Drilling Stem Testing:

- No DST or cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubulars good and other mechanical equipment.

9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary

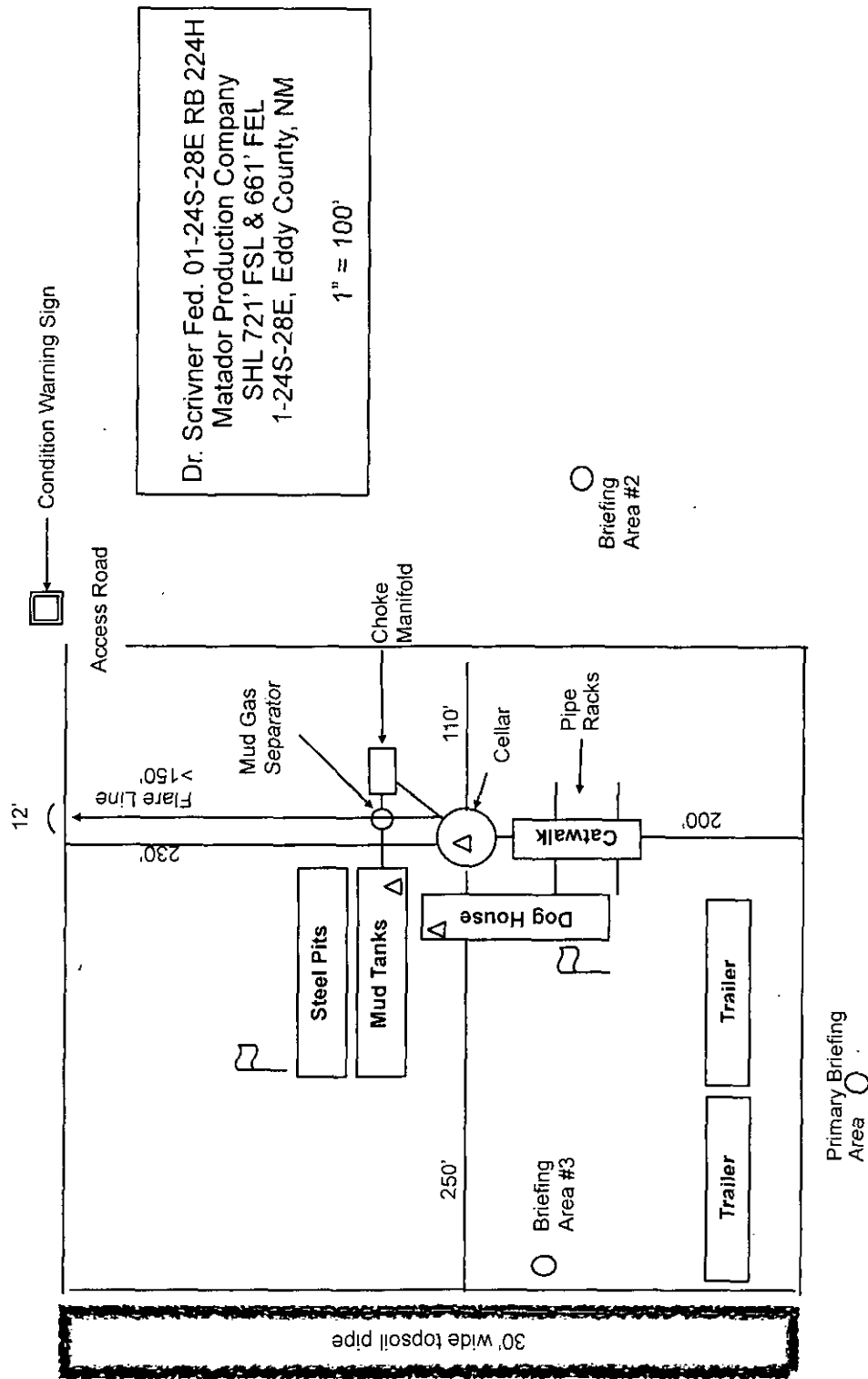
11 Emergency Contacts

- See next page

H2S Contingency Plan Emergency Contacts
Matador Production Company
Sec. 1, 24S, 28E, Eddy County, NM

