16-395

OCD Artesia
NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 10 2016
RECEIVED

Form 3160-3
(June 2015)

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

5. Lease Serial No
SESW:NM-115410, SHL & BHL: fee

6. If Indian, Allotee or Tribe Name
N/A

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.
will comm. w/fee leases

8. Lease Name and Well No.
Dr. Scrivner Fed. Com #208H

2. Name of Operator
MATADOR PRODUCTION COMPANY

9. API Well No.
30-015- 43822

3a. Address
5400 LBJ FREEWAY, STE 1500, DALLAS, TX 75240

3b. Phone No. *(include area code)*
972-371-5241

10. Field and Pool, or Exploratory
~~WC~~; ~~WOLFCAMP~~ Pierce Crossing; WC Northwest

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 631' FSL & 662' FEL
At proposed prod. zone 330' FSL & 240' FWL
UNORTHODOX LOCATION

11. Sec., T. R. M. or Blk. and Survey or Area
SESE 1-24-28E NMPM

14. Distance in miles and direction from nearest town or post office*
2-1/2 AIR MILES NE OF MALAGA, NM

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
SHL: 631' (comm. line)
BHL: 240' (comm. line)

16. No of acres in lease
lease= 40 ac, comm=320 ac

17. Spacing Unit dedicated to this well
S2 1-24S-28E

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
SHL: 2,335' (P&A)
BHL: 1,860 (P&A)

19. Proposed Depth
TVD: 9,698' MD: 14,626'

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*
06/21/2016

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
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
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

SEE ATTACHED FOR CONDITIONS OF APPROVAL

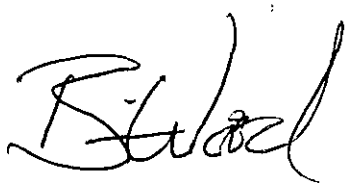
Approval Subject to General Requirements & Special Stipulations Attached

(Continued on page 2)

*(Instructions on page 2)

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 15th 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

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., Sante 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.
Sante Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

*Wolfcamp and its X & Y sands are goals

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30-015- 43822	96712	~~WC; Wolfcamp~~* Pierce Crossing; WC, Northwest

[4]Property Code	[5]Property Name	[6]Well Number
314327	DR. SCRIVNER FEDERAL 01-24S-28E RB	#208H

[7]OGRID No.	[8]Operator Name	[9]Elevation
228937	MATADOR PRODUCTION COMPANY	2984'

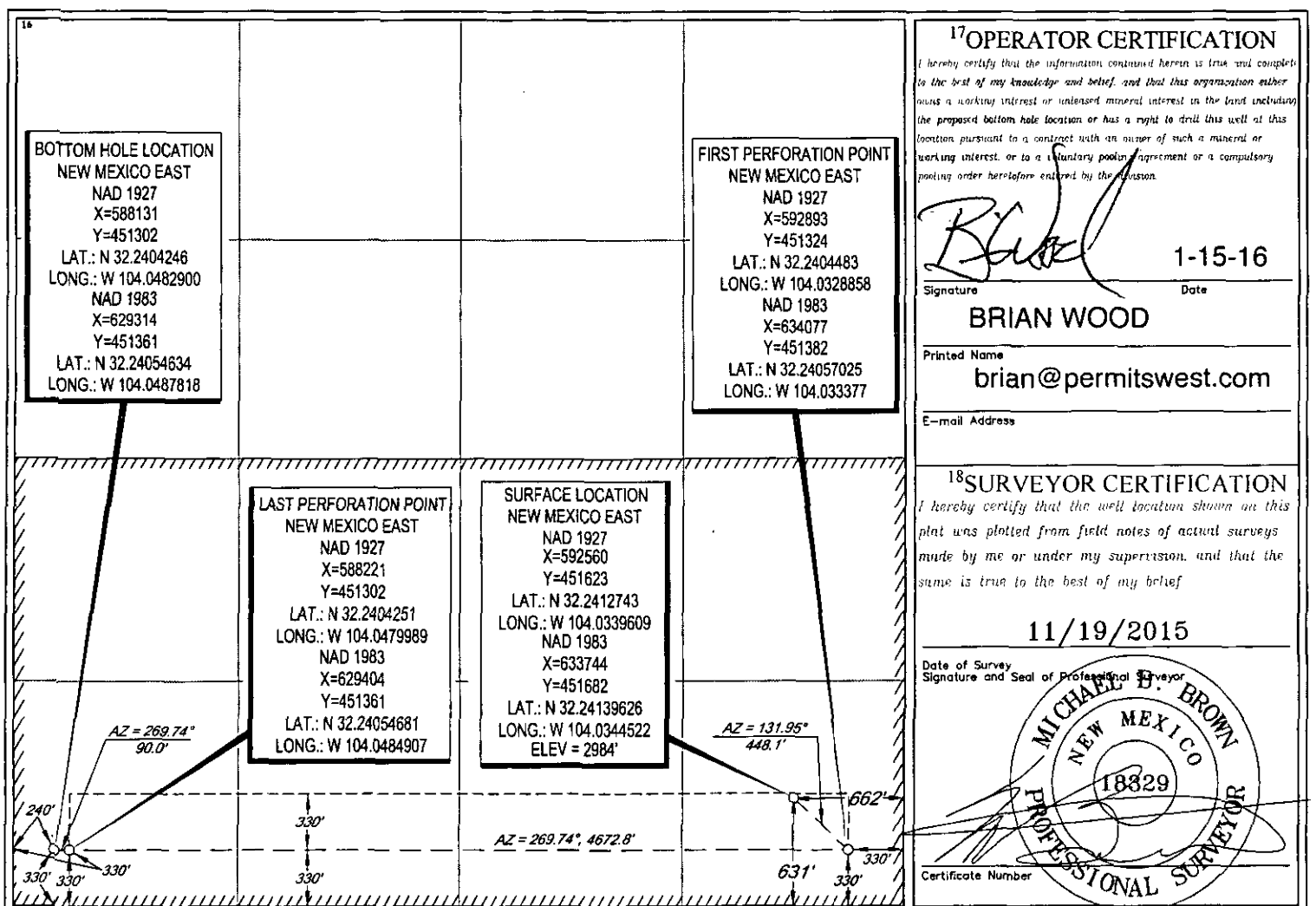
[10]Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	1	24-S	28-E	-	631'	SOUTH	662'	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	-	330'	SOUTH	240'	WEST	EDDY

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

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.



[17]OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

1-15-16
Signature Date

BRIAN WOOD
Printed Name

brian@permitswest.com
E-mail Address

[18]SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief

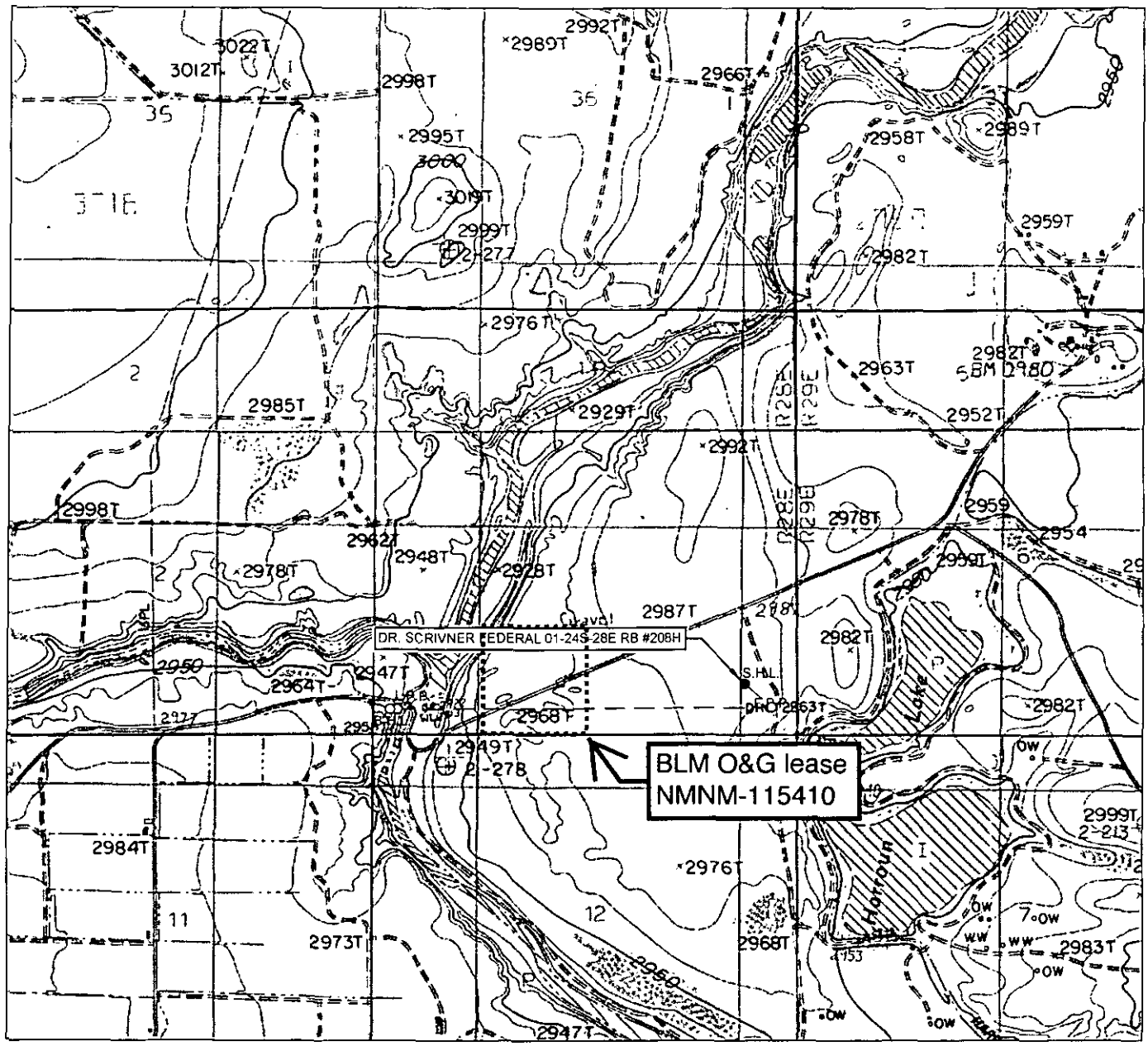
11/19/2015
Date of Survey
Signature and Seal of Professional Surveyor

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Certificate Number

S:\SURVEY\MATADOR_RESOURCES\DR_SCRIVNER_FEDERAL_01-24S-28E_RB_208H\FINAL_PRODUCTS\LO_DR_SCRIVNER_FEDERAL_01-24S-28E_RB_208H_REV2.DWG 12/1/2015 8:13:10 PM jstovall

LOCATION & ELEVATION VERIFICATION MAP



Matador PRODUCTION COMPANY

LEASE NAME & WELL NO.: DR. SCRIVNER FEDERAL 01-24S-28E RB #208H

SECTION 1 TWP 24-S RGE 28-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 2984'
DESCRIPTION 631' FSL & 662' FEL

LATITUDE N 32.2412743 LONGITUDE W 104.0339609

-N-

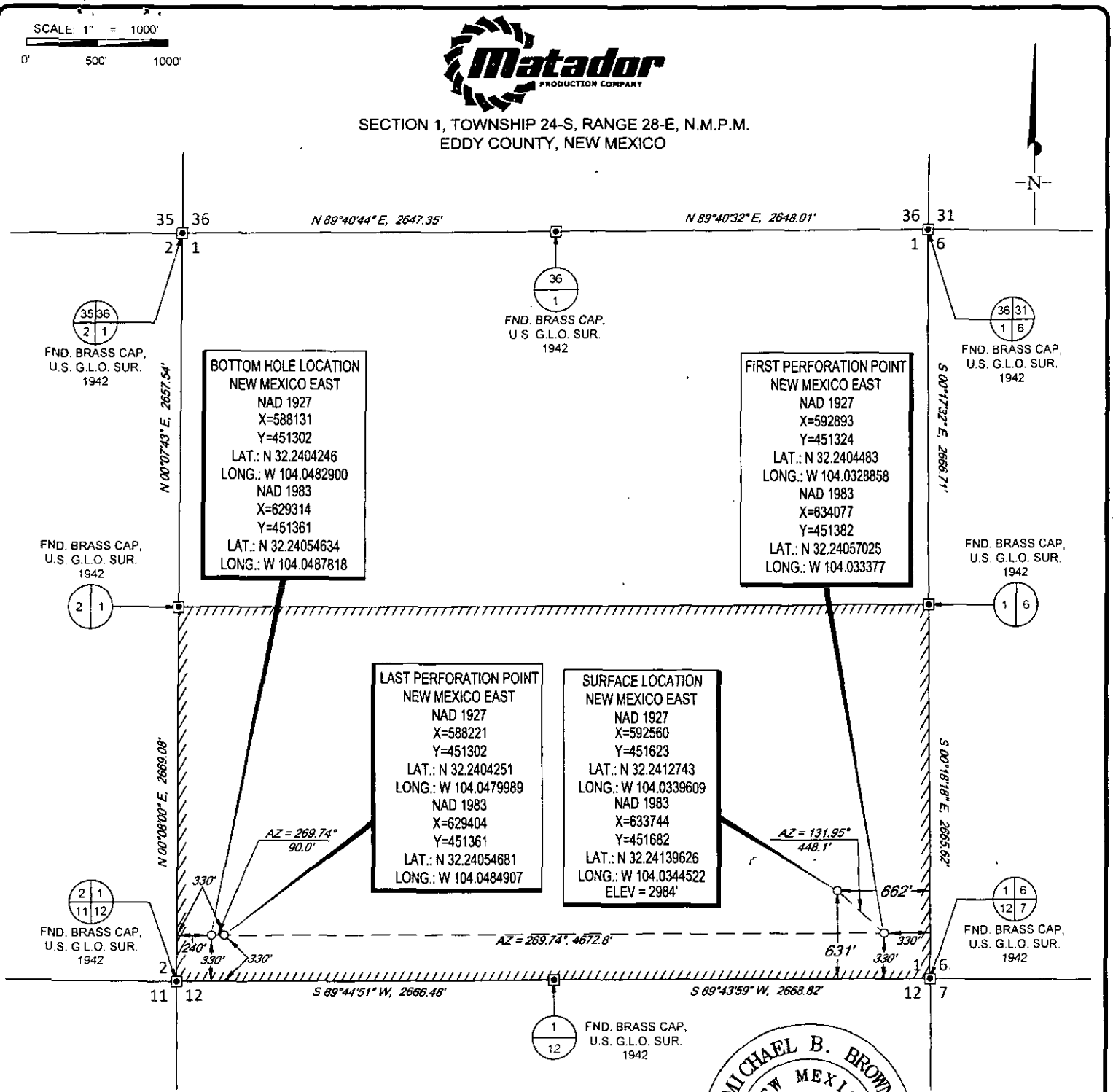
SCALE: 1" = 2000'

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



LEASE NAME & WELL NO.: DR. SCRIVNER FEDERAL 01-24S-28E RB #208H

SECTION 1 TWP 24-S RGE 28-E SURVEY N.M.P.M.

COUNTY EDDY STATE NM

DESCRIPTION 631' FSL & 662' 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 ±300 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

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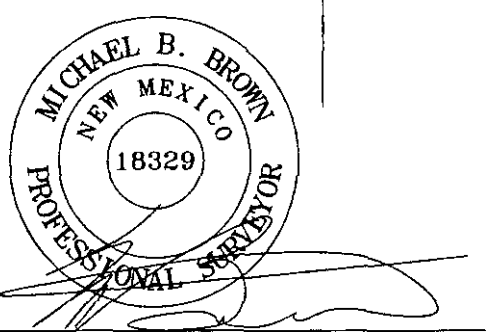

Michael Blake Brown, P.S. No. 18329

NOVEMBER 25, 2015

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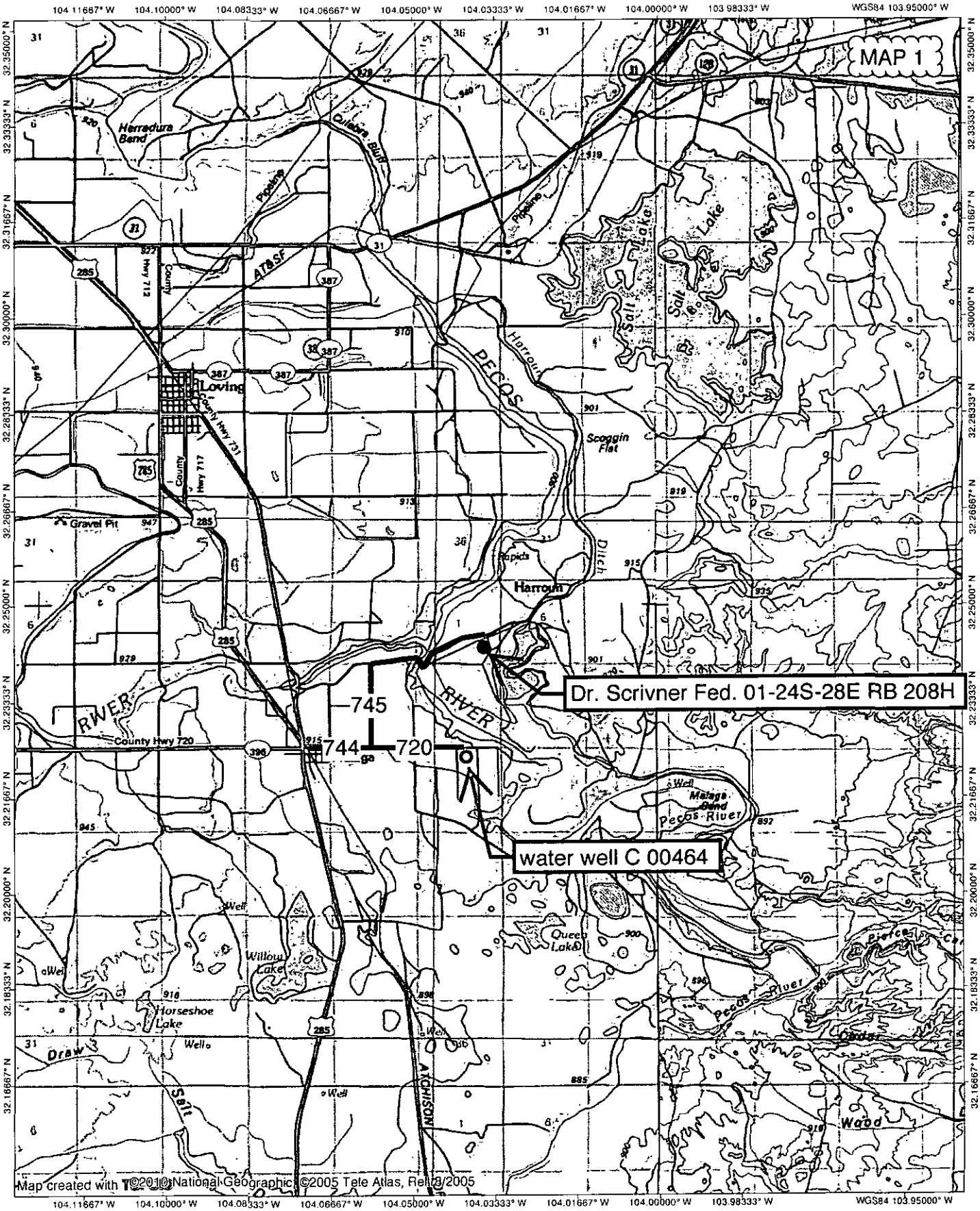
WWW.TOPOGRAPHIC.COM

