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	C_{a_I}	Isba	d d		FORM OMB N Expires (Company)		MIN	F
orm 3160-3 March 2012) UNITED STATE:	S	OCI	DH	eld obb	FORM OMB NAPIRES OF STATE OF S	APPROVED No. 1004-0137 October 31, 20	JURP 114	P
DEPARTMENT OF THE BUREAU OF LAND MAI	INTERIOR NAGEMEN	Γ			NMNM115426 <			
APPLICATION FOR PERMIT TO	DRILL O	R REENT	rer		6. If Indian, Allotee	or Tribe N	ame	
la. Type of work: DRILL REENT	ER				7 If Unit or CA Agre		7/	(چ
lb. Type of Well: Oil Well Gas Well Other	✓s	ingle Zone	Multip	ole Zone	& Lease Name and DR IRELAND RED		(32226 3H	7)
Name of Operator MATADOR PRODUCTION COMPAN	1				9 API Well No.	451	120	
3a. Address 5400 LBJ Freeway, Suite 1500 Dallas TX 752	3b. Phone N (972)371-		rea code)		10, Field and Pool, or BONE, SPRING	Exploratory	2200)	
4. Location of Well (Report location clearly and in accordance with a At surface SESE / 570 FSL / 1280 FEL / LAT 32.28443 At proposed prod. zone NWNE / 240 FNL / 1650 FEL / LA	71 / LONG -	103.40232	-	6302	11. Sec., T. R. M. or E SEC 19 / T23S / R		•	
Distance in miles and direction from nearest town or post office*	1 02.20071	J. J.	×100.403	3332	12. County or Parish LEA		13. State	
5. Distance from proposed* location to nearest 570 feet property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No. of 279.45	acres in lease		17. Spacing	g Unit dedicated to this	well		
8. Distance from proposed location* to nearest well, drilling, completed, 30 feet applied for, on this lease, ft.	19 Proposo 9920 feet	ed Depth / 14692 fe	eet		BIA Bond No. on file MB001079			
I. Elevations (Show whether DF, KDB, RT, GL, etc.) 3387 feet	22. Approx 12/01/20	imate date w	ork will sta	rt*	23. Estimated duration 25 days	n		
	8 1	chments						
he following, completed in accordance with the requirements of Onsho	ore Oil and Gas							
. Well plat certified by a registered surveyor. 2. A Drilling Plan.		Item	20 above).	•	ns unless covered by an	existing bo	ond on file (see	
A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office).	Lands, the	, .			ormation and/or plans as	s may be rec	quired by the	
5. Signature (Electronic Submission)		(Printed T) Thompsoi	. /	05)254-11	15	Date 03/30/2	018	
Assistant Project Manager							_	
pproved by (Signature) (Electronic Submission)		(Printed Ty Layton / F	•	234-5959		Date 07/06/2	018	
itle Assistant Field Manager Lands & Minerals	Office CAR	e RLSBAD		,				
pplication approval does not warrant or certify that the applicant hol onduct operations thereon. onditions of approval, if any, are attached.			o those righ	ts in the subj	ject lease which-would o	entitle the ap	pplicant to	
itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a tates any false, fictitious or fraudulent statements or representations as	crime for any past to any matter	person know within its jur	ingly and i	willfully to m	ake to any department of	or agency o	f the United	

(Continued on page 2)
GCP Rec 05/16/18

*(Instructions on page 2)

Approval Date: 07/06/2018

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396, 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts. ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

(Form 3160-3, page 2)