<u>Company Office</u>			
Matador Production Company	(972)-371-5200		
<u>Key Personnel</u>			
Name	Title	Office	Mobile
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Aaron Byrd	Drilling Engineer	972-371-5267	214-507-2333
	Construction Superintendent		
	Construction Superintendent		
<u>Artesia</u>			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
Fire Department		575-746-2701	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	
<u>Carlsbad</u>			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
Fire Department		575-887-3798	
Local Emergency Planning Committee		575-887-6544	
New Mexico Oil Conservation Division		575-887-6544	
<u>Santa Fe</u>			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
<u>National</u>			
Carlsbad BLM		575-234-5972	
National Emergency Response Center (Washington, D.C.)		800-424-8802	
<u>Medical</u>			
Flight for Life- 4000 24th St.; Lubbock, TX		806-743-9911	
Aerocare- R3, Box 49F; Lubbock, TX		806-747-8923	
Med Flight Air Amb- 2301 Yale Blvd S.E., D3; Albuquerque, NM		505-842-4433	
SB Air Med Service- 2505 Clark Carr Loop S.E.; Albuquerque, NM		505-842-4949	
<u>Other</u>			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563-3356
Haliburton		575-746-2757	
B.J. Services		575-746-3569	

H2S Diagram



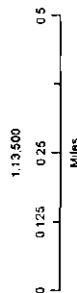
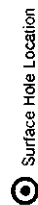
Dr. Scrivner Fed. 01-24S-28E RB 224H
Matador Production Company
SHL 721' FSL & 661' FEL
1-24S-28E, Eddy County, NM

1" = 100'