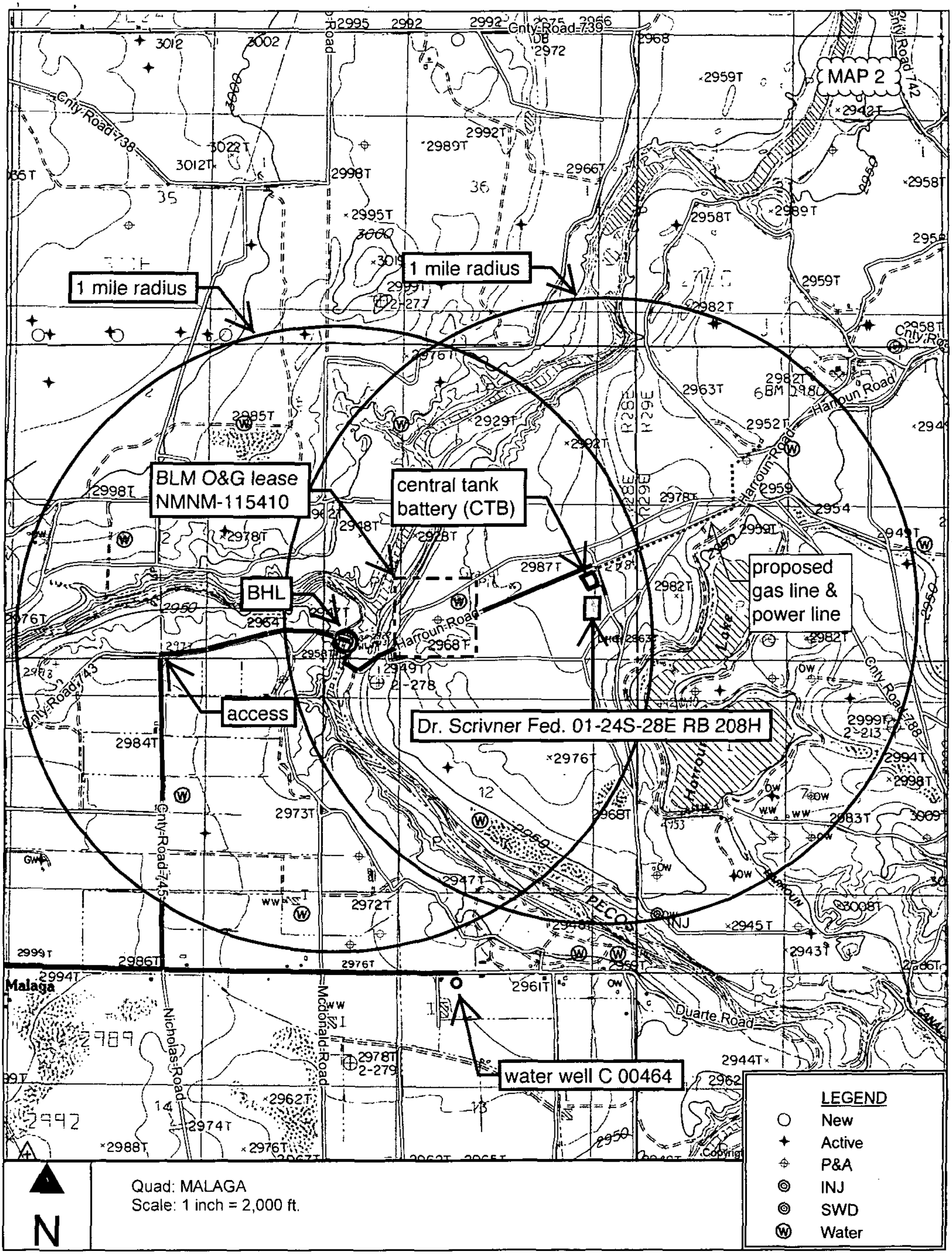
TOPO! map printed on 12/18/15 from "Untitled.tpo"



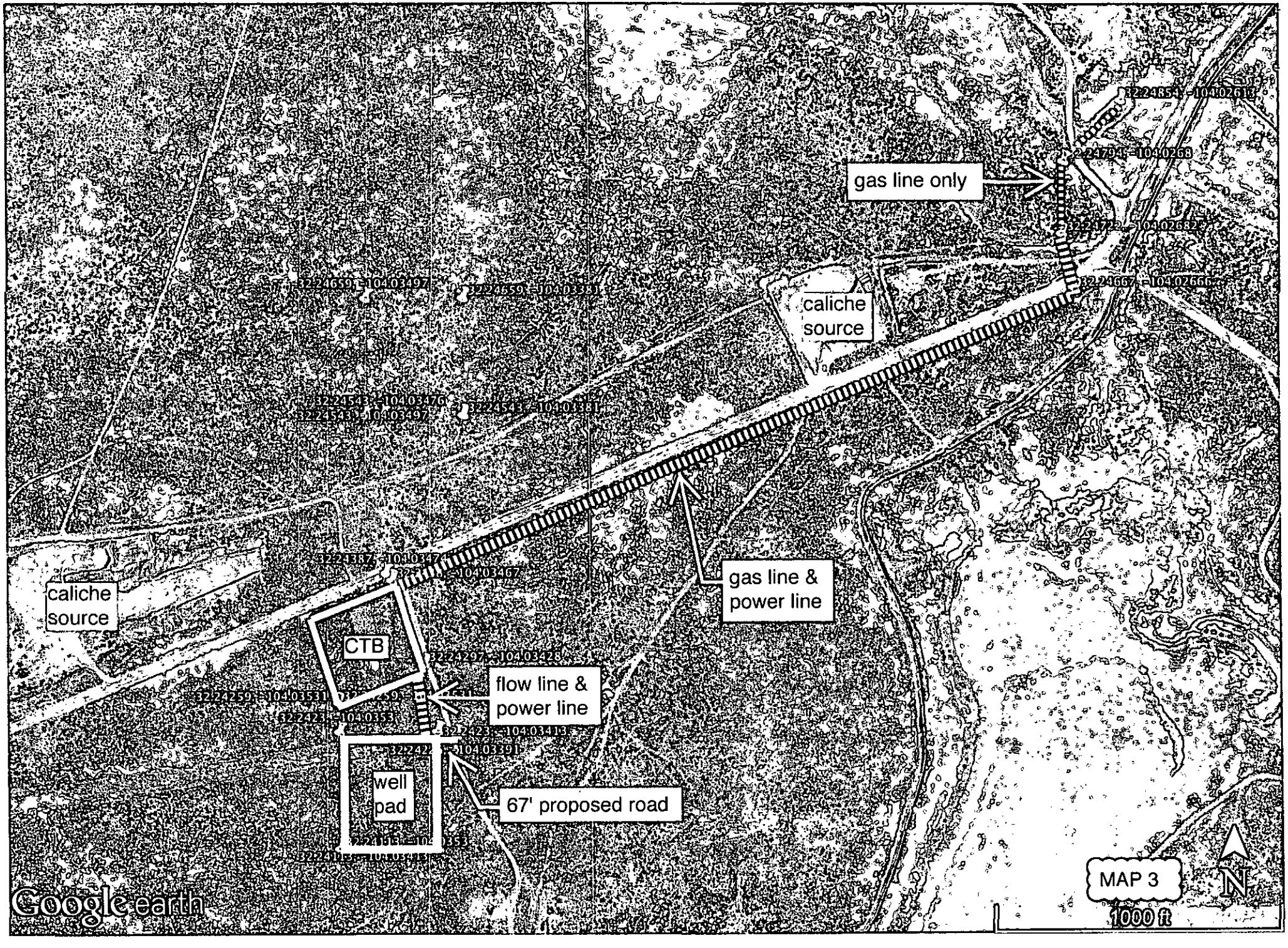
NATIONAL GEOGRAPHIC

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

TN MN
7.5°
12/18/15



MAP 2
1 mile radius
1 mile radius
BLM O&G lease
NMNM-115410
central tank
battery (CTB)
BHL
proposed
gas line &
power line
access
Dr. Scrivner Fed. 01-24S-28E RB 208H
water well C 00464
Harroun Road
Cnty Road 738
Cnty Road 739
Cnty Road 742
Cnty Road 743
Cnty Road 745
Cnty Road 788
Nicholas Road
Mcdonald Road
Duarte Road
Malaga
PECOS
R28E R29E
LEGEND
New
Active
P&A
INJ
SWD
Water
N
Quad: MALAGA
Scale: 1 inch = 2,000 ft.

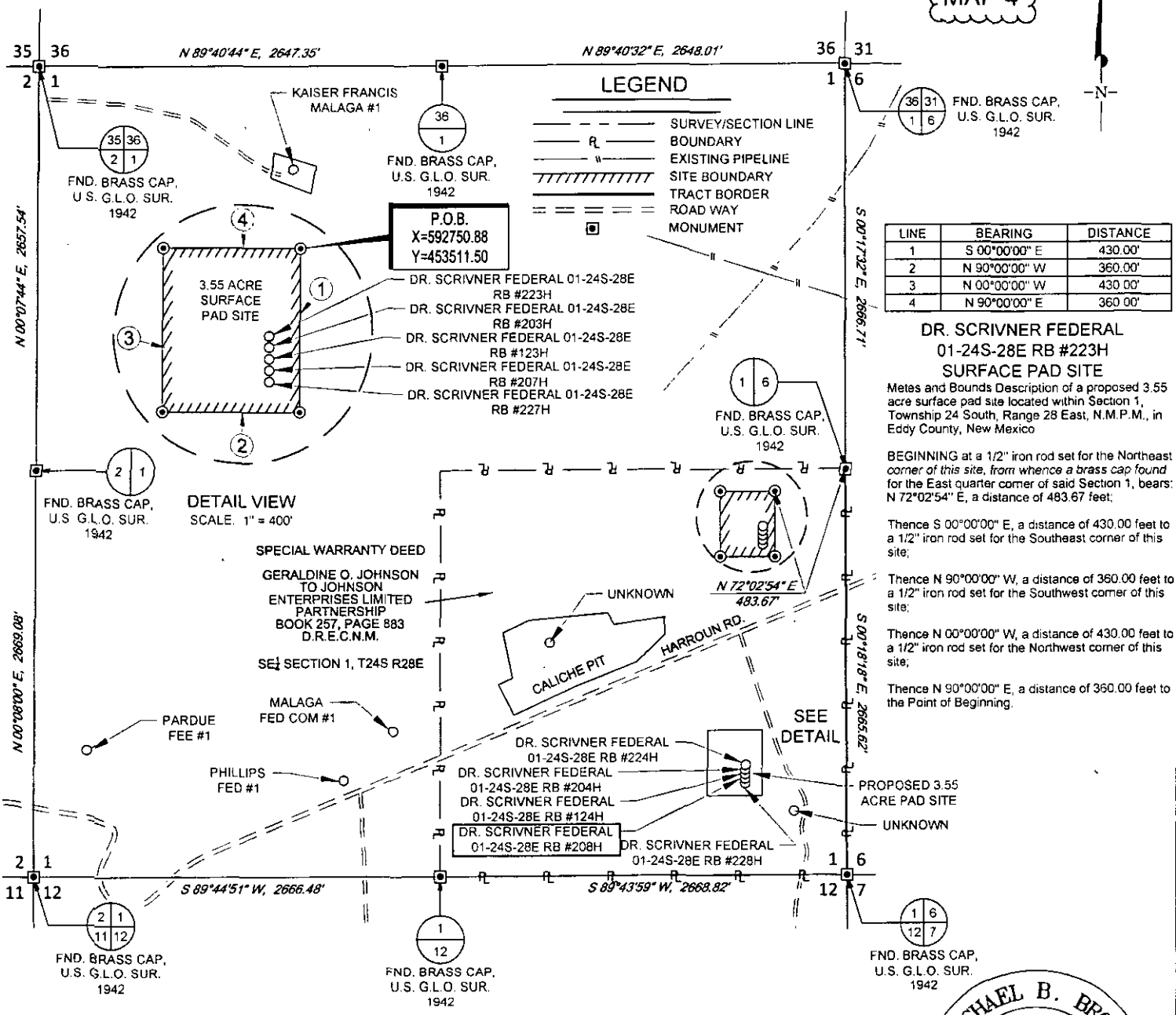

gas line only
caliche source
caliche source
gas line & power line
CTB
flow line & power line
well pad
67' proposed road
MAP 3
1000 ft
N
Google earth

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



LINE	BEARING	DISTANCE
1	S 00°00'00" E	430.00'
2	N 90°00'00" W	360.00'
3	N 00°00'00" W	430.00'
4	N 90°00'00" E	360.00'

DR. SCRIVNER FEDERAL 01-24S-28E RB #223H SURFACE PAD SITE

Metes and Bounds Description of a proposed 3.55 acre surface pad site located within Section 1, Township 24 South, Range 28 East, N.M.P.M., in Eddy County, New Mexico

BEGINNING at a 1/2" iron rod set for the Northeast *corner of this site, from whence a brass cap found* for the East quarter corner of said Section 1, bears: N 72°02'54" E, a distance of 483.67 feet;

Thence S 00°00'00" E, a distance of 430.00 feet to a 1/2" iron rod set for the Southeast corner of this site;

Thence N 90°00'00" W, a distance of 360.00 feet to a 1/2" iron rod set for the Southwest corner of this site;

Thence N 00°00'00" W, a distance of 430.00 feet to a 1/2" iron rod set for the Northwest corner of this site;

Thence N 90°00'00" E, a distance of 360.00 feet to the Point of Beginning.

MICHAEL B. BROWN NEW MEXICO 18329 PROFESSIONAL SURVEYOR

Matador PRODUCTION COMPANY

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) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

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

SURFACE PAD SITE

DATE: 08/21/2015

FILE: BO_DR_SCRIVNER_FEDERAL_01-24S-28E_RB_223H_SURFACE_PAD_SITE_REV2

DRAWN BY: GJU

SHEET: 1 OF 1

REVISION:	
MML	11/06/2015
A.V.F.	11/24/2015

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

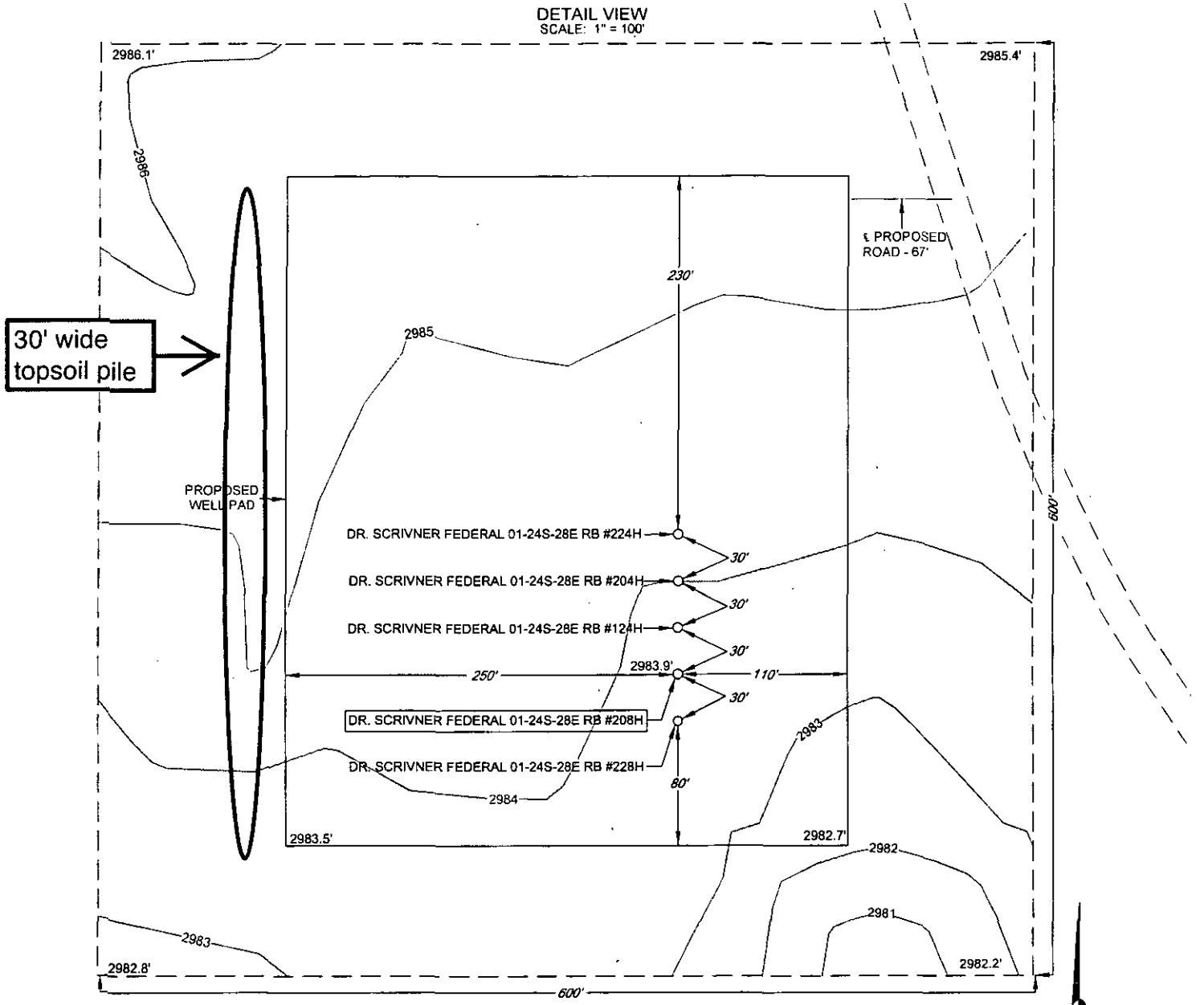
S:\SURVEY\MATADOR_RESOURCES\DR_SCRIVNER_FEDERAL_01-24S-28E_RB_223H_SURFACE_PAD_SITE\FINAL_PRODUCTS\BO_DR_SCRIVNER_FEDERAL_01-24S-28E_RB_223H_SURFACE_PAD_SITE_REV2.DWG 12/1/2015 7:14:15 PM jstovall

Matador PRODUCTION COMPANY

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 #208H

#208H LATITUDE N 32.2412743 #208H LONGITUDE W 104.0339609

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.