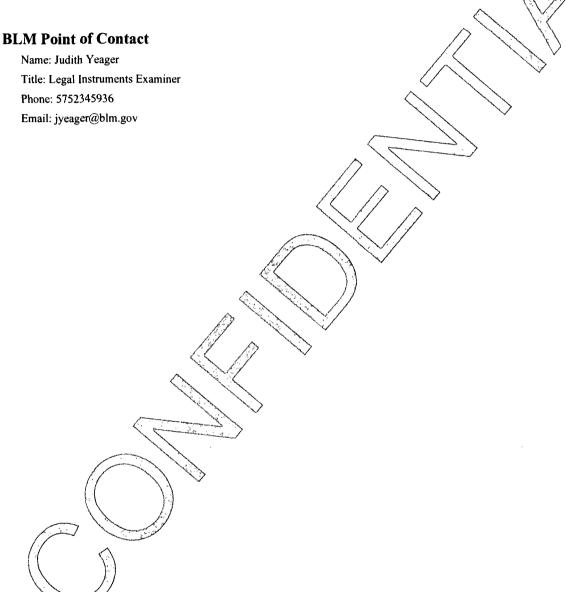
Additional Operator Remarks

Location of Well

1. SHL: SESE / 570 FSL / 1280 FEL / TWSP: 23S / RANGE: 35E / SECTION: 19 / LAT: 32.2844371 / LONG: -103.4023251 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 330 FSL / 1650 FEL / TWSP: 23S / RANGE: 35E / SECTION: 19 / LAT: 32.2837705 / LONG: -103.403533 (TVD: 9920 feet, MD: 10276 feet)

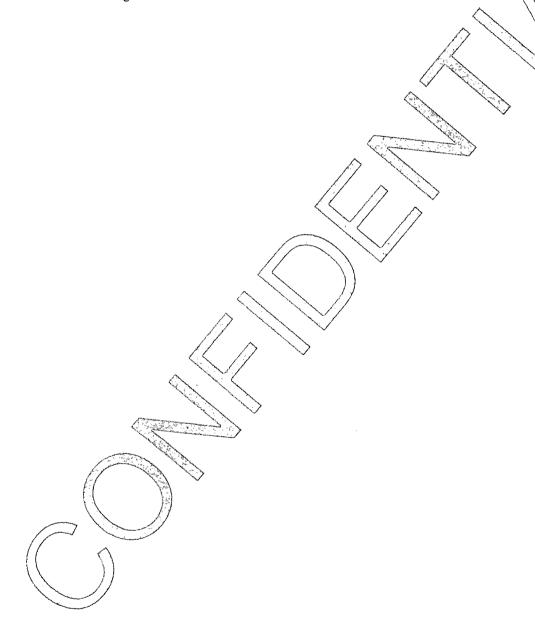
BHL: NWNE / 240 FNL / 1650 FEL / TWSP: 23S / RANGE: 35E / SECTION: 19 / LAT: 32.2967119 / LONG: -103.4035392 (TVD: 9920) feet, MD: 14692 feet)



(Form 3160-3, page 3)

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.



(Form 3160-3, page 4)



U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

App...cation Data Report

Zip: 75240

APD ID: 10400028330 Submission Date: 03/30/2018

Operator Name: MATADOR PRODUCTION COMPANY

Wall Name: DR IRELAND FED COM Well Number: 113H

Well Type: OIL WELL Well Work Type: Drill

Highlighted data catable the most recent chances

Show Final Text

Section 1 - General

BLM Office: CARLSBAD User: Lara Thompson Title: Assistant Project Manager

Federal/Indian APD: FED Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM115426 Lease Acres: 279.45

Surface access agreement in place? Allotted? Reservation:

Agreement in place? NO Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? YES APD Operator: MATADOR PRODUCTION COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: MATADOR PRODUCTION COMPANY

Operator Address: 5400 LBJ Freeway, Suite 1500

Operator PO Box:

Operator City: Dallas State: TX

Operator Phone: (972)371-5200

Operator Internet Address: amonroe@matadorresources.com

Section 2 - Well Information

Well in Master Development Plan? NO Mater Development Plan name:

Well in Master SUPO? NO Master SUPO name:

Well in Master Drilling Plan? NO Master Drilling Plan name:

Well Number: 113H Well API Number:

Field/Pool or Exploratory? Field and Pool Field Name: BONE SPRING Pool Name:

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: MATADOR PRC

JON COMPANY

Wall Klama: DR IRBLAND FIED COM

Well Number: 113H

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Type of Well Pad: MULTIPLE WELL Multiple Well Pad Name: DR Number: 4

Well Class: HORIZONTAL IRELAND FEDERAL Number of Legs: 1

Well Work Type: Drill
Well Type: OIL WELL
Describe Well Type:

Well sub-Type: APPRAISAL

Describe sub-type:

Distance to town: Distance to nearest well: 30 FT Distance to lease line: 570 FT

Reservoir well spacing assigned acres Measurement: 160.09 Acres

Well plat: BO_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_SITE_REV1_S_20180313102854.PDF