Matador Production Company

Dr. Scrivner Fed 01-24S-28E RB #224H
H-S Contingency Plan:
1 Mile Radius Map

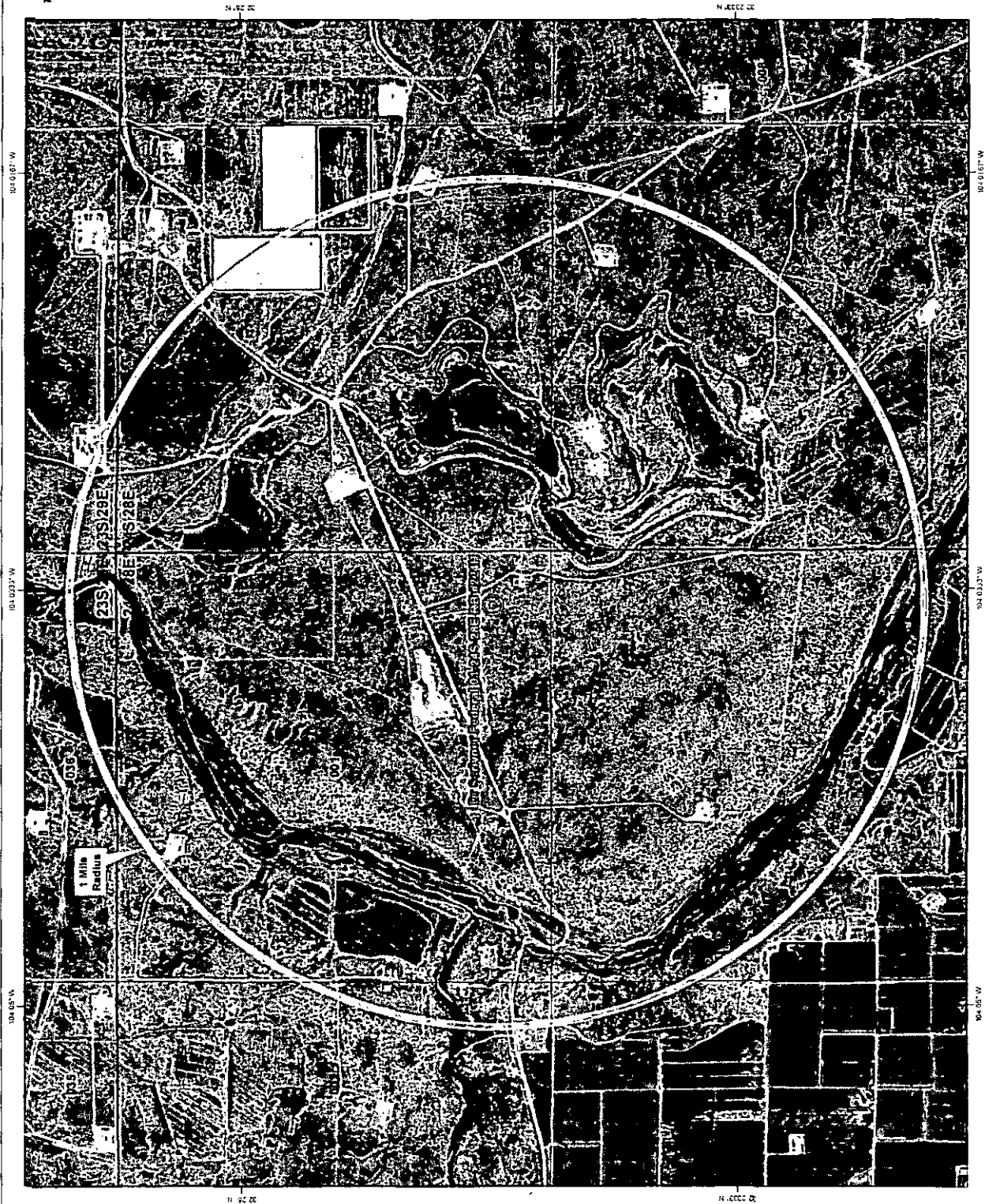
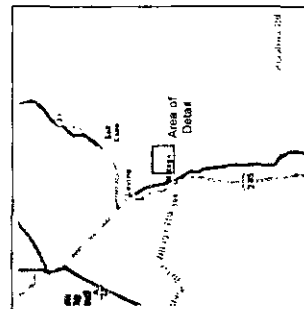
Section 1, Township 24S, Range 28E
Eddy County, New Mexico



NAD 1927 New Mexico State Plane East
FPS 3001 Feet

PERMIT
Produced by Permits West, Inc.

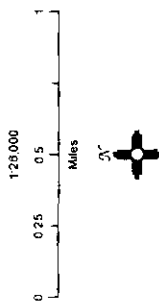
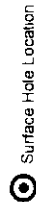
Prepared by Permits West, Inc. December 18, 2015
for Matador Production Company