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ORIGINAL DOCUMENT SIZE: 8.5" X 11"

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	Target Formation
X Sand	9680	Target Formation
Y Sand	9780	Target Formation
TD (MD = 14626)	9698	*Hydrocarbon*

2. NOTABLE ZONES

Closest water well (C 02184) is 2,368' 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.

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 nippled 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.

See COA 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 ≥330' from the dedication perimeter.

Hole O. D.	Set @ (MD)	Casing O. D.	Age	Weight (lb/ft)	Grade	Thread Collar	Collapse	Burst	Tension
17.5"	~~610'~~ 360	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"	13354'	7"	New	29	P-110	BTC/TXP	1.125	1.125	1.8
6.125"	14600'	4.5"	New	13.5	P-110	BTC/TXP	1.125	1.125	1.8

See COA

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	300	1.39	417	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 = 9000'		10% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of curve	

additional cement required - See COA

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

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

might encounter abnormal pressure - See COA

~~No abnormal pressure~~ or temperature is expected. Maximum expected bottom hole pressure is ≈7300 psi. Expected bottom hole temperature is ≈170° 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". *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.

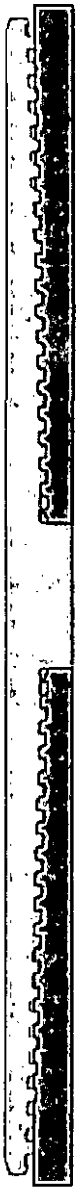
For the latest performance data, always visit our website: www.tenaris.com

December 31 2015

Tenaris

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	Standard Drift Diameter	**3.795** in.
Nominal ID	**3.920** in.	Wall Thickness	**0.290** in.	Special Drift Diameter	**N/A**
Plain End Weight	**13.05** lbs/ft				

PERFORMANCE

Body Yield Strength	**479** x 1000 lbs	Internal Yield	**14100** psi	SMYS	**125000** psi
Collapse	**11620** psi				

TENARISXP® BTC CONNECTION DATA

GEOMETRY

Connection OD	**5.000** in.	Coupling Length	**9.075** in.	Connection ID	**3.908** in.
Critical Section Area	**3.836** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.016** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**479** x 1000 lbs	Internal Pressure Capacity(1)	**14100** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**479** x 1000 lbs	Structural Bending(2)	**127** °/100 ft
External Pressure Capacity	**11620** psi				

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

CASING PERFORMANCE Data Sheet

vallourec

UOM	Type	OD Size	T&C LB/FT	PE LB/FT	Grade
STANDARD	CASING	7.000	29.00	28.75	P110 EC

Grade - Material Properties

Minimum Yield Strength:	125	ksi
Maximum Yield Strength:	140	ksi
Minimum Tensile Strength:	135	ksi

Pipe Body Data (PE)

Geometery

Nominal ID:	6.180	inch
Wall:	0.410	inch
Min. Wall % (API = 87.5%):	87.5	%
API Drift:	6.060	inch
Special Drift*:	6.130	inch

Performance

Pipe Body Yield Strength:	1,056	kips
Collapse Resistance:	9,580	psi
Internal Yield Pressure (*API Historical*):	12,750	psi

API Connection Data

SC Internal Pressure:	N/A	psi
SC Joint Strength:	N/A	kips
LC Internal Pressure:	9,520	psi
LC Joint Strength:	885	kips
BC Internal Pressure:	11,790	psi
BC Joint Strength:	1,045	kips

SC Torque (ft-lbs)

Minimum: N/A Optimum: N/A Maximum: N/A

LC Torque (ft-lbs)

Minimum: 6,683 Optimum: 8,910 Maximum: 11,138

Disclaimer

API grades with enhanced performance are supplied with API couplings produced from standard API grades. If above API connections do not suit your needs, VAM premium connections are available up to 100% of pipe body ratings.

*Special drift must be ordered or API drift will be used for actual drifting of product.

This form created from the online generator.

Matador RESOURCES COMPANY

Site: Dr. Scrivner Federal 01-24S-28E RB
Well: 208H
Wellbore: OH
Design: Preliminary Plan 1
Rig:

PHOENIX TECHNOLOGY SERVICES

T G M

Azimuths to Grid North
True North: -0.16°
Magnetic North: 7.22°

Magnetic Field
Strength: 48281.9snT
Dip Angle: 60.10°
Date: 12/8/2015
Model: HDGM

WELL DETAILS

Ground Level: 2984.00

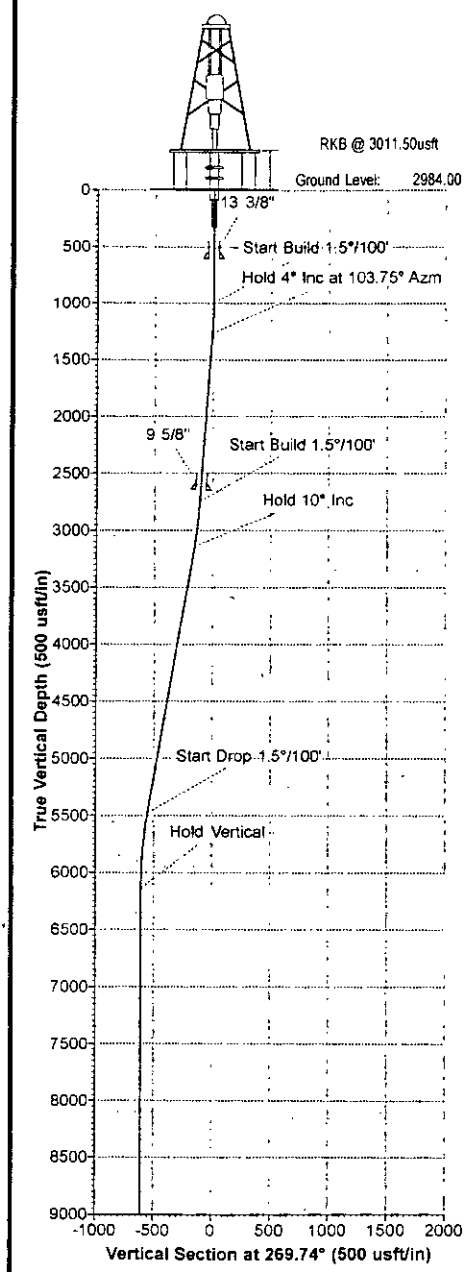
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	451623.00	592560.00	32° 14' 28.58650 N	104° 2' 2.26173 W

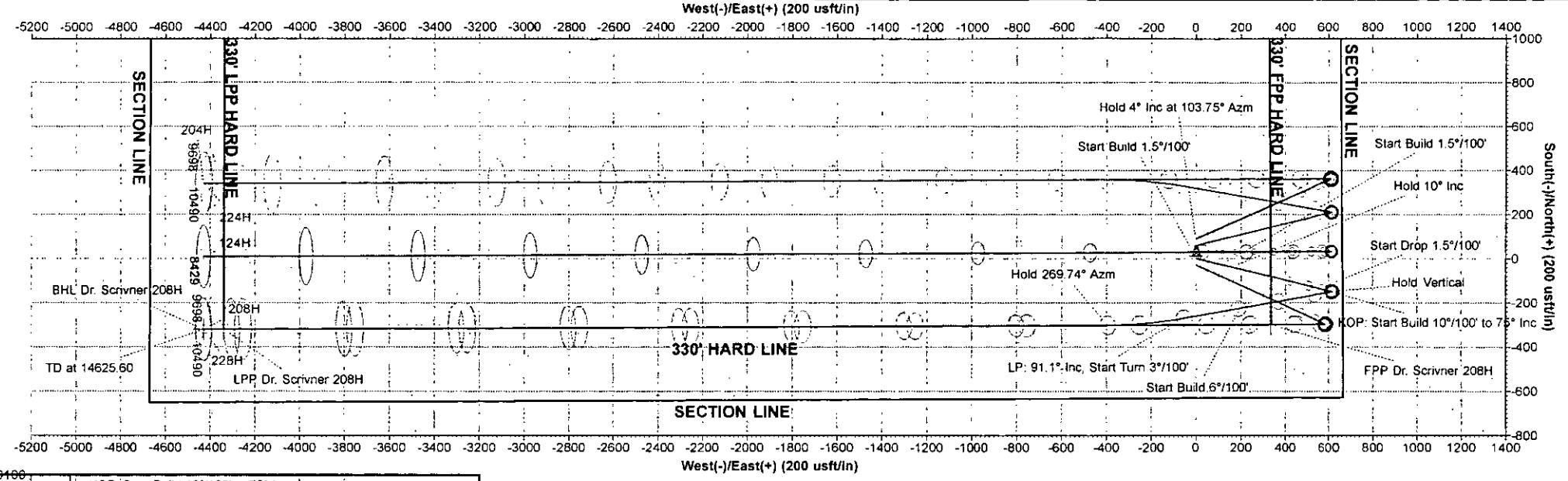
DESIGN TARGET DETAILS

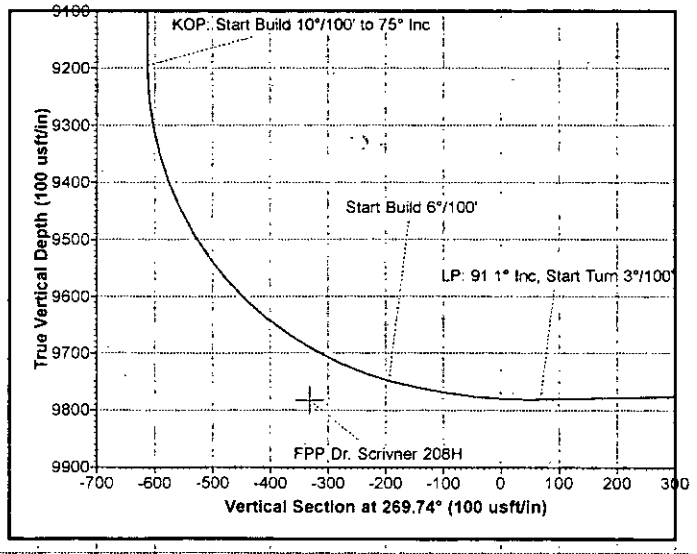
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL Dr. Scrivner 208H	9697.74	-321.00	-4429.00	451302.00	588131.00	32° 14' 25.52906 N	104° 2' 53.84091 W
LPP Dr. Scrivner 208H	9697.74	-321.00	-4339.00	451302.00	588221.00	32° 14' 25.52670 N	104° 2' 52.79300 W
FPP Dr. Scrivner 208H	9783.00	-299.00	333.00	451324.00	592893.00	32° 14' 25.61833 N	104° 1' 58.39417 W

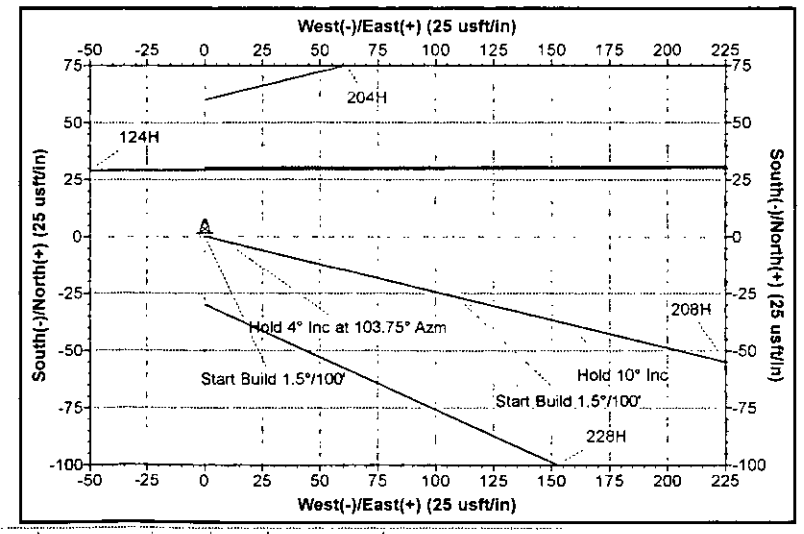
SECTION DETAILS

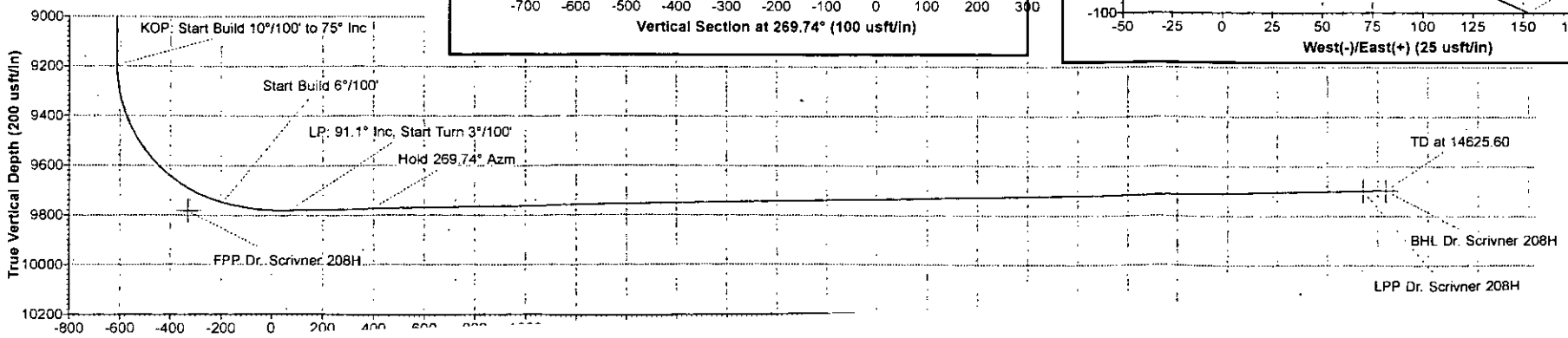
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00		Start Build 1.5°/100'
3	1266.67	4.00	103.75	1266.45	-2.21	9.04	1.50	103.75	-9.03		Hold 4° Inc at 103.75° Azm
4	2750.00	4.00	103.75	2746.17	-26.81	109.54	0.00	0.00	-109.42		Start Build 1.5°/100'
5	3149.95	10.00	103.75	3142.96	-38.38	156.87	1.50	0.00	-156.69		Hold 10° Inc
6	5520.26	10.00	103.75	5477.26	-136.21	556.64	0.00	0.00	-556.02		Start Drop 1.5°/100'
7	6186.88	0.00	0.00	6140.50	-150.00	613.00	1.50	180.00	-612.31		Hold Vertical
8	9241.88	0.00	0.00	9195.50	-150.00	613.00	0.00	0.00	-612.31		KOP: Start Build 10°/100' to 75° Inc
9	9991.88	75.00	259.80	9748.93	-225.20	195.05	10.00	259.80	-194.02		Start Build 6°/100'
10	10260.21	91.10	259.80	9781.30	-272.22	-66.24	6.00	0.00	67.48		LP: 91.1° Inc, Start Turn 3°/100'
11	10591.33	91.10	269.74	9774.93	-302.37	-395.51	3.00	89.92	396.88		Hold 269.74° Azm
12	14625.60	91.10	269.74	9697.74	-321.00	-4429.00	0.00	0.00	4430.41	BHL Dr. Scrivner 208H	TD at 14625.60











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 208H, Grid North

Latitude: 32° 14' 28.58650 N
Longitude: 104° 2' 2.26173 W

Grid East: 592560.00
Grid North: 451623.00
Scale Factor: 1.000

Geomagnetic Model: HDGM
Sample Date: 08-Dec-15
Magnetic Declination: 7.38°
Dip Angle from Horizontal: 60.10°
Magnetic Field Strength: 48282

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

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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 208H

Well Position	**+N/-S**	-30.00 usft	**Northing:**	451,623.00 usft	**Latitude:**	32° 14' 28.58650 N
	+E/-W	0.00 usft	**Easting:**	592,560.00 usft	**Longitude:**	104° 2' 2.26173 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	2,984.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/8/2015	7.38	60.10	48,282

Design Preliminary Plan 1

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	103.75	1,266.45	-2.21	9.04	1.50	1.50	0.00	103.75	
2,750.00	4.00	103.75	2,746.17	-26.81	109.54	0.00	0.00	0.00	0.00	
3,149.95	10.00	103.75	3,142.96	-38.38	156.87	1.50	1.50	0.00	0.00	
5,520.26	10.00	103.75	5,477.26	-136.21	556.64	0.00	0.00	0.00	0.00	
6,186.88	0.00	0.01	6,140.50	-150.00	613.00	1.50	-1.50	0.00	180.00	
9,241.88	0.00	0.01	9,195.50	-150.00	613.00	0.00	0.00	0.00	0.00	
9,991.88	75.00	259.80	9,748.93	-225.20	195.05	10.00	10.00	0.00	259.80	
10,260.21	91.10	259.80	9,781.30	-272.22	-66.24	6.00	6.00	0.00	0.00	
10,591.33	91.10	269.74	9,774.94	-302.37	-395.51	3.00	0.00	3.00	89.92	
14,625.60	91.10	269.74	9,697.74	-321.00	-4,429.00	0.00	0.00	0.00	0.00	BHL Dr. Scrivner 208I