CD_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_PRO_REV1_S_20180313102855.PDF

1Mile_Radius_Map_20180313102917.docx

DrlrelandFederal113H_Signed_20180420111208.pdf

Well work start Date: 12/01/2018 Duration: 25 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 Vertical Datum: NAVD88

Survey number:

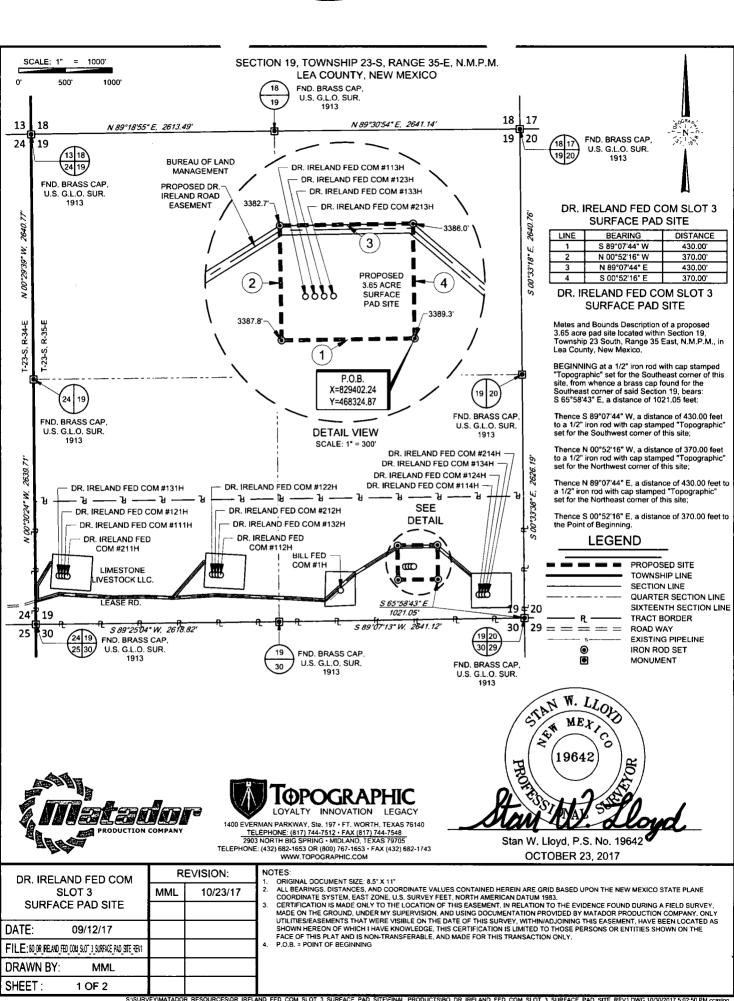
	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	dvT
SHL Leg #1	570	FSL	128 0	FEL	238	35E	19	Aliquot SESE	32.28443 71	- 103.4023 251	LEA	NEW MEXI CO		F	NMNM 115426	338 7	0	0
KOP Leg #1	570	FSL	128 0	FEL	238	35E	19	Aliquot SESE	32.28443 71	- 103.4023 251	LEA	NEW MEXI CO		F	NMNM 115426	238 7	100 0	100 0

Operator Name: MATADOR PROL

ON COMPANY

Well Number: 113H

:	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	ΔΛΤ
PPP	330	FSL	165	FEL	23\$	35E	19	Aliquot	32.28377	-	LEA	NEW	NEW	F	NMNM	-	102	992
Leg			0					SWSE	05	103.4035		MEXI	MEXI		115426	653	76	0
#1										23		СО	СО			3		
EXIT	330	FNL	165	FEL	23\$	35E	19	Aliquot	32.29646	-	LEA	NEW	NEW	F	NMNM	-	146	992
Leg			0					NWNE	45	103.4035		MEXI	MEXI		113422	653	02	0
#1										389		со	co			3		
BHL	240	FNL	165	FEL	238	35E	19	Aliquot	32.29671	-	LEA	NEW	NEW	F	NMNM	-	146	992
Leg			0					NWNE	19	103.4035		MEXI	MEXI		115426	653	92	0
#1										392		co	СО			3		