Matador Production Company

Dr. Schvner Fed 01-24S-28E RB #224H
H2S Contingency Plan:
2 Mile Radius Map

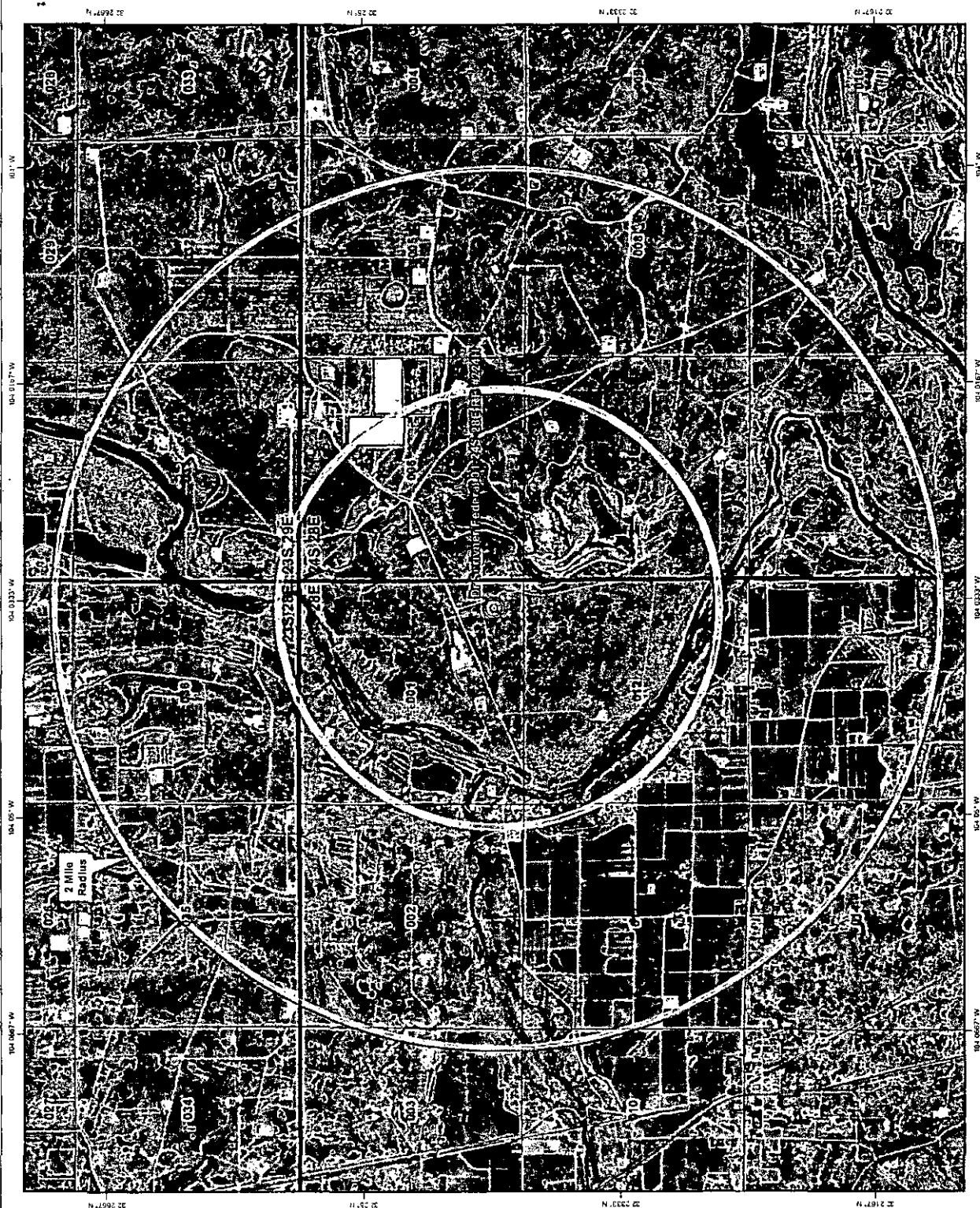
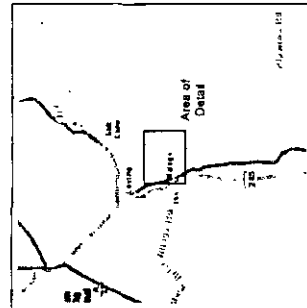
Section 1, Township 24S, Range 28E
Eddy County, New Mexico