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

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	103.75	1,099.99	-0.31	1.27	-1.27	1.50	1.50	0.00
1,200.00	*3.00*	*103.75*	*1,199.91*	*-1.24*	*5.08*	*-5.08*	*1.50*	*1.50*	*0.00*
1,266.67	4.00	103.75	1,266.45	-2.21	9.04	-9.03	1.50	1.50	0.00
Hold 4° Inc at 103.75° Azm									
1,300.00	4.00	103.75	1,299.70	-2.76	11.30	-11.28	0.00	0.00	0.00
1,400.00	4.00	103.75	1,399.46	-4.42	18.07	-18.05	0.00	0.00	0.00
1,500.00	4.00	103.75	1,499.22	-6.08	24.85	-24.82	0.00	0.00	0.00
1,600.00	4.00	103.75	1,598.97	-7.74	31.62	-31.59	0.00	0.00	0.00
1,700.00	4.00	103.75	1,698.73	-9.40	38.40	-38.36	0.00	0.00	0.00
1,800.00	4.00	103.75	1,798.48	-11.05	45.18	-45.12	0.00	0.00	0.00
1,900.00	4.00	103.75	1,898.24	-12.71	51.95	-51.89	0.00	0.00	0.00
2,000.00	4.00	103.75	1,998.00	-14.37	58.73	-58.66	0.00	0.00	0.00
2,100.00	4.00	103.75	2,097.75	-16.03	65.50	-65.43	0.00	0.00	0.00
2,200.00	4.00	103.75	2,197.51	-17.69	72.28	-72.20	0.00	0.00	0.00
2,300.00	4.00	103.75	2,297.27	-19.34	79.05	-78.97	0.00	0.00	0.00
2,400.00	4.00	103.75	2,397.02	-21.00	85.83	-85.73	0.00	0.00	0.00
2,500.00	4.00	103.75	2,496.78	-22.66	92.61	-92.50	0.00	0.00	0.00
2,600.00	4.00	103.75	2,596.54	-24.32	99.38	-99.27	0.00	0.00	0.00
2,650.00	4.00	103.75	2,646.41	-25.15	102.77	-102.65	0.00	0.00	0.00
9 5/8"									
2,700.00	4.00	103.75	2,696.29	-25.98	106.16	-106.04	0.00	0.00	0.00
2,750.00	4.00	103.75	2,746.17	-26.81	109.54	-109.42	0.00	0.00	0.00
Start Build 1.5°/100'									
2,800.00	4.75	103.75	2,796.02	-27.71	113.25	-113.12	1.50	1.50	0.00
2,900.00	6.25	103.75	2,895.56	-29.99	122.56	-122.42	1.50	1.50	0.00
3,000.00	7.75	103.75	2,994.81	-32.89	134.40	-134.25	1.50	1.50	0.00
3,100.00	9.25	103.75	3,093.71	-36.40	148.75	-148.59	1.50	1.50	0.00
3,149.95	10.00	103.75	3,142.96	-38.38	156.87	-156.69	1.50	1.50	0.00
Hold 10° Inc									
3,200.00	10.00	103.75	3,192.25	-40.45	165.31	-165.12	0.00	0.00	0.00
3,300.00	10.00	103.75	3,290.73	-44.58	182.17	-181.97	0.00	0.00	0.00
3,400.00	10.00	103.75	3,389.21	-48.70	199.04	-198.82	0.00	0.00	0.00
3,500.00	10.00	103.75	3,487.69	-52.83	215.90	-215.66	0.00	0.00	0.00
3,600.00	10.00	103.75	3,586.17	-56.96	232.77	-232.51	0.00	0.00	0.00
3,700.00	10.00	103.75	3,684.65	-61.09	249.64	-249.36	0.00	0.00	0.00
3,800.00	10.00	103.75	3,783.13	-65.21	266.50	-266.20	0.00	0.00	0.00
3,900.00	10.00	103.75	3,881.61	-69.34	283.37	-283.05	0.00	0.00	0.00
4,000.00	10.00	103.75	3,980.10	-73.47	300.23	-299.90	0.00	0.00	0.00
4,100.00	10.00	103.75	4,078.58	-77.59	317.10	-316.75	0.00	0.00	0.00
4,200.00	10.00	103.75	4,177.06	-81.72	333.97	-333.59	0.00	0.00	0.00

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

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	103.75	4,275.54	-85.85	350.83	-350.44	0.00	0.00	0.00
4,400.00	10.00	103.75	4,374.02	-89.98	367.70	-367.29	0.00	0.00	0.00
4,500.00	10.00	103.75	4,472.50	-94.10	384.56	-384.13	0.00	0.00	0.00
4,600.00	10.00	103.75	4,570.98	-98.23	401.43	-400.98	0.00	0.00	0.00
4,700.00	10.00	103.75	4,669.46	-102.36	418.30	-417.83	0.00	0.00	0.00
4,800.00	10.00	103.75	4,767.94	-106.48	435.16	-434.67	0.00	0.00	0.00
4,900.00	10.00	103.75	4,866.42	-110.61	452.03	-451.52	0.00	0.00	0.00
5,000.00	10.00	103.75	4,964.91	-114.74	468.89	-468.37	0.00	0.00	0.00
5,100.00	10.00	103.75	5,063.39	-118.86	485.76	-485.22	0.00	0.00	0.00
5,200.00	10.00	103.75	5,161.87	-122.99	502.63	-502.06	0.00	0.00	0.00
5,300.00	10.00	103.75	5,260.35	-127.12	519.49	-518.91	0.00	0.00	0.00
5,400.00	10.00	103.75	5,358.83	-131.25	536.36	-535.76	0.00	0.00	0.00
5,500.00	10.00	103.75	5,457.31	-135.37	553.22	-552.60	0.00	0.00	0.00
5,520.26	10.00	103.75	5,477.26	-136.21	556.64	-556.02	0.00	0.00	0.00
Start Drop 1.5°/100'									
5,600.00	8.80	103.75	5,555.93	-139.31	569.29	-568.66	1.50	-1.50	0.00
5,700.00	7.30	103.75	5,654.94	-142.63	582.90	-582.25	1.50	-1.50	0.00
5,800.00	5.80	103.75	5,754.29	-145.35	593.99	-593.32	1.50	-1.50	0.00
5,900.00	4.30	103.75	5,853.89	-147.44	602.54	-601.87	1.50	-1.50	0.00
6,000.00	2.80	103.75	5,953.70	-148.91	608.56	-607.88	1.50	-1.50	0.00
6,100.00	1.30	103.75	6,053.63	-149.77	612.04	-611.35	1.50	-1.50	0.00
6,186.88	0.00	0.01	6,140.50	-150.00	613.00	-612.31	1.50	-1.50	0.00
Hold Vertical									
6,200.00	0.00	0.00	6,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,300.00	0.00	0.00	6,253.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,400.00	0.00	0.00	6,353.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,500.00	0.00	0.00	6,453.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,600.00	0.00	0.00	6,553.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,700.00	0.00	0.00	6,653.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,800.00	0.00	0.00	6,753.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,900.00	0.00	0.00	6,853.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,000.00	0.00	0.00	6,953.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,100.00	0.00	0.00	7,053.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,200.00	0.00	0.00	7,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,300.00	0.00	0.00	7,253.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,400.00	0.00	0.00	7,353.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,500.00	0.00	0.00	7,453.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,600.00	0.00	0.00	7,553.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,700.00	0.00	0.00	7,653.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,800.00	0.00	0.00	7,753.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,900.00	0.00	0.00	7,853.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,000.00	0.00	0.00	7,953.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,100.00	0.00	0.00	8,053.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,200.00	0.00	0.00	8,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,300.00	0.00	0.00	8,253.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,400.00	0.00	0.00	8,353.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,500.00	0.00	0.00	8,453.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,600.00	0.00	0.00	8,553.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,700.00	0.00	0.00	8,653.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,800.00	0.00	0.00	8,753.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,900.00	0.00	0.00	8,853.62	-150.00	613.00	-612.31	0.00	0.00	0.00
9,000.00	0.00	0.00	8,953.62	-150.00	613.00	-612.31	0.00	0.00	0.00
9,100.00	0.00	0.00	9,053.62	-150.00	613.00	-612.31	0.00	0.00	0.00
9,200.00	0.00	0.00	9,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

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)
9,241.88	0.00	0.00	9,195.50	-150.00	613.00	-612.31	0.00	0.00	0.00
KOP: Start Build 10°/100' to 75° Inc									
9,250.00	0.81	259.80	9,203.62	-150.01	612.94	-612.26	10.00	10.00	0.00
9,300.00	5.81	259.80	9,253.52	-150.52	610.10	-609.41	10.00	10.00	0.00
9,350.00	10.81	259.80	9,302.98	-151.80	602.99	-602.29	10.00	10.00	0.00
9,400.00	15.81	259.80	9,351.62	-153.84	591.66	-590.96	10.00	10.00	0.00
9,450.00	20.81	259.80	9,399.08	-156.62	576.20	-575.49	10.00	10.00	0.00
9,500.00	25.81	259.80	9,444.98	-160.12	556.74	-556.00	10.00	10.00	0.00
9,550.00	30.81	259.80	9,488.99	-164.32	533.40	-532.65	10.00	10.00	0.00
9,600.00	35.81	259.80	9,530.76	-169.18	506.39	-505.61	10.00	10.00	0.00
9,650.00	40.81	259.80	9,569.98	-174.67	475.89	-475.09	10.00	10.00	0.00
9,700.00	45.81	259.80	9,606.35	-180.74	442.14	-441.32	10.00	10.00	0.00
9,750.00	50.81	259.80	9,639.59	-187.35	405.41	-404.55	10.00	10.00	0.00
9,800.00	55.81	259.80	9,669.45	-194.45	365.96	-365.07	10.00	10.00	0.00
9,850.00	60.81	259.80	9,695.71	-201.98	324.10	-323.18	10.00	10.00	0.00
9,900.00	65.81	259.80	9,718.16	-209.89	280.14	-279.19	10.00	10.00	0.00
9,950.00	70.81	259.80	9,736.63	-218.12	234.43	-233.44	10.00	10.00	0.00
9,991.88	75.00	259.80	9,748.93	-225.20	195.05	-194.02	10.00	10.00	0.00
Start Build 6°/100'									
10,000.00	75.49	259.80	9,751.00	-226.59	187.31	-186.28	6.00	6.00	0.00
10,050.00	78.49	259.80	9,762.26	-235.22	139.37	-138.30	6.00	6.00	0.00
10,100.00	81.49	259.80	9,770.95	-243.94	90.92	-89.81	6.00	6.00	0.00
10,150.00	84.49	259.80	9,777.06	-252.72	42.08	-40.94	6.00	6.00	0.00
10,200.00	87.49	259.80	9,780.56	-261.56	-7.00	8.19	6.00	6.00	0.00
10,250.00	90.49	259.80	9,781.44	-270.41	-56.20	57.42	6.00	6.00	0.00
10,260.21	91.10	259.80	9,781.30	-272.22	-66.24	67.48	6.00	6.00	0.00
LP: 91.1° Inc, Start Turn 3°/100'									
10,300.00	91.10	260.99	9,780.53	-278.85	-105.47	106.73	3.00	0.00	3.00
10,400.00	91.10	263.99	9,778.61	-291.91	-204.58	205.91	3.00	0.00	3.00
10,500.00	91.10	267.00	9,776.69	-299.76	-304.24	305.60	3.00	0.00	3.00
10,591.33	91.10	269.74	9,774.94	-302.37	-395.51	396.88	3.00	0.00	3.00
Hold 269.74° Azm									
10,600.00	91.10	269.74	9,774.77	-302.41	-404.18	405.55	0.00	0.00	0.00
10,700.00	91.10	269.74	9,772.86	-302.87	-504.16	505.53	0.00	0.00	0.00
10,800.00	91.10	269.74	9,770.94	-303.33	-604.14	605.51	0.00	0.00	0.00
10,900.00	91.10	269.74	9,769.03	-303.79	-704.12	705.49	0.00	0.00	0.00
11,000.00	91.10	269.74	9,767.11	-304.26	-804.10	805.47	0.00	0.00	0.00
11,100.00	91.10	269.74	9,765.20	-304.72	-904.08	905.46	0.00	0.00	0.00
11,200.00	91.10	269.74	9,763.29	-305.18	-1,004.06	1,005.44	0.00	0.00	0.00
11,300.00	91.10	269.74	9,761.37	-305.64	-1,104.04	1,105.42	0.00	0.00	0.00
11,400.00	91.10	269.74	9,759.46	-306.10	-1,204.02	1,205.40	0.00	0.00	0.00
11,500.00	91.10	269.74	9,757.55	-306.56	-1,304.01	1,305.38	0.00	0.00	0.00
11,600.00	91.10	269.74	9,755.63	-307.03	-1,403.99	1,405.36	0.00	0.00	0.00
11,700.00	91.10	269.74	9,753.72	-307.49	-1,503.97	1,505.35	0.00	0.00	0.00
11,800.00	91.10	269.74	9,751.81	-307.95	-1,603.95	1,605.33	0.00	0.00	0.00
11,900.00	91.10	269.74	9,749.89	-308.41	-1,703.93	1,705.31	0.00	0.00	0.00
12,000.00	91.10	269.74	9,747.98	-308.87	-1,803.91	1,805.29	0.00	0.00	0.00
12,100.00	91.10	269.74	9,746.07	-309.34	-1,903.89	1,905.27	0.00	0.00	0.00
12,200.00	91.10	269.74	9,744.15	-309.80	-2,003.87	2,005.25	0.00	0.00	0.00
12,300.00	91.10	269.74	9,742.24	-310.26	-2,103.85	2,105.24	0.00	0.00	0.00
12,400.00	91.10	269.74	9,740.32	-310.72	-2,203.83	2,205.22	0.00	0.00	0.00
12,500.00	91.10	269.74	9,738.41	-311.18	-2,303.81	2,305.20	0.00	0.00	0.00
12,600.00	91.10	269.74	9,736.50	-311.64	-2,403.79	2,405.18	0.00	0.00	0.00

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

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)
12,700.00	91.10	269.74	9,734.58	-312.11	-2,503.77	2,505.16	0.00	0.00	0.00
12,800.00	91.10	269.74	9,732.67	-312.57	-2,603.75	2,605.14	0.00	0.00	0.00
12,900.00	91.10	269.74	9,730.76	-313.03	-2,703.73	2,705.13	0.00	0.00	0.00
13,000.00	91.10	269.74	9,728.84	-313.49	-2,803.71	2,805.11	0.00	0.00	0.00
13,100.00	91.10	269.74	9,726.93	-313.95	-2,903.70	2,905.09	0.00	0.00	0.00
13,200.00	91.10	269.74	9,725.02	-314.42	-3,003.68	3,005.07	0.00	0.00	0.00
13,300.00	91.10	269.74	9,723.10	-314.88	-3,103.66	3,105.05	0.00	0.00	0.00
13,400.00	91.10	269.74	9,721.19	-315.34	-3,203.64	3,205.04	0.00	0.00	0.00
13,500.00	91.10	269.74	9,719.27	-315.80	-3,303.62	3,305.02	0.00	0.00	0.00
13,600.00	91.10	269.74	9,717.36	-316.26	-3,403.60	3,405.00	0.00	0.00	0.00
13,700.00	91.10	269.74	9,715.45	-316.73	-3,503.58	3,504.98	0.00	0.00	0.00
13,800.00	91.10	269.74	9,713.53	-317.19	-3,603.56	3,604.96	0.00	0.00	0.00
13,900.00	91.10	269.74	9,711.62	-317.65	-3,703.54	3,704.94	0.00	0.00	0.00
14,000.00	91.10	269.74	9,709.71	-318.11	-3,803.52	3,804.93	0.00	0.00	0.00
14,100.00	91.10	269.74	9,707.79	-318.57	-3,903.50	3,904.91	0.00	0.00	0.00
14,200.00	91.10	269.74	9,705.88	-319.03	-4,003.48	4,004.89	0.00	0.00	0.00
14,300.00	91.10	269.74	9,703.97	-319.50	-4,103.46	4,104.87	0.00	0.00	0.00
14,400.00	91.10	269.74	9,702.05	-319.96	-4,203.44	4,204.85	0.00	0.00	0.00
14,500.00	91.10	269.74	9,700.14	-320.42	-4,303.42	4,304.83	0.00	0.00	0.00
14,600.00	91.10	269.74	9,698.23	-320.88	-4,403.40	4,404.82	0.00	0.00	0.00
14,625.60	91.10	269.74	9,697.74	-321.00	-4,429.00	4,430.41	0.00	0.00	0.00
TD at 14625.60									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LPP Dr. Scrivner 208H - plan misses target center by 1.77usft at 14535.62usft MD (9699.46 TVD, -320.58 N, -4339.03 E) - Point	0.00	0.01	9,697.74	-321.00	-4,339.00	451,302.00	588,221.00	32° 14' 25.52670 N	104° 2' 52.79300 W
BHL Dr. Scrivner 208H - plan hits target center - Point	0.00	0.01	9,697.74	-321.00	-4,429.00	451,302.00	588,131.00	32° 14' 25.52906 N	104° 2' 53.84091 W
FPP Dr. Scrivner 208H - plan misses target center by 122.10usft at 9896.74usft MD (9716.81 TVD, -209.36 N, 283.07 E) - Point	0.00	0.01	9,783.00	-299.00	333.00	451,324.00	592,893.00	32° 14' 25.61833 N	104° 1' 58.39417 W

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

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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 208H

Well Position	**+N/-S**	-30.00 usft	**Northing:**	451,623.00 usft	**Latitude:**	32° 14' 28.58650 N
	+E/-W	0.00 usft	**Easting:**	592,560.00 usft	**Longitude:**	104° 2' 2.26173 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	2,984.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/8/2015	7.38	60.10	48,282

Design Preliminary Plan 1

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	103.75	1,266.45	-2.21	9.04	1.50	1.50	0.00	103.75	
2,750.00	4.00	103.75	2,746.17	-26.81	109.54	0.00	0.00	0.00	0.00	
3,149.95	10.00	103.75	3,142.96	-38.38	156.87	1.50	1.50	0.00	0.00	
5,520.26	10.00	103.75	5,477.26	-136.21	556.64	0.00	0.00	0.00	0.00	
6,186.88	0.00	0.01	6,140.50	-150.00	613.00	1.50	-1.50	0.00	180.00	
9,241.88	0.00	0.01	9,195.50	-150.00	613.00	0.00	0.00	0.00	0.00	
9,991.88	75.00	259.80	9,748.93	-225.20	195.05	10.00	10.00	0.00	259.80	
10,260.21	91.10	259.80	9,781.30	-272.22	-66.24	6.00	6.00	0.00	0.00	
10,591.33	91.10	269.74	9,774.94	-302.37	-395.51	3.00	0.00	3.00	89.92	
14,625.60	91.10	269.74	9,697.74	-321.00	-4,429.00	0.00	0.00	0.00	0.00	BHL Dr. Scrivner 208I