U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



APD ID: 10400028330 Submission Date: 03/30/2018

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FED COM Well Number: 113H

Well Type: OIL WELL Well Work Type: Drill



Show Final Text

Section 1 - Geologic Formations

Formation			True Vertical	Measured		,	Producing
.: ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
1	同 应制度	3387	1396	1396		USEABLE WATER	No
2	\$21,466	1616	1771	1771	•	NONE	No
3	caphan Gize	-656	4043	4043		NONE	No
4	DELL COMOS	-2155	5542	5542		NATURAL GAS,OIL	No
5	igrophy io private	-4105	7492	7492		NATURAL GAS,OIL	No
6	consterns limi	-5414	8801	8801		NATURAL GAS,OIL	No
7	rone spring ist	-6135	9522	9522		NATURAL GAS,OIL	No
8	PONESSANC 200	-6601	9988	9988		NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M Rating Depth: 15000

Equipment: See Exhibit E-1. A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. 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.

Requesting Variance? YES

Variance request: The operator requests a variance to have the option of running a speed head for setting the intermediate strings. In the case of running a speed head with landing mandrel for 9-5/8" casing, a minimum of a 3M BOPE system will be installed after surface casing is set. Matador Resources 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 (see Exhibit E-2). 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.

Testing Procedure: After setting surface casing and before drilling below the surface casing shoe, a minimum of a 2M BOPE system will be installed and tested to 250 psi low and 1000 psi high. After setting intermediate casing, a minimum of a 3M system will be installed and tested to 250 psi low and 3000 psi high with the annular being tested to 250 psi low and 3000 psi high with the annular being tested to 250 psi low and 2500 psi high.

Operator Name: MATADOR PRODU

OOR PRODL IN COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

Choke Diagram Attachment:

Choke_Manifold_20180313114310.pdf

BOP Diagram Attachment:

BOP_297_001_20180313114321.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	850	0	850			850	J-55		OTHER - BTC	1.12 5	1.12 5	BUOY	1.8	BUOY	1.8
2	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	5400	0	5400			5400	J-55		OTHER - BTC	1.12 5	1.12 5	BUOY	1.8	BUOY	1.8
3	PRODUCTI ON	8.75	5.5	NEW	NON API	N	4400	14692	4400	9920			10292	P- 110		OTHER - BTC/TXP	1.12 5	1.12 5	BUOY	1.8	BUOY	1.8

Casing Attachments

Casing ID: 1

String Type: SURFACE

Inspection Document:

Spec Document:

TenarisHydril_TenarisXP_BTC_5.500_20_20180213122618.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_3_string_20180213123000.pdf

Operator Name: MATADOR PRODUC

OR PRODUC IN COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

Casing Attachments

Casing ID: 2

String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_3_string_20180213122944.pdf

Casing ID: 3

String Type: PRODUCTION

Inspection Document:

Spec Document:

TenarisHydril_TenarisXP_BTC_5.500_20_20180306142420.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_3_string_20180213122951.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	850	210	1.82	12.8	382	100	Class C	Bentonite + 2% CaCL2 + 3% NaCl + LCM
SURFACE	Tail		0	850	720	1.38	14.8	994	100	Class C	5% NaCl + LCM
INTERMEDIATE	Lead		0	5400	1170	2.13	12.6	2492	100	Class C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
INTERMEDIATE	Tail		0	5400	620	1.38	14.8	856	100	Class C	5% NaCl + LCM
PRODUCTION	Lead		4400	1469 2	580	2.35	11.5	1363	35	TXI	Fluid Loss + Dispersant + Retarder + LCM

Operator Name: MATADOR PRODU

JN COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		4400	1469 2	1500	1.39	13.2	2085	35	TXI	Fluid Loss + Dispersant + Retarder + LCM

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: See Exhibit E-1. A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. 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.

Describe the mud monitoring system utilized: The Mud Monitoring System is an electronic Pason system satisfying requirements of Onshore Order 1. Mud Logging Program: 2 man unit from 5400 – TD.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (Ibs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	Н	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	850	SPUD MUD	8.3	8.3							
0	5400	SALT SATURATED	10	10							
4400	1469 2	OTHER : FW/ Cut Brine	9	9							

Operator Name: MATADOR PRODUC

N COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

See page 3 of Drilling Plan attached in Other Facets, Section 8.