NAD 1927 New Mexico State Plane East
FPS 3001 Feet



Prepared by Permits West, Inc. December 18, 2015
for Matador Production Company



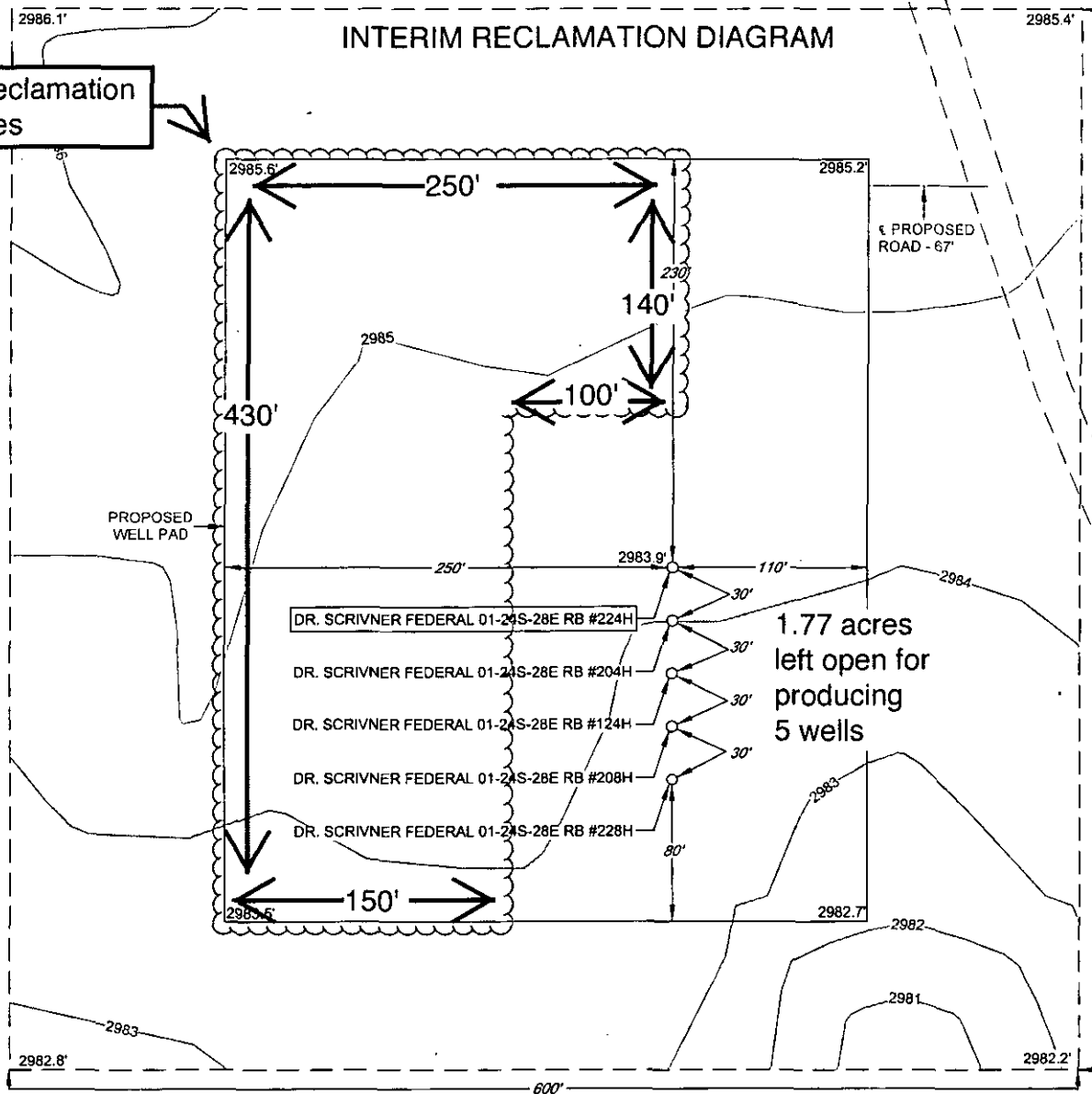


SECTION 1, TOWNSHIP 24-S, RANGE 28-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'

INTERIM RECLAMATION DIAGRAM

interim reclamation
1.78 acres



LEGEND

— PROPOSED ROAD
— ARCH SITE

LEASE NAME & WELL NO.: DR. SCRIVNER FEDERAL 01-24S-28E RB #224H

#224H LATITUDE N 32.2415218 #224H LONGITUDE W 104.0339597

SCALE: 1" = 100'
0' 50' 100'

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX: (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX: (432) 682-1743
WWW.TOPOGRAPHIC.COM

Matador Production Company

SURFACE PLAN PAGE 1

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

Surface Use Plan

1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 – 3 & 5)

From the Malaga Post Office...