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

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	103.75	1,099.99	-0.31	1.27	-1.27	1.50	1.50	0.00
1,200.00	3.00	103.75	1,199.91	-1.24	5.08	-5.08	1.50	1.50	0.00
1,266.67	4.00	103.75	1,266.45	-2.21	9.04	-9.03	1.50	1.50	0.00
Hold 4° Inc at 103.75° Azm									
1,300.00	4.00	103.75	1,299.70	-2.76	11.30	-11.28	0.00	0.00	0.00
1,400.00	4.00	103.75	1,399.46	-4.42	18.07	-18.05	0.00	0.00	0.00
1,500.00	4.00	103.75	1,499.22	-6.08	24.85	-24.82	0.00	0.00	0.00
1,600.00	4.00	103.75	1,598.97	-7.74	31.62	-31.59	0.00	0.00	0.00
1,700.00	4.00	103.75	1,698.73	-9.40	38.40	-38.36	0.00	0.00	0.00
1,800.00	4.00	103.75	1,798.48	-11.05	45.18	-45.12	0.00	0.00	0.00
1,900.00	4.00	103.75	1,898.24	-12.71	51.95	-51.89	0.00	0.00	0.00
2,000.00	4.00	103.75	1,998.00	-14.37	58.73	-58.66	0.00	0.00	0.00
2,100.00	4.00	103.75	2,097.75	-16.03	65.50	-65.43	0.00	0.00	0.00
2,200.00	4.00	103.75	2,197.51	-17.69	72.28	-72.20	0.00	0.00	0.00
2,300.00	4.00	103.75	2,297.27	-19.34	79.05	-78.97	0.00	0.00	0.00
2,400.00	4.00	103.75	2,397.02	-21.00	85.83	-85.73	0.00	0.00	0.00
2,500.00	4.00	103.75	2,496.78	-22.66	92.61	-92.50	0.00	0.00	0.00
2,600.00	4.00	103.75	2,596.54	-24.32	99.38	-99.27	0.00	0.00	0.00
2,650.00	4.00	103.75	2,646.41	-25.15	102.77	-102.65	0.00	0.00	0.00
9 5/8"									
2,700.00	4.00	103.75	2,696.29	-25.98	106.16	-106.04	0.00	0.00	0.00
2,750.00	4.00	103.75	2,746.17	-26.81	109.54	-109.42	0.00	0.00	0.00
Start Build 1.5°/100'									
2,800.00	4.75	103.75	2,796.02	-27.71	113.25	-113.12	1.50	1.50	0.00
2,900.00	6.25	103.75	2,895.56	-29.99	122.56	-122.42	1.50	1.50	0.00
3,000.00	7.75	103.75	2,994.81	-32.89	134.40	-134.25	1.50	1.50	0.00
3,100.00	9.25	103.75	3,093.71	-36.40	148.75	-148.59	1.50	1.50	0.00
3,149.95	10.00	103.75	3,142.96	-38.38	156.87	-156.69	1.50	1.50	0.00
Hold 10° Inc									
3,200.00	10.00	103.75	3,192.25	-40.45	165.31	-165.12	0.00	0.00	0.00
3,300.00	10.00	103.75	3,290.73	-44.58	182.17	-181.97	0.00	0.00	0.00
3,400.00	10.00	103.75	3,389.21	-48.70	199.04	-198.82	0.00	0.00	0.00
3,500.00	10.00	103.75	3,487.69	-52.83	215.90	-215.66	0.00	0.00	0.00
3,600.00	10.00	103.75	3,586.17	-56.96	232.77	-232.51	0.00	0.00	0.00
3,700.00	10.00	103.75	3,684.65	-61.09	249.64	-249.36	0.00	0.00	0.00
3,800.00	10.00	103.75	3,783.13	-65.21	266.50	-266.20	0.00	0.00	0.00
3,900.00	10.00	103.75	3,881.61	-69.34	283.37	-283.05	0.00	0.00	0.00
4,000.00	10.00	103.75	3,980.10	-73.47	300.23	-299.90	0.00	0.00	0.00
4,100.00	10.00	103.75	4,078.58	-77.59	317.10	-316.75	0.00	0.00	0.00
4,200.00	10.00	103.75	4,177.06	-81.72	333.97	-333.59	0.00	0.00	0.00

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

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	103.75	4,275.54	-85.85	350.83	-350.44	0.00	0.00	0.00
4,400.00	10.00	103.75	4,374.02	-89.98	367.70	-367.29	0.00	0.00	0.00
4,500.00	10.00	103.75	4,472.50	-94.10	384.56	-384.13	0.00	0.00	0.00
4,600.00	10.00	103.75	4,570.98	-98.23	401.43	-400.98	0.00	0.00	0.00
4,700.00	10.00	103.75	4,669.46	-102.36	418.30	-417.83	0.00	0.00	0.00
4,800.00	10.00	103.75	4,767.94	-106.48	435.16	-434.67	0.00	0.00	0.00
4,900.00	10.00	103.75	4,866.42	-110.61	452.03	-451.52	0.00	0.00	0.00
5,000.00	10.00	103.75	4,964.91	-114.74	468.89	-468.37	0.00	0.00	0.00
5,100.00	10.00	103.75	5,063.39	-118.86	485.76	-485.22	0.00	0.00	0.00
5,200.00	10.00	103.75	5,161.87	-122.99	502.63	-502.06	0.00	0.00	0.00
5,300.00	10.00	103.75	5,260.35	-127.12	519.49	-518.91	0.00	0.00	0.00
5,400.00	10.00	103.75	5,358.83	-131.25	536.36	-535.76	0.00	0.00	0.00
5,500.00	10.00	103.75	5,457.31	-135.37	553.22	-552.60	0.00	0.00	0.00
5,520.26	10.00	103.75	5,477.26	-136.21	556.64	-556.02	0.00	0.00	0.00
Start Drop 1.5°/100'									
5,600.00	8.80	103.75	5,555.93	-139.31	569.29	-568.66	1.50	-1.50	0.00
5,700.00	7.30	103.75	5,654.94	-142.63	582.90	-582.25	1.50	-1.50	0.00
5,800.00	5.80	103.75	5,754.29	-145.35	593.99	-593.32	1.50	-1.50	0.00
5,900.00	4.30	103.75	5,853.89	-147.44	602.54	-601.87	1.50	-1.50	0.00
6,000.00	2.80	103.75	5,953.70	-148.91	608.56	-607.88	1.50	-1.50	0.00
6,100.00	1.30	103.75	6,053.63	-149.77	612.04	-611.35	1.50	-1.50	0.00
6,186.88	0.00	0.01	6,140.50	-150.00	613.00	-612.31	1.50	-1.50	0.00
Hold Vertical									
6,200.00	0.00	0.00	6,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,300.00	0.00	0.00	6,253.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,400.00	0.00	0.00	6,353.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,500.00	0.00	0.00	6,453.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,600.00	0.00	0.00	6,553.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,700.00	0.00	0.00	6,653.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,800.00	0.00	0.00	6,753.62	-150.00	613.00	-612.31	0.00	0.00	0.00
6,900.00	0.00	0.00	6,853.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,000.00	0.00	0.00	6,953.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,100.00	0.00	0.00	7,053.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,200.00	0.00	0.00	7,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,300.00	0.00	0.00	7,253.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,400.00	0.00	0.00	7,353.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,500.00	0.00	0.00	7,453.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,600.00	0.00	0.00	7,553.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,700.00	0.00	0.00	7,653.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,800.00	0.00	0.00	7,753.62	-150.00	613.00	-612.31	0.00	0.00	0.00
7,900.00	0.00	0.00	7,853.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,000.00	0.00	0.00	7,953.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,100.00	0.00	0.00	8,053.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,200.00	0.00	0.00	8,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,300.00	0.00	0.00	8,253.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,400.00	0.00	0.00	8,353.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,500.00	0.00	0.00	8,453.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,600.00	0.00	0.00	8,553.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,700.00	0.00	0.00	8,653.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,800.00	0.00	0.00	8,753.62	-150.00	613.00	-612.31	0.00	0.00	0.00
8,900.00	0.00	0.00	8,853.62	-150.00	613.00	-612.31	0.00	0.00	0.00
9,000.00	0.00	0.00	8,953.62	-150.00	613.00	-612.31	0.00	0.00	0.00
9,100.00	0.00	0.00	9,053.62	-150.00	613.00	-612.31	0.00	0.00	0.00
9,200.00	0.00	0.00	9,153.62	-150.00	613.00	-612.31	0.00	0.00	0.00

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
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Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

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)
9,241.88	0.00	0.00	9,195.50	-150.00	613.00	-612.31	0.00	0.00	0.00
KOP: Start Build 10°/100' to 75° Inc									
9,250.00	0.81	259.80	9,203.62	-150.01	612.94	-612.26	10.00	10.00	0.00
9,300.00	5.81	259.80	9,253.52	-150.52	610.10	-609.41	10.00	10.00	0.00
9,350.00	10.81	259.80	9,302.98	-151.80	602.99	-602.29	10.00	10.00	0.00
9,400.00	15.81	259.80	9,351.62	-153.84	591.66	-590.96	10.00	10.00	0.00
9,450.00	20.81	259.80	9,399.08	-156.62	576.20	-575.49	10.00	10.00	0.00
9,500.00	25.81	259.80	9,444.98	-160.12	556.74	-556.00	10.00	10.00	0.00
9,550.00	30.81	259.80	9,488.99	-164.32	533.40	-532.65	10.00	10.00	0.00
9,600.00	35.81	259.80	9,530.76	-169.18	506.39	-505.61	10.00	10.00	0.00
9,650.00	40.81	259.80	9,569.98	-174.67	475.89	-475.09	10.00	10.00	0.00
9,700.00	45.81	259.80	9,606.35	-180.74	442.14	-441.32	10.00	10.00	0.00
9,750.00	50.81	259.80	9,639.59	-187.35	405.41	-404.55	10.00	10.00	0.00
9,800.00	55.81	259.80	9,669.45	-194.45	365.96	-365.07	10.00	10.00	0.00
9,850.00	60.81	259.80	9,695.71	-201.98	324.10	-323.18	10.00	10.00	0.00
9,900.00	65.81	259.80	9,718.16	-209.89	280.14	-279.19	10.00	10.00	0.00
9,950.00	70.81	259.80	9,736.63	-218.12	234.43	-233.44	10.00	10.00	0.00
9,991.88	75.00	259.80	9,748.93	-225.20	195.05	-194.02	10.00	10.00	0.00
Start Build 6°/100'									
10,000.00	75.49	259.80	9,751.00	-226.59	187.31	-186.28	6.00	6.00	0.00
10,050.00	78.49	259.80	9,762.26	-235.22	139.37	-138.30	6.00	6.00	0.00
10,100.00	81.49	259.80	9,770.95	-243.94	90.92	-89.81	6.00	6.00	0.00
10,150.00	84.49	259.80	9,777.06	-252.72	42.08	-40.94	6.00	6.00	0.00
10,200.00	87.49	259.80	9,780.56	-261.56	-7.00	8.19	6.00	6.00	0.00
10,250.00	90.49	259.80	9,781.44	-270.41	-56.20	57.42	6.00	6.00	0.00
10,260.21	91.10	259.80	9,781.30	-272.22	-66.24	67.48	6.00	6.00	0.00
LP: 91.1° Inc, Start Turn 3°/100'									
10,300.00	91.10	260.99	9,780.53	-278.85	-105.47	106.73	3.00	0.00	3.00
10,400.00	91.10	263.99	9,778.61	-291.91	-204.58	205.91	3.00	0.00	3.00
10,500.00	91.10	267.00	9,776.69	-299.76	-304.24	305.60	3.00	0.00	3.00
10,591.33	91.10	269.74	9,774.94	-302.37	-395.51	396.88	3.00	0.00	3.00
Hold 269.74° Azm									
10,600.00	91.10	269.74	9,774.77	-302.41	-404.18	405.55	0.00	0.00	0.00
10,700.00	91.10	269.74	9,772.86	-302.87	-504.16	505.53	0.00	0.00	0.00
10,800.00	91.10	269.74	9,770.94	-303.33	-604.14	605.51	0.00	0.00	0.00
10,900.00	91.10	269.74	9,769.03	-303.79	-704.12	705.49	0.00	0.00	0.00
11,000.00	91.10	269.74	9,767.11	-304.26	-804.10	805.47	0.00	0.00	0.00
11,100.00	91.10	269.74	9,765.20	-304.72	-904.08	905.46	0.00	0.00	0.00
11,200.00	91.10	269.74	9,763.29	-305.18	-1,004.06	1,005.44	0.00	0.00	0.00
11,300.00	91.10	269.74	9,761.37	-305.64	-1,104.04	1,105.42	0.00	0.00	0.00
11,400.00	91.10	269.74	9,759.46	-306.10	-1,204.02	1,205.40	0.00	0.00	0.00
11,500.00	91.10	269.74	9,757.55	-306.56	-1,304.01	1,305.38	0.00	0.00	0.00
11,600.00	91.10	269.74	9,755.63	-307.03	-1,403.99	1,405.36	0.00	0.00	0.00
11,700.00	91.10	269.74	9,753.72	-307.49	-1,503.97	1,505.35	0.00	0.00	0.00
11,800.00	91.10	269.74	9,751.81	-307.95	-1,603.95	1,605.33	0.00	0.00	0.00
11,900.00	91.10	269.74	9,749.89	-308.41	-1,703.93	1,705.31	0.00	0.00	0.00
12,000.00	91.10	269.74	9,747.98	-308.87	-1,803.91	1,805.29	0.00	0.00	0.00
12,100.00	91.10	269.74	9,746.07	-309.34	-1,903.89	1,905.27	0.00	0.00	0.00
12,200.00	91.10	269.74	9,744.15	-309.80	-2,003.87	2,005.25	0.00	0.00	0.00
12,300.00	91.10	269.74	9,742.24	-310.26	-2,103.85	2,105.24	0.00	0.00	0.00
12,400.00	91.10	269.74	9,740.32	-310.72	-2,203.83	2,205.22	0.00	0.00	0.00
12,500.00	91.10	269.74	9,738.41	-311.18	-2,303.81	2,305.20	0.00	0.00	0.00
12,600.00	91.10	269.74	9,736.50	-311.64	-2,403.79	2,405.18	0.00	0.00	0.00

Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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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)
12,700.00	91.10	269.74	9,734.58	-312.11	-2,503.77	2,505.16	0.00	0.00	0.00
12,800.00	91.10	269.74	9,732.67	-312.57	-2,603.75	2,605.14	0.00	0.00	0.00
12,900.00	91.10	269.74	9,730.76	-313.03	-2,703.73	2,705.13	0.00	0.00	0.00
13,000.00	91.10	269.74	9,728.84	-313.49	-2,803.71	2,805.11	0.00	0.00	0.00
13,100.00	91.10	269.74	9,726.93	-313.95	-2,903.70	2,905.09	0.00	0.00	0.00
13,200.00	91.10	269.74	9,725.02	-314.42	-3,003.68	3,005.07	0.00	0.00	0.00
13,300.00	91.10	269.74	9,723.10	-314.88	-3,103.66	3,105.05	0.00	0.00	0.00
13,400.00	91.10	269.74	9,721.19	-315.34	-3,203.64	3,205.04	0.00	0.00	0.00
13,500.00	91.10	269.74	9,719.27	-315.80	-3,303.62	3,305.02	0.00	0.00	0.00
13,600.00	91.10	269.74	9,717.36	-316.26	-3,403.60	3,405.00	0.00	0.00	0.00
13,700.00	91.10	269.74	9,715.45	-316.73	-3,503.58	3,504.98	0.00	0.00	0.00
13,800.00	91.10	269.74	9,713.53	-317.19	-3,603.56	3,604.96	0.00	0.00	0.00
13,900.00	91.10	269.74	9,711.62	-317.65	-3,703.54	3,704.94	0.00	0.00	0.00
14,000.00	91.10	269.74	9,709.71	-318.11	-3,803.52	3,804.93	0.00	0.00	0.00
14,100.00	91.10	269.74	9,707.79	-318.57	-3,903.50	3,904.91	0.00	0.00	0.00
14,200.00	91.10	269.74	9,705.88	-319.03	-4,003.48	4,004.89	0.00	0.00	0.00
14,300.00	91.10	269.74	9,703.97	-319.50	-4,103.46	4,104.87	0.00	0.00	0.00
14,400.00	91.10	269.74	9,702.05	-319.96	-4,203.44	4,204.85	0.00	0.00	0.00
14,500.00	91.10	269.74	9,700.14	-320.42	-4,303.42	4,304.83	0.00	0.00	0.00
14,600.00	91.10	269.74	9,698.23	-320.88	-4,403.40	4,404.82	0.00	0.00	0.00
14,625.60	91.10	269.74	9,697.74	-321.00	-4,429.00	4,430.41	0.00	0.00	0.00

TD at 14625.60

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LPP Dr. Scrivner 208H - plan misses target center by 1.77usft at 14535.62usft MD (9699.46 TVD, -320.58 N, -4339.03 E) - Point	0.00	0.01	9,697.74	-321.00	-4,339.00	451,302.00	588,221.00	32° 14' 25.52670 N	104° 2' 52.79300 W
BHL Dr. Scrivner 208H - plan hits target center - Point	0.00	0.01	9,697.74	-321.00	-4,429.00	451,302.00	588,131.00	32° 14' 25.52906 N	104° 2' 53.84091 W
FPP Dr. Scrivner 208H - plan misses target center by 122.10usft at 9896.74usft MD (9716.81 TVD, -209.36 N, 283.07 E) - Point	0.00	0.01	9,783.00	-299.00	333.00	451,324.00	592,893.00	32° 14' 25.61833 N	104° 1' 58.39417 W