List of open and cased hole logs run in the well:

CBL,GR,MUDLOG

Coring operation description for the well:

No DSTs or cores are planned at this time.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4500

Anticipated Surface Pressure: 2317.6

Anticipated Bottom Hole Temperature(F): 135

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Matador_Hydrogen_Sulfide_Drilling_Leslie__024_20180313115529.docx H2S Emergency Contacts 20180529152127.docx

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Dr._Ireland_Fed_Com__113H___Well_Plan_v1_20180313115550.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

3_string_Speed_Head_20180313115606.pdf

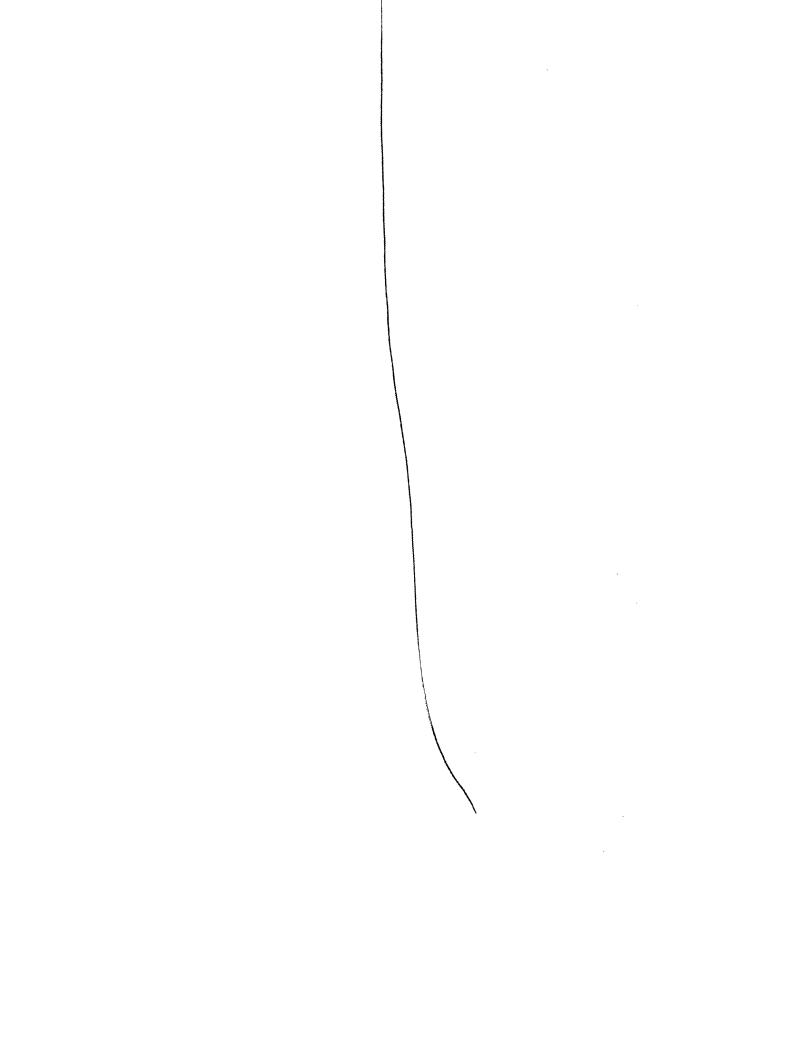
Close_Loop_System_20180313115617.docx

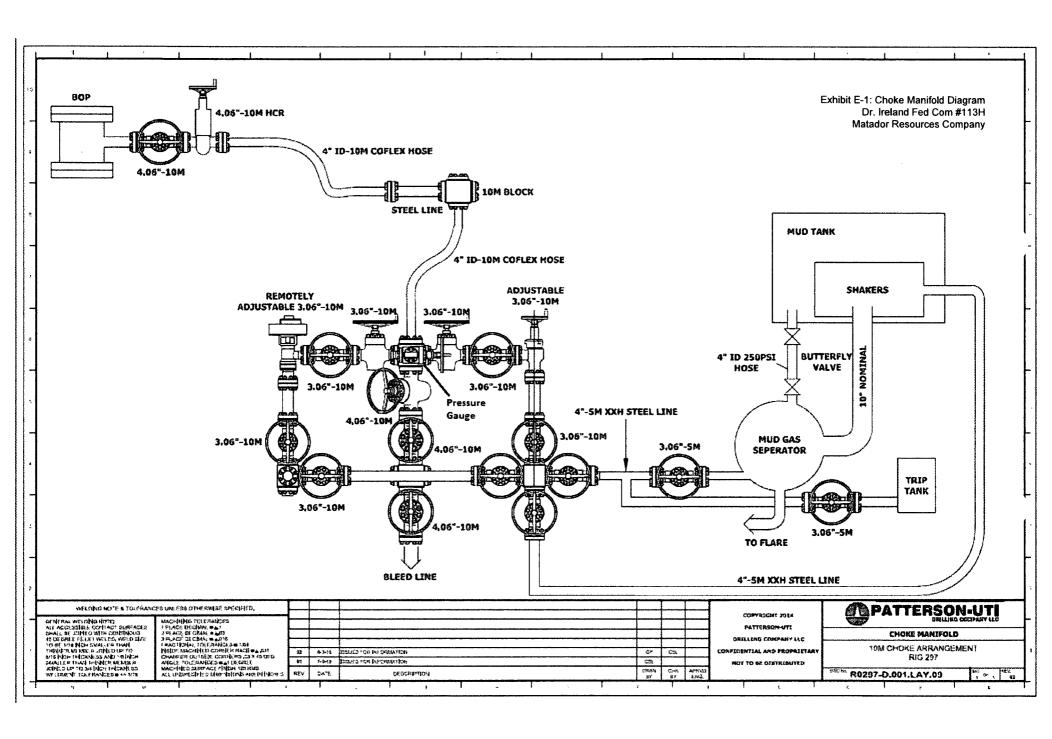