Go East 0.85 miles on paved County Road 744 (aka, Duarte Road)

Then turn left and go North 1.0 mile on paved County Road 745

Then turn right and go East and Northeast 1.1 miles on paved Harroun Road

Then turn right and go South 200 yards on a caliche road

Then turn right and go West 67' cross-country to the proposed pad

Non-county roads will be maintained as needed to Gold Book standards. This includes pulling ditches, preserving the crown, and cleaning culverts. This will be done at least once a year, and more often as needed. Caliche will be hauled from existing caliche pits on private land in NWSE 1-24s-28e and NWSW 6-24s-29e.

2. ROAD TO BE BUILT OR UPGRADED (See MAPS 3, 5, & 7)

The 67' of new road to the well will be crowned, have a 14' wide driving surface, and be surfaced with caliche. Maximum disturbed width = 20'. Maximum grade = 1%. Maximum cut or fill = 1'. No upgrade, culvert, cattle guard, or vehicle turn out is needed.

3. EXISTING WELLS (See MAP 2)

Existing oil, gas, water, and P & A wells are within a mile. There are no injection or disposal wells within a mile radius.

Matador Production Company
Dr. Scrivner Fed. 01-24S-28E RB 224H
SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.
BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.
Eddy County, NM

SURFACE PLAN PAGE 2

4. PROPOSED PRODUCTION FACILITIES (See MAPS 2 & 3)

The only production equipment on the pad will be the pump jack. A $\approx 6"$ O. D. steel buried flow line will be laid 230.54' north to Matador's proposed central tank battery (CTB). A 230.54' long overhead raptor safe 3-phase power line will be built south parallel to the flow line from the battery to the pad. Construction corridor for each line will be 15' wide. See Dr. Scrivner Fed. 01-24S-28E RB 124H APD dated 1-8-16 for plats and details on the battery and lines.

5. WATER SUPPLY (See MAPS 1 - 3)

Water will be trucked from an existing well (C 00464) on private land in NENW 13-24s-28e.

6. CONSTRUCTION MATERIALS & METHODS (see MAP 5)

NM One Call (811) will be notified before construction starts. A temporary fence will be built on the south side of the pad before construction starts to keep construction equipment off a slope. Top $\approx 6"$ of soil and brush will be stockpiled west of the pad. Pipe racks will be to the south. A closed loop drilling system will be used. Caliche will be hauled from existing caliche pits on private land in NWSE 1-24s-28e and NWSW 6-24s-29e.

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the Eddy County landfill. There will be no trash burning. Contents (drill cuttings, mud, salts, and other chemicals) of the mud tanks will be hauled to CRI's state approved (NM-01-0006) disposal site. Human waste will be disposed of in chemical toilets and hauled to the Carlsbad wastewater treatment plant.

Matador Production Company

SURFACE PLAN PAGE 3

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, or mud logger.

9. WELL SITE LAYOUT

See Rig Diagram for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION

Interim reclamation will consist of shrinking the pad $\approx 51\%$ by removing caliche and reclaiming (1.78 acres) the north and west sides, leaving a 1.77 acre area around the pump jacks. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas. Disturbed areas will be seeded in accordance with the surface owner's requirements. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the wells are plugged. Once the last well is plugged, then the remainder of the pad will be similarly reclaimed. Noxious weeds will be controlled.

11. SURFACE OWNER

All construction will be on private surface. Matador has surface use agreements with the surface owners.

Johnson Enterprises (P. O. Box 1713, Roswell NM 88202) is the surface owner for the well site, battery, road, and those portions of the pipelines and power lines in Section 1, T. 24 S., R. 28 E. Eddy County, NM.

Matador Production Company

SURFACE PLAN PAGE 4

Dr. Scrivner Fed. 01-24S-28E RB 224H

SHL 721' FSL & 661' FEL Sec. 1, T. 24 S., R. 28 E.

BHL 990' FSL & 240' FWL Sec. 1, T. 24 S., R. 28 E.