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

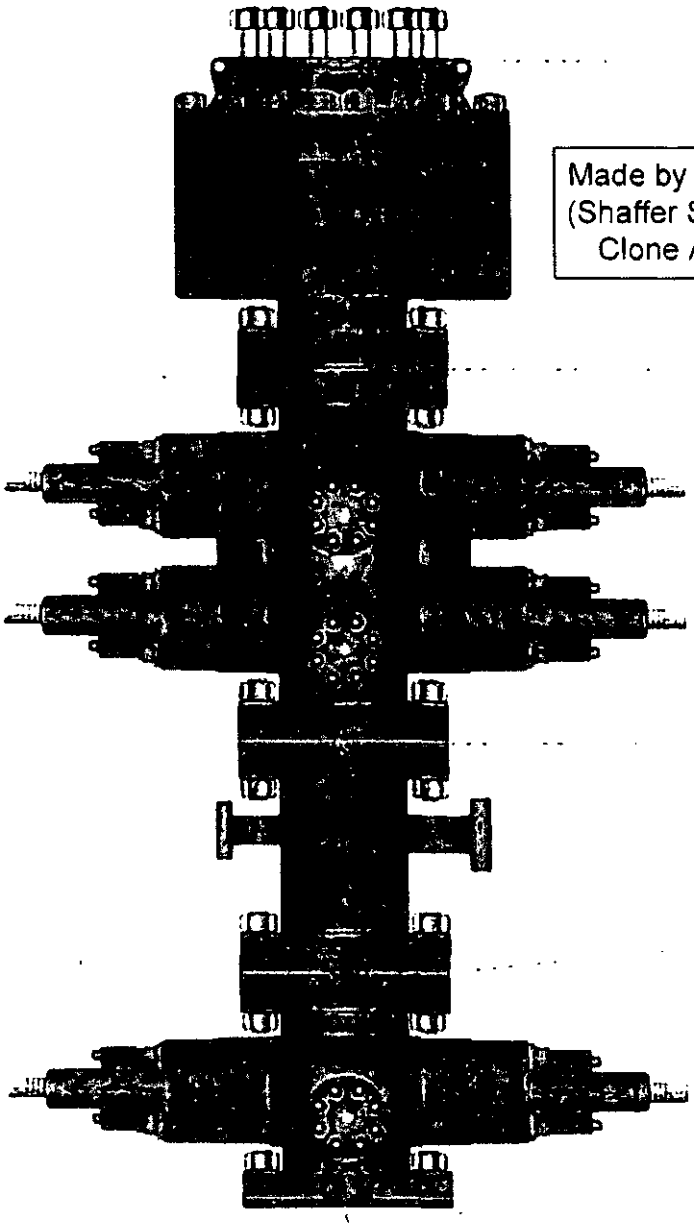
Database:	Compass 5000 GCR	**Local Co-ordinate Reference:**	Well 208H
Company:	Matador Resources	**TVD Reference:**	RKB @ 3011.50usft
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3011.50usft
Site:	Dr. Scrivner Federal 01-24S-28E RB	**North Reference:**	Grid
Well:	208H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Preliminary Plan 1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,000.00	1,000.00	0.00	0.00	Start Build 1.5°/100'
1,266.67	1,266.45	-2.21	9.04	Hold 4° Inc at 103.75° Azm
2,750.00	2,746.17	-26.81	109.54	Start Build 1.5°/100'
3,149.95	3,142.96	-38.38	156.87	Hold 10° Inc
5,520.26	5,477.26	-136.21	556.64	Start Drop 1.5°/100'
6,186.88	6,140.50	-150.00	613.00	Hold Vertical
9,241.88	9,195.50	-150.00	613.00	KOP: Start Build 10°/100' to 75° Inc
9,991.88	9,748.93	-225.20	195.05	Start Build 6°/100'
10,260.21	9,781.30	-272.22	-66.24	LP: 91.1° Inc, Start Turn 3°/100'
10,591.33	9,774.94	-302.37	-395.51	Hold 269.74° Azm
14,625.60	9,697.74	-321.00	-4,429.00	TD at 14625.60

PATTERSON-UTI
Well Control

RIG: 297



Made by Cameron
(Shaffer Spherical)
Clone Annular

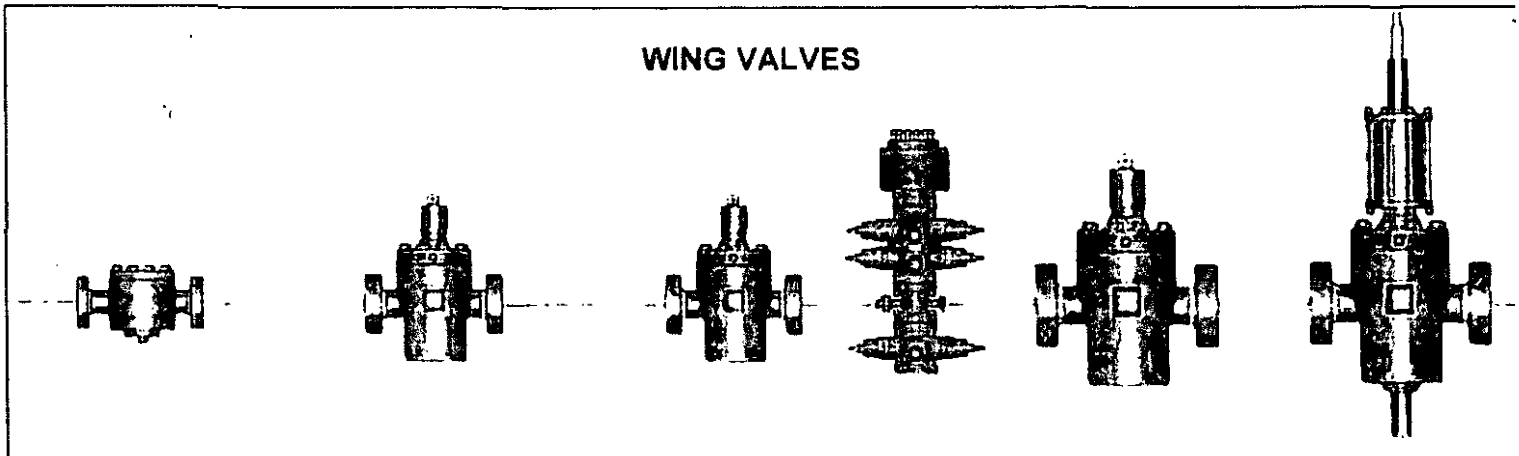
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" **PRESSURE** 5,000
HEIGHT: 48 ½" **WEIGHT:** 13,800 lbs

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

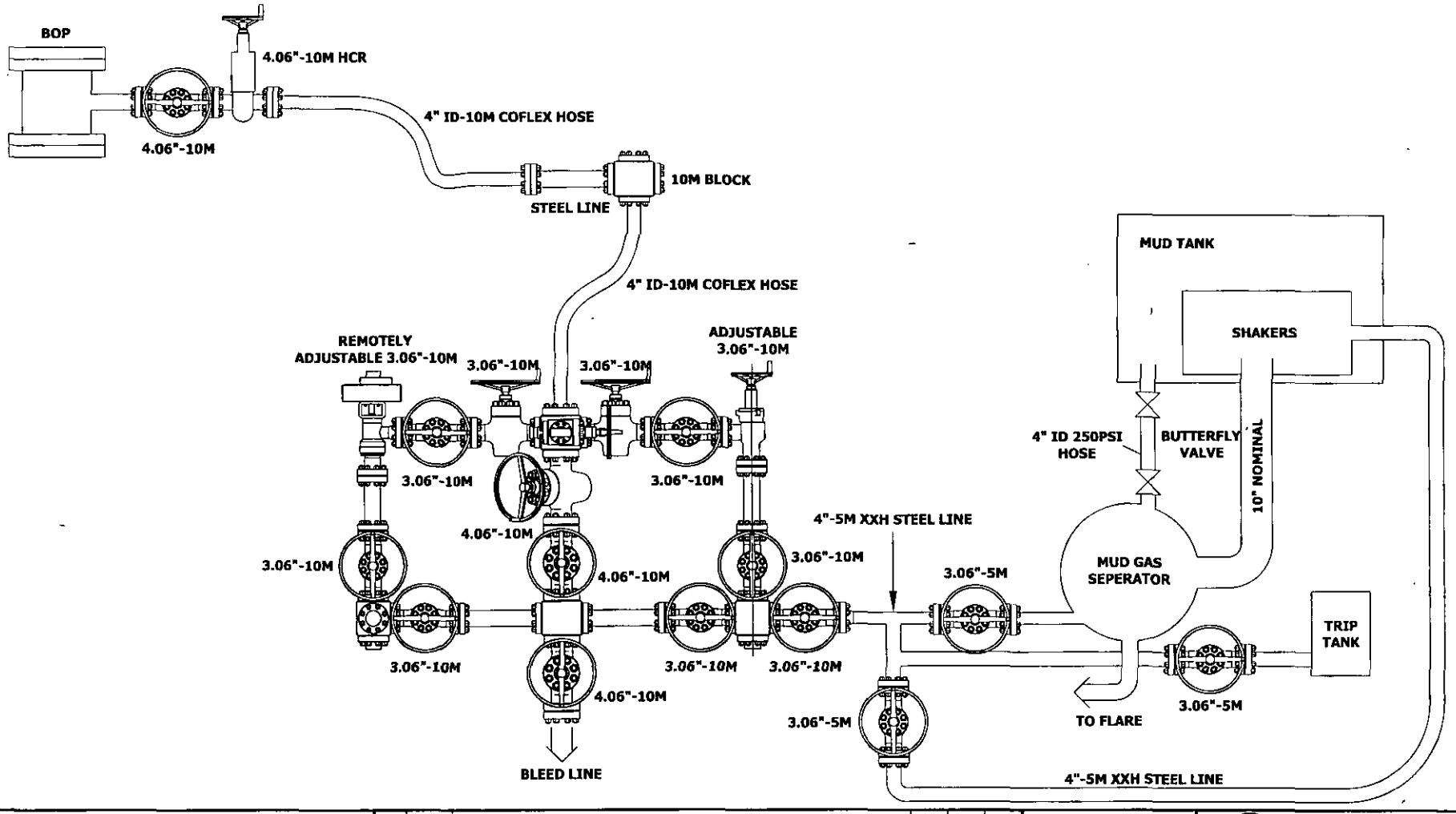
Length 40" **Outlets** 4" 10M
DSA 4" 10M x 2" 10M

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



WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED.

GENERAL WELDING NOTE:
ALL ACCESSIBLE CONTACT SURFACES SHALL BE JOINED WITH CONTINOUS 45 DEGREE FILLET WELDS. WELD SIZE TO BE 1/16 INCH SMALLER THAN THINNER MEMBER JOINED UP TO 5/16 INCH THICKNESS AND 1/8 INCH SMALLER THAN THINNER MEMBER JOINED UP TO 3/4 INCH THICKNESS. WELDMENT TOLERANCES = +/- 1/16

MACHINING TOLERANCES
1 PLACE DECIMAL = ±.1
2 PLACE DECIMAL = ±.03
3 PLACE DECIMAL = ±.015
FRACTIONAL TOLERANCES = 1/64
INSIDE MACHINED CORNER RADII = ±.031
CHAMFER OUTSIDE CORNERS .03 X 45 DEG
ANGLE TOLERANCES = ±1 DEGREE
MACHINED SURFACE FINISH 125 RMS
ALL UNSPECIFIED DIMENSIONS ARE IN INCHES

REV	DATE	DESCRIPTION	DRWN BY	CHK BY	APRVD ENG
02	8-3-15	ISSUED FOR INFORMATION	CP	CSL	
01	7-9-15	ISSUED FOR INFORMATION	CSL		

PATTERSON-UTI
DRILLING COMPANY LLC

CHOKE MANIFOLD

10M CHOKE ARRANGEMENT
RIG 297

DWG No. R0297-D.001.LAY.09

SHT 1 OF 1

REV 02

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

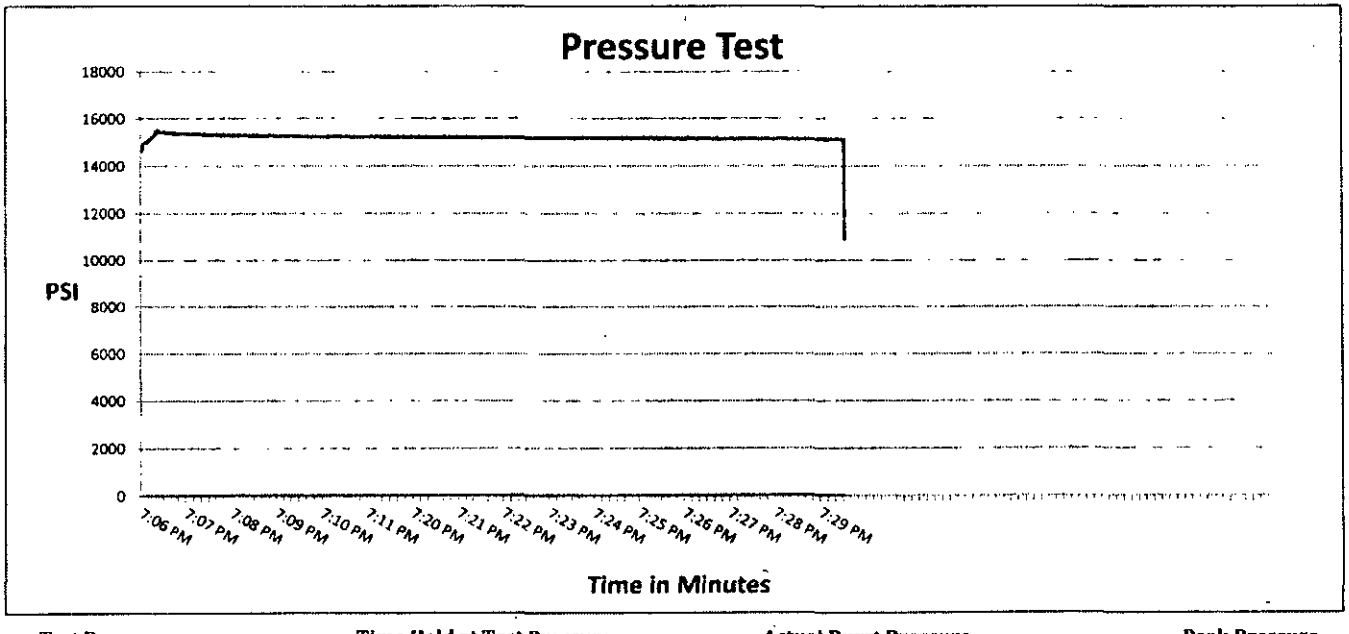
Pick Ticket #: 284918

Hose Specifications

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

Verification

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



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

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

Tested By: *Tyler Hill*

Approved By: *Ryan Adams*

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'	Armor (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**

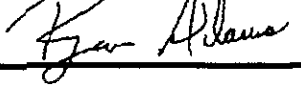
Specifications

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**

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

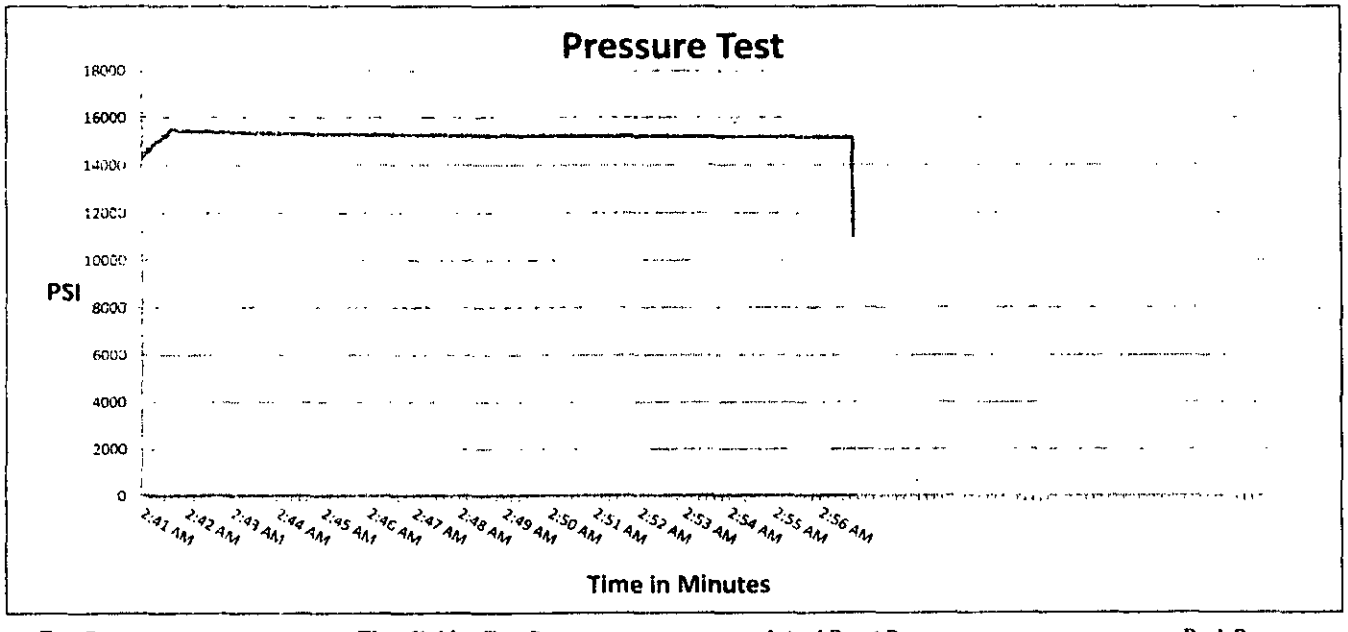
December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

R29X

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Ck	20'	4-1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
3"	4.77"	5.37"	5.40"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	10490	284918-1



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

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

Tested By: *Tyler Hill*

Approved By: *Ryan Adams*

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**

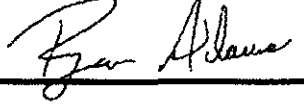
Specifications

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**

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

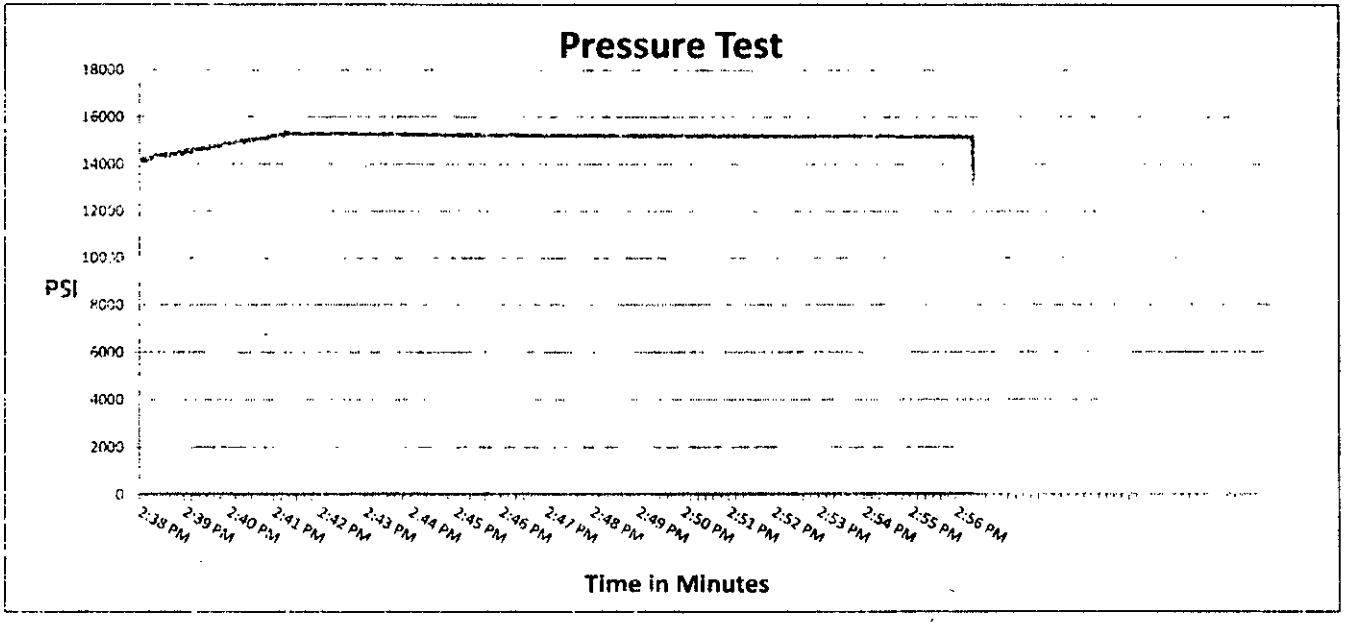
Pick Ticket #: 284918

Hose Specifications

Hose Type	Length
Mud	70'
I.D.	**O.D.**
3"	4.79"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

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

Midwest Hose
& Specialty, Inc.