297Co_Flex_Certs__Dr._Ireland_Fed_Com__113H_20180313120133.pdf

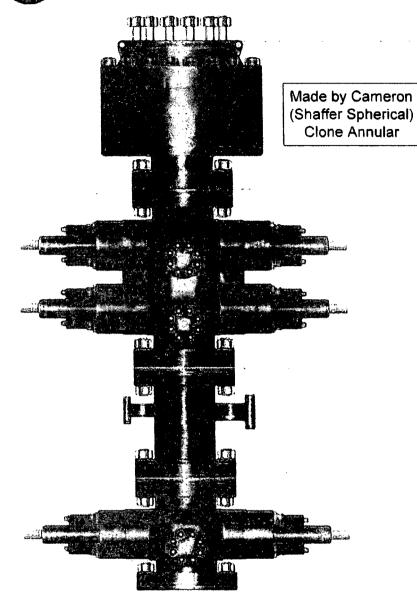
 $Dr._Ireland_Fed_Com__113H_MTDR_Drill_Plan_20180313120150.docx$

Gas Capture Plan Dr. Ireland 111H 112H 113H 114H 20180529152212.docx

Other Variance attachment:







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

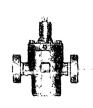
BORE 13 5/8" PRESSURE 10,000

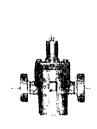
RAMS: 5" Pipe

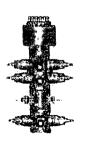
HEIGHT: 41 5/8" WEIGHT: 13,000 lbs

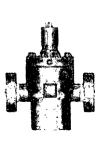
WING VALVES

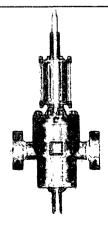












2" Check Valve

2" Manual Valve

2" Manual Valve

4" Manual Valve

4" Hydraulic Valve

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

February 02 2017

Size: 5.500 in.