Eddy County, NM

John Draper Brantley, Jr. and Henry McDonald (706 W. Riverside Dr., Carlsbad NM 88220) are the surface owners (together) for those portions of the pipeline and power line in Section 6, T. 24 S., R. 29 E. Eddy County, NM.

12. OTHER INFORMATION

On site inspection was held with Trish Bad Bear (BLM) on November 19, 2015.

Lone Mountain submitted archaeology report NMCRIS 134941 on December 23, 2015.

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Prod Co
LEASE NO.:	NM115410
WELL NAME & NO.:	224H-Dr. Scrivner Fed Com
SURFACE HOLE FOOTAGE:	721'/S & 661'/E
BOTTOM HOLE FOOTAGE:	990'/S & 240'/W
LOCATION:	Section 1, T. 24 S., R. 28 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Communitization Agreement
- ☒ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Cement Requirements
 - Medium Cave/Karst
 - Logging Requirements
 - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

Lease Suspension

Well to be spudded within 120 days of the approval of the APD.

If the drilling operations have not commenced by this time, the lease suspension of Lease NMNM115410 will be removed and One month will be remaining in its primary term.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS**Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts

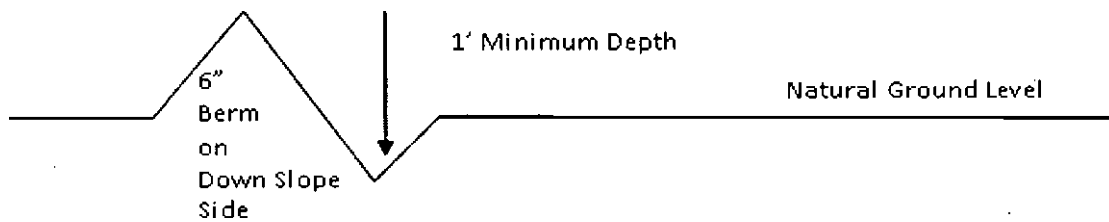
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