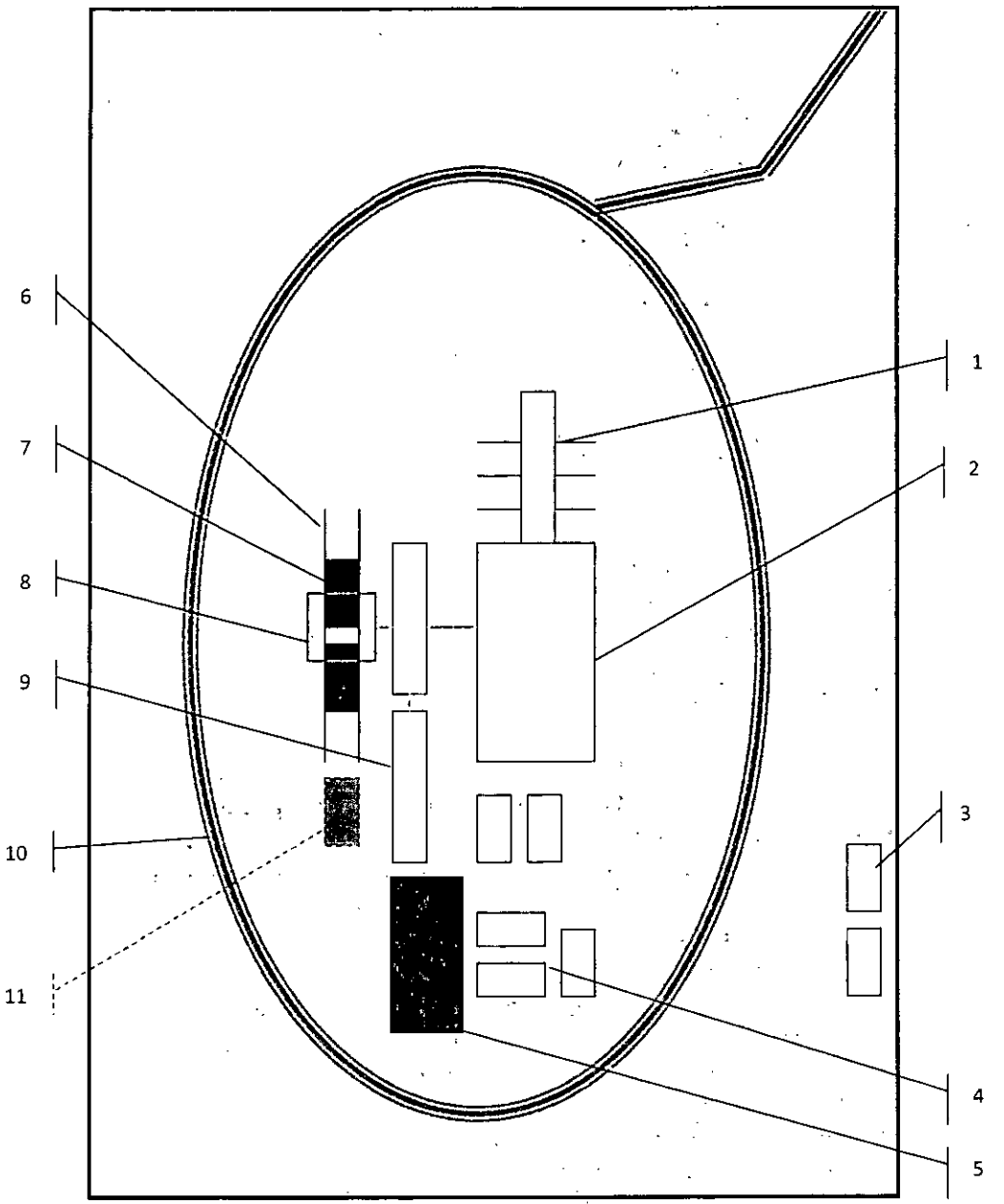
Internal Hydrostatic Test Certificate

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	

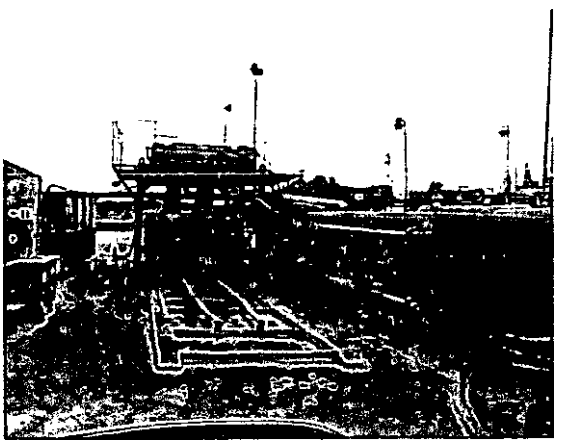
Date Tested	Tested By	Approved By
12/9/2014		



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

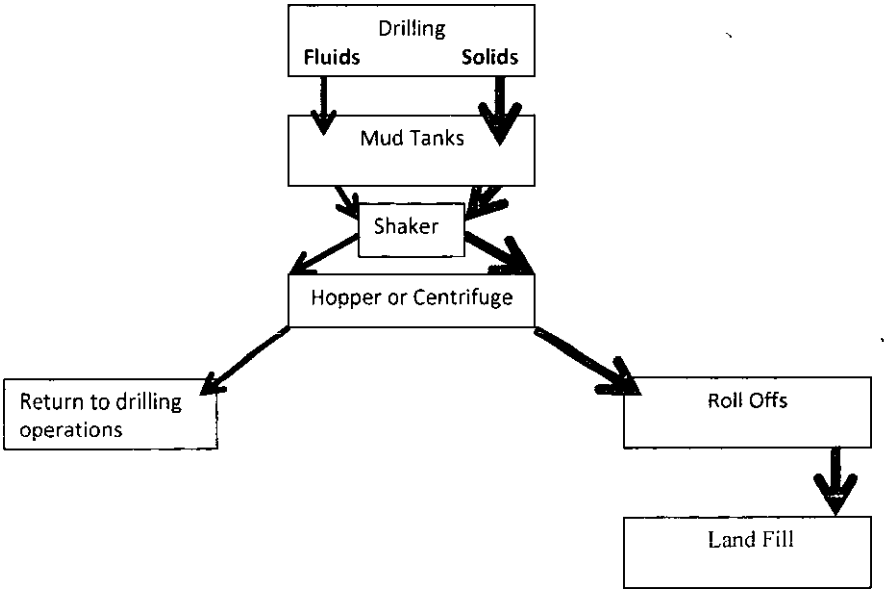


Above: Centrifugal Closed Loop System

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

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)

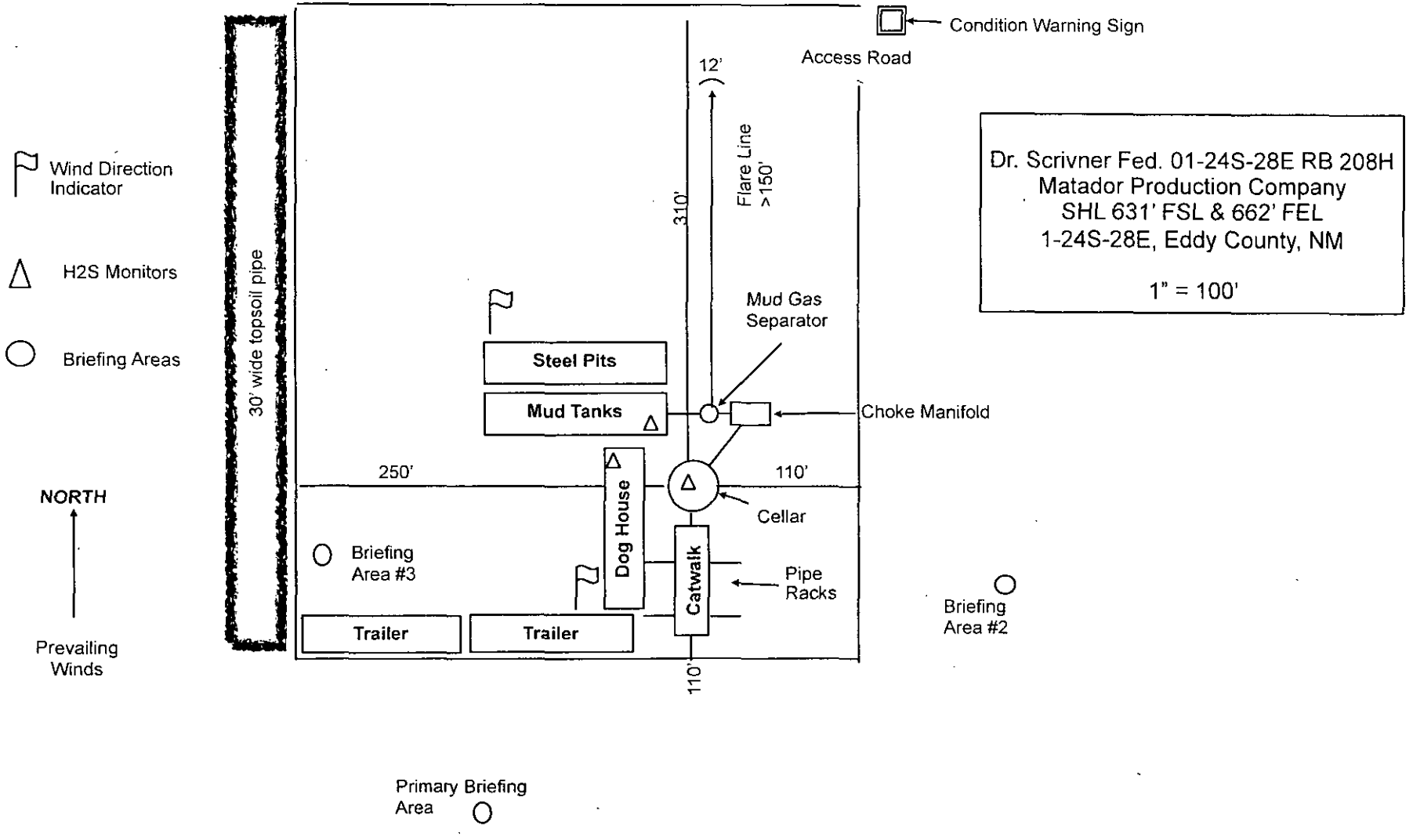
Flow Chart for Drilling Fluids and Solids



Photos Courtesy of Gandy Corporation Oil Field Service

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

Rig Diagram


Wind Direction Indicator
H2S Monitors
Briefing Areas
NORTH
Prevailing Winds
30' wide topsoil pipe
Condition Warning Sign
Access Road
12'
310'
Flare Line >150'
Mud Gas Separator
Steel Pits
Mud Tanks
Choke Manifold
250'
110'
Dog House
Cellar
Catwalk
Pipe Racks
Briefing Area #3
Trailer
Trailer
Briefing Area #2
110'
Primary Briefing Area
Dr. Scrivner Fed. 01-24S-28E RB 208H
Matador Production Company
SHL 631' FSL & 662' 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

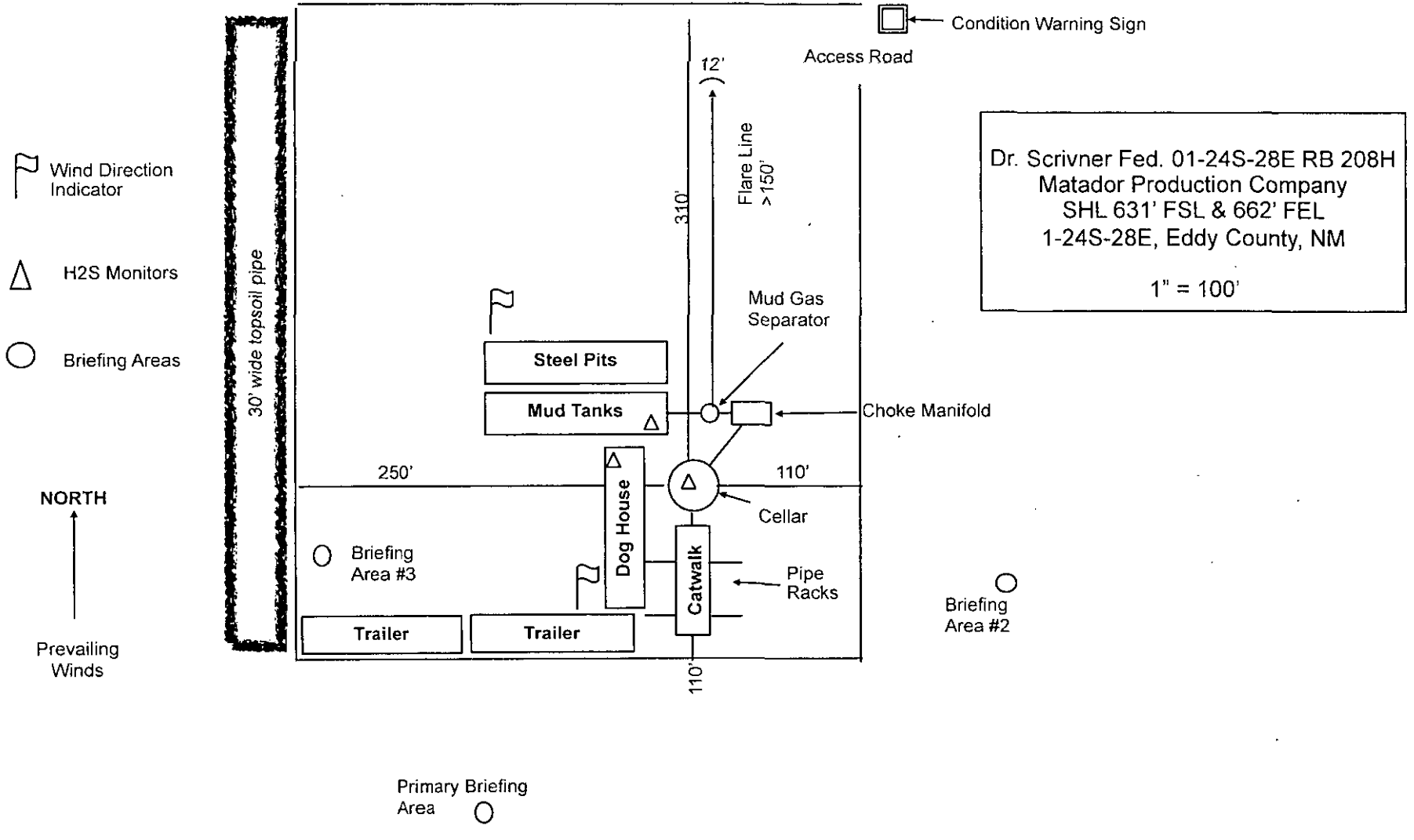
H2S Contingency Plan Emergency Contacts
Matador Production Company
Sec. 1, 24S, 28E, Eddy County, NM

Company Office			
Matador Production Company	(972)-371-5200		
Key Personnel			
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		

Artesia	
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
Carlsbad	
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
Santa Fe	
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
National	
Carlsbad BLM	575-234-5972
National Emergency Response Center (Washington, D.C.)	800-424-8802
Medical	
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

Other		
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	

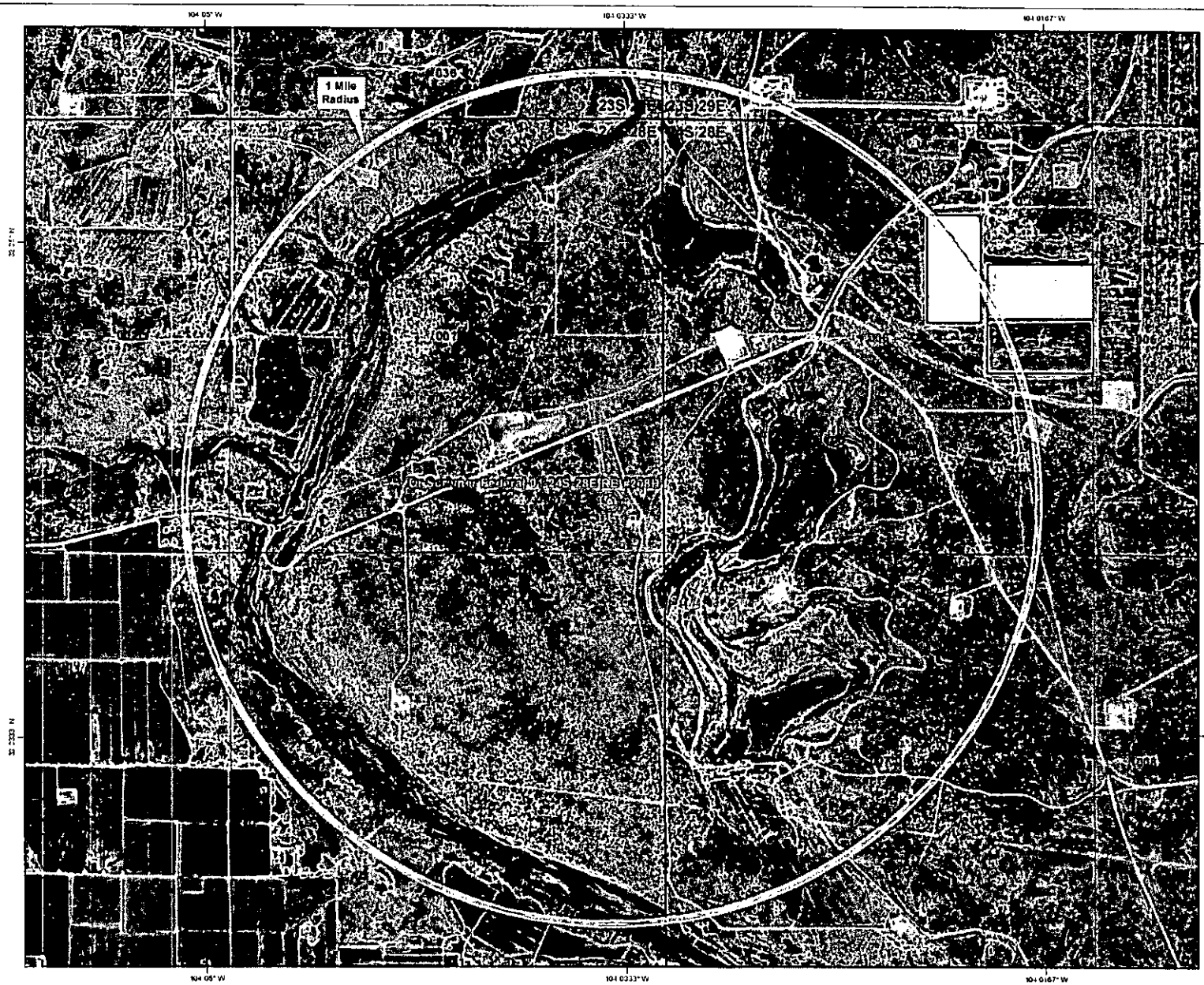
H2S Diagram


Wind Direction Indicator
H2S Monitors
Briefing Areas
NORTH
Prevailing Winds
30' wide topsoil pipe
Condition Warning Sign
Access Road
12'
310'
Flare Line >150'
Mud Gas Separator
Steel Pits
Mud Tanks
Choke Manifold
250'
110'
Dog House
Cellar
Catwalk
Pipe Racks
Briefing Area #3
Trailer
Trailer
Briefing Area #2
110'
Primary Briefing Area
Dr. Scrivner Fed. 01-24S-28E RB 208H
Matador Production Company
SHL 631' FSL & 662' FEL
1-24S-28E, Eddy County, NM
1" = 100'

Matador Production Company

Dr. Scrivner Fed 01-24S-28E RB #208H
H2S Contingency Plan:
1 Mile Radius Map

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



Surface Hole Location

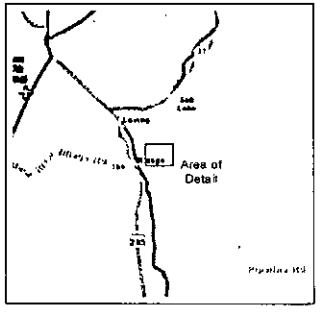
1:13,500
0 0.125 0.25 0.5
Miles

N

NAD 1927 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST, INC.

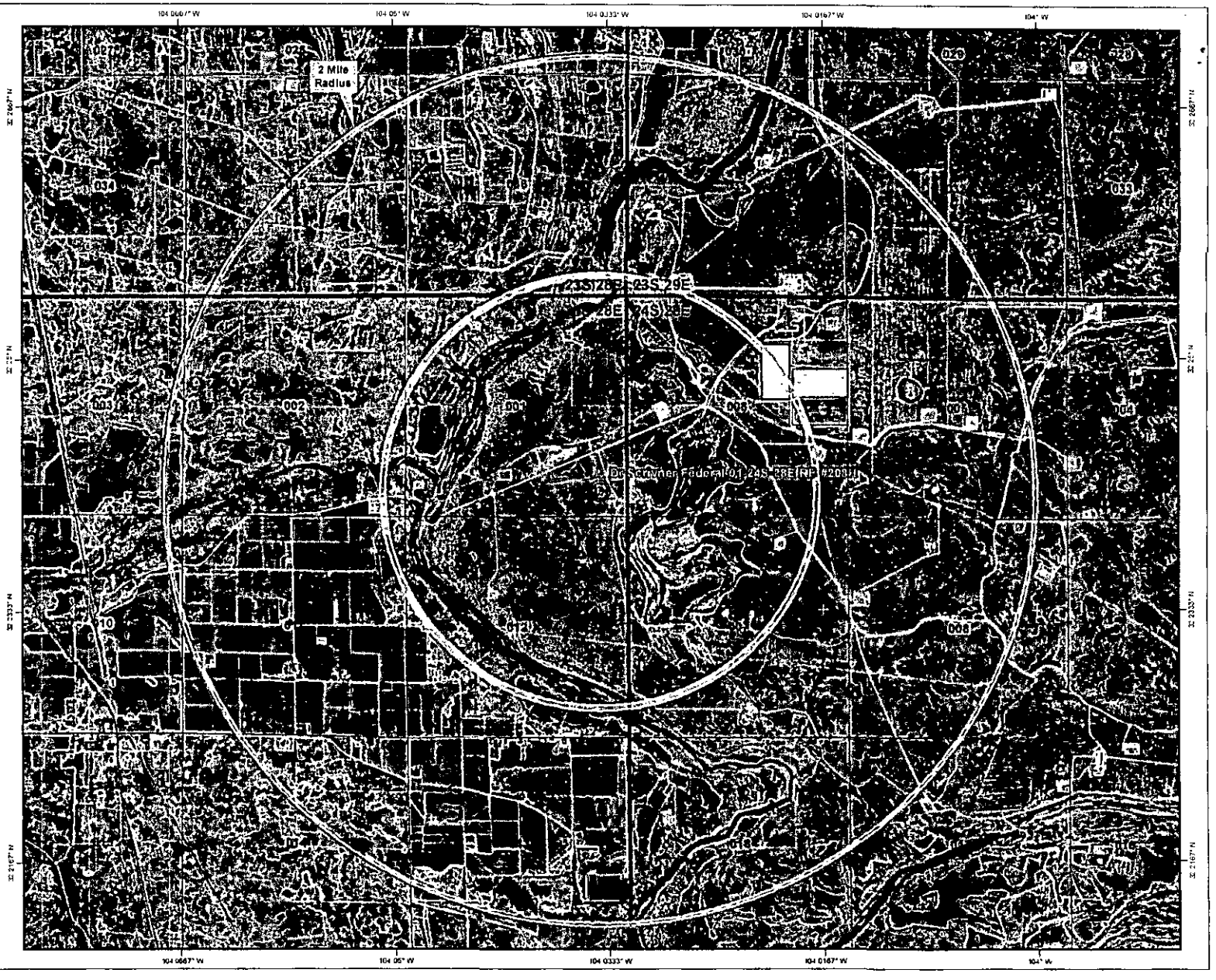
Prepared by Permits West, Inc., December 18, 2015
for Matador Production Company



Matador Production Company

Dr. Scrivner Fed 01-24S-28E RB #208H
H_2S Contingency Plan:
2 Mile Radius Map

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



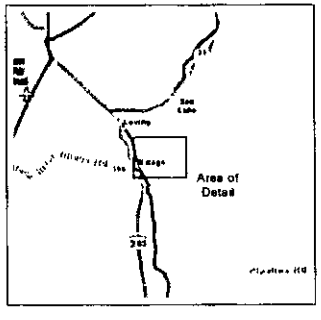
Surface Hole Location

1:26,000
0 0.25 0.5 1
Miles

NAD 1927 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST, INC.

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

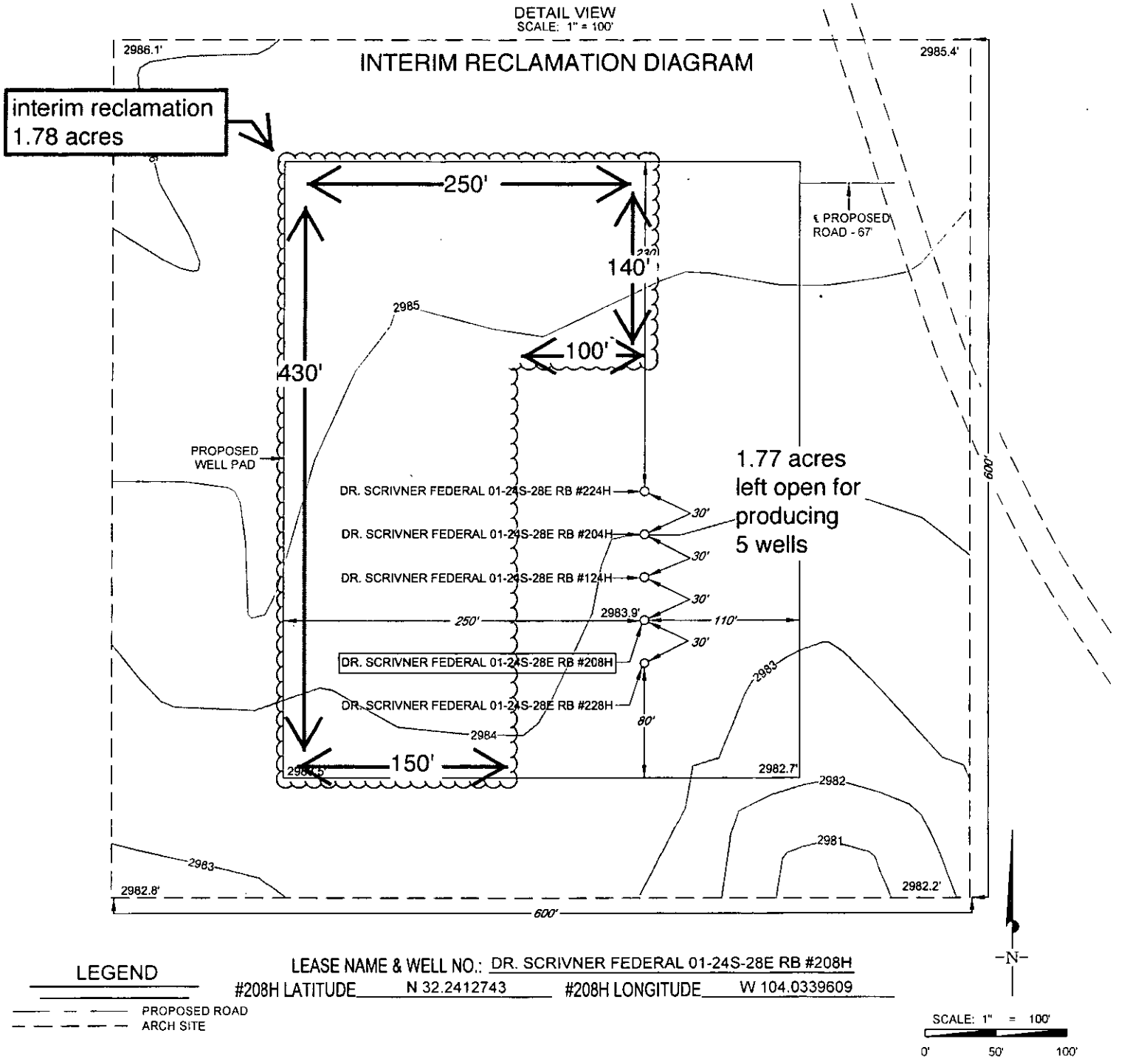


Matador PRODUCTION COMPANY

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

DETAIL VIEW
SCALE: 1" = 100'

INTERIM RECLAMATION DIAGRAM



LEGEND

PROPOSED ROAD
ARCH SITE

LEASE NAME & WELL NO.: DR. SCRIVNER FEDERAL 01-24S-28E RB #208H

#208H LATITUDE N 32.2412743 #208H LONGITUDE W 104.0339609

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

Dr. Scrivner Fed. 01-24S-28E RB 208H
SHL 631' FSL & 662' FEL Sec. 1, T. 24 S., R. 28 E.
BHL 330' 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.

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

The only production equipment on the pad will be the pump jack. A ≈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 ≈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.

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 ≈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.

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 Production Company
LEASE NO.:	NMNM115410
WELL NAME & NO.:	208H-Dr. Scrivner Federal 01 24S 28E RB
SURFACE HOLE FOOTAGE:	631'/S & 662'/E
BOTTOM HOLE FOOTAGE	330'/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.

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.

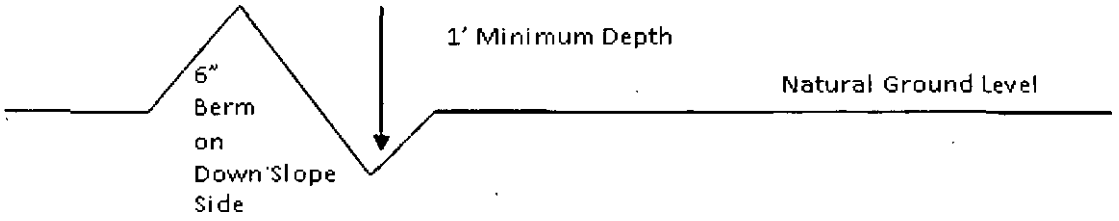
Ditching
Ditching shall be required on both sides of the road.

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 outsloping 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 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ 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

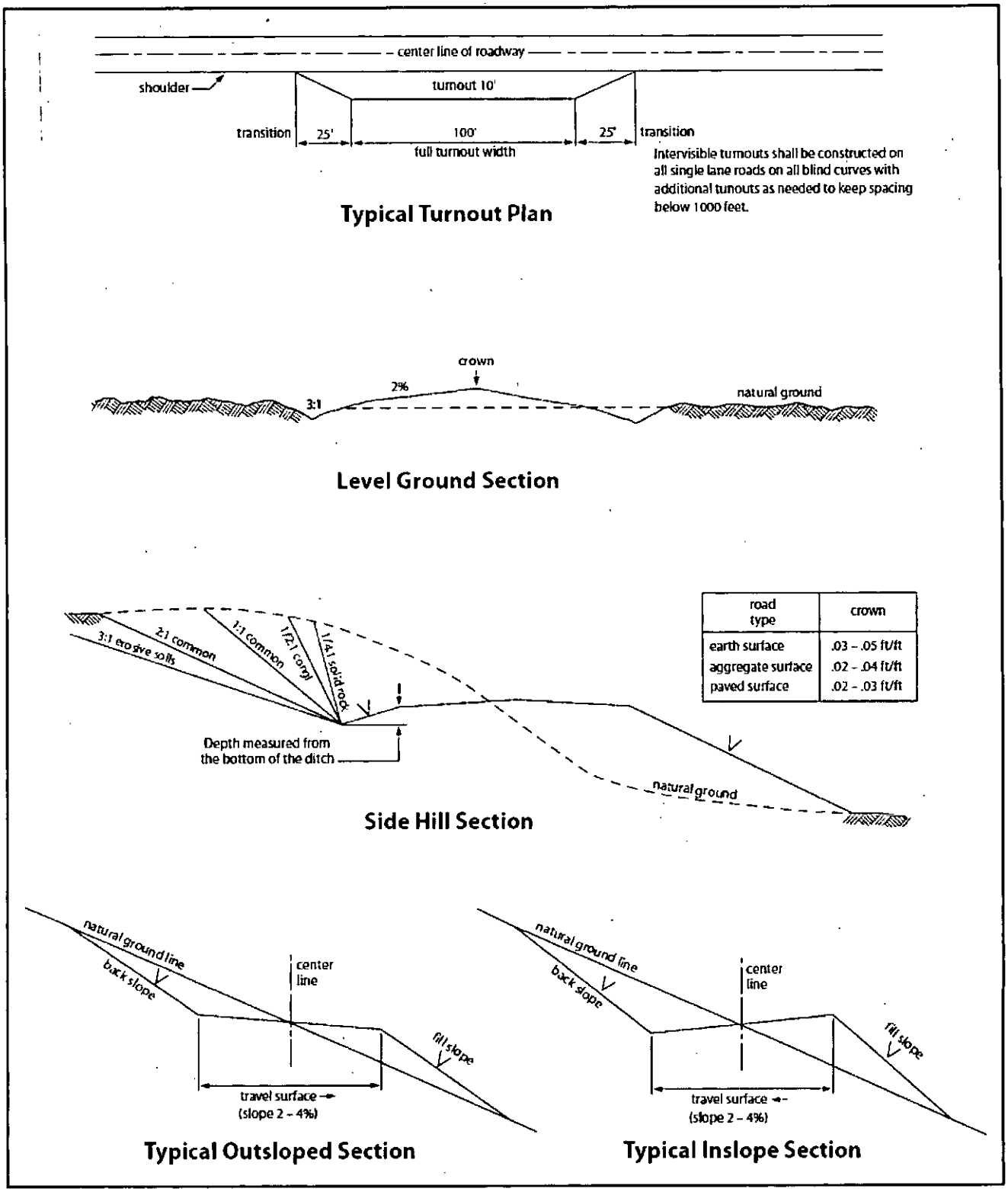


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. **Excess calculates to negative 8% - Additional cement will be required.**

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 exclosure 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 Exclosures
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 exclosure 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.

(x) 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 of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then 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:

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

*Pounds of pure live seed:

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