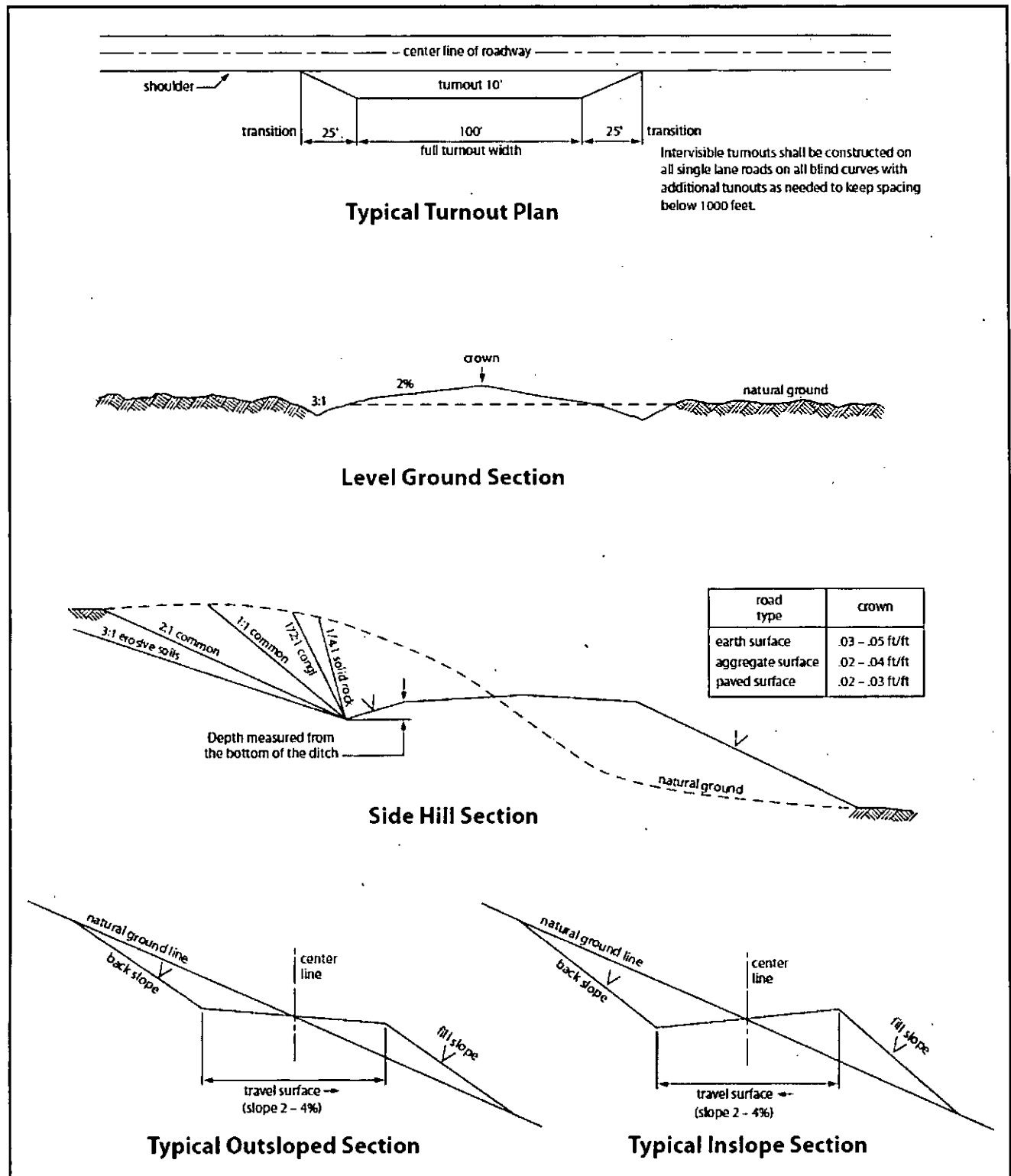


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium Cave/Karst

Possibility of water flows in the Castile.

Possibility of lost circulation in the Salado, Rustler, and Delaware.

Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

1. The 13-3/8 inch surface casing shall be set at approximately 360 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the 7 inch production casing is:
- ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

Formation below the 7" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

4. The minimum required fill of cement behind the 4-1/2 inch production Liner is:
- ☒ Cement as proposed by operator. Operator shall provide method of verification. **Excess calculates to 7% - Additional cement may be required.**
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required. (operator shall expect delays if this occurs).
3. BOP shall be installed with three sets of 10M rams.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi**
5. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch 1st intermediate casing shoe shall be **3000 (3M) psi**.
6. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7** inch 2nd intermediate casing shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
7. Choke manifold equipment configuration required for drilling below the **7** inch 2nd intermediate casing shoe shall be functionally equivalent to a 10M system.
8. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design,

construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock enclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Enclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended enclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b.

A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 15 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 15 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- | | |
|--|--|
| ☒ seed mixture 1 | ☐ seed mixture 3 |
| ☐ seed mixture 2 | ☐ seed mixture 4 |
| ☐ seed mixture 2/LPC | ☐ Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
 - (1) Land clearing.
 - (2) Earth-disturbing and earth-moving work.
 - (3) Blasting.
 - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or

injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 15 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.
13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.
14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.
15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.
16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.
17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly. Fill in any holes from the poles removed.

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 1 for Loamy Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass (<i>Eragrostis intermedia</i>)	0.5
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sideoats grama (<i>Bouteloua curtipendula</i>)	5.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

NMOCD CONDITION OF APPROVAL

The *New* Gas Capture Plan (GCP) notice is posted on the NMOCD website under Announcements. The Plan became effective May 1, 2016. A copy of the GCP form is included with the NOTICE and is also in our FORMS section under Unnumbered Forms. Please review filing dates for all applicable activities currently approved or pending and submit accordingly. Failure to file a GCP may jeopardize the operator's ability to obtain C-129 approval to flare gas after the initial 60-day completion period.