Min. Wall Thickness: 87.5 %



Wall: 0.361 in. Weight: 20.00 lbs/ft Connection: TenarisXP® BTC Grade: P110-IC

Casing/Tubing: CAS

Coupling Option: REGULAR

					····
	•	GEOMET	ry		
Nominal OD	5.500 in.	Nominal Weight	20.00 lbs/ft	Standard Drift Diameter	4.653 in.
Nominal ID	4.778 in.	Wall Thickness	0.361 in.	Special Drift Diameter	N/A
Plain End Weight	19.83 lbs/ft				
		PERFORM	ANCE		
Body Yield Strength	641 x 1000 lbs	Internal Yield	12630 psi	SMYS	110000 psi
Collapse	12100 psi				
	TE	NARISXP® BTC CO		ATA	
		GEOMET	TRY	1	
Connection OD	6.100 in.	Coupling Length	9.450 in.	Connection ID	4.766 in.
Critical Section Area	5.828 sq. in.	Threads per in.	5.00	Make-Up Loss	4.204 in.
		PERFORM	ANCE		
Tension Efficiency	100 %	Joint Yield Strength	641 x 1000 lbs	Internal Pressure $Capacity^{(\underline{1})}$	12630 psi
Structural Compression Efficiency	100 %	Structural Compression Strength	641 x 1000 lbs	Structural Bending ⁽²⁾	92 °/100 ft
External Pressure Capacity	12100 psi				
	£	STIMATED MAKE-L	JP TORQUES	3)	
Minimum	11270 ft-lbs	Optimum	12520 ft-lbs	Maximum	13770 ft-lbs
		OPERATIONAL LI	MIT TORQUES	3	
Operating Torque	21500 ft-lbs	Yield Torque	23900 ft-lbs		

⁽¹⁾ Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per

section 10.3 API 5C3 , 5O 10400 - 2007.

- (2) Structural rating, pure bending to yield (i.e no other loads applied)
- (3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed. For additional information, please contact us at contact-tenarishydril@tenaris.com

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

February 02 2017



Size: 5.500 in. Wall: 0.361 in.

Weight: 20.00 lbs/ft Grade: P110-IC

Min. Wall Thickness: 87.5 %

Connection: TenarisXP® BTC

Casing/Tubing: CAS

Coupling Option: REGULAR

		GEOMET	'RY		
Nominal OD	5.500 in.	Nominal Weight	20.00 lbs/ft	Standard Drift Diameter	4.653 in.
Nominal ID	4.778 in.	Wall Thickness	0.361 in.	Special Drift Diameter	N/A
Plain End Weight	19.83 lbs/ft			-	
		PERFORM	ANCE		
Body Yield Strength	641 x 1000 lbs	Internal Yield	12630 psi	SMYS	110000 psi
Collapse	12100 psi				
	TEI	NARISXP® BTC CO		AIA	
		GEOMET		I	
	6.100 in.	Coupling Length	9.450 in.	Connection ID	4.766 in.
Critical Section Area	5.828 sq. in.	Threads per in.	5.00	Make-Up Loss	4.204 in.
		PERFORM	ANCE		
Tension Efficiency	100 %	Joint Yield Strength	641 × 1000 lbs	Internal Pressure $Capacity^{({ extbf{1}})}$	12630 psi
Structural		Structural	641 x 1000	Structural	
Compression	100 %	Compression	lbs	Bending(2)	92 °/100 ft
Efficiency		Strength			
External Pressure	12100 psi				
Capacity					
	E	STIMATED MAKE-L	IP TORQUES	(3) T	
Minimum	11270 ft-lbs	Optimum	12520 ft-lbs	Maximum	13770 ft-ll
		OPERATIONAL LI	MIT TORQUES	5	
Operating Torque	21500 ft-lbs	Yield Torque	23900 ft-lbs		
		BLANKING DI	MENSIONS		:
		Blanking Din			

⁽¹⁾ Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per

section 10.3 API 5C3 , __O 10400 - 2007.

- (2) Structural rating, pure bending to yield (i.e no other loads applied)
- (3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread $compounds \ please \ contact \ us \ at \ \underline{licensees@oilfield.tenaris.com}. \ Torque \ values \ may \ be \ further \ reviewed.$ For additional information, please contact us at contact-tenarishydril@tenaris.com

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DFb=1.125

Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud
gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore
pressure.

Tensile: DFt=1.8

 Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an
 internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud
 gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore
 pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at
 setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force
 will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative
 backup force than pore pressure.

Tensile: DFt=1.8

 Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud
 gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient
 of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

 Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an
 internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DFb=1.125

Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud
gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore
pressure.

Tensile: DFt=1.8

 Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DFb=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud
 gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore
 pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst
 pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick
 with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that
 (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft),
 which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at
 setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force
 will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative
 backup force than pore pressure.

Tensile: DFt=1.8

 Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud
 gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient
 of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DFb=1.125

Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud
gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore
pressure.

Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DFc=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF6=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud
 gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore
 pressure
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DFt=1.8

 Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DF_c=1.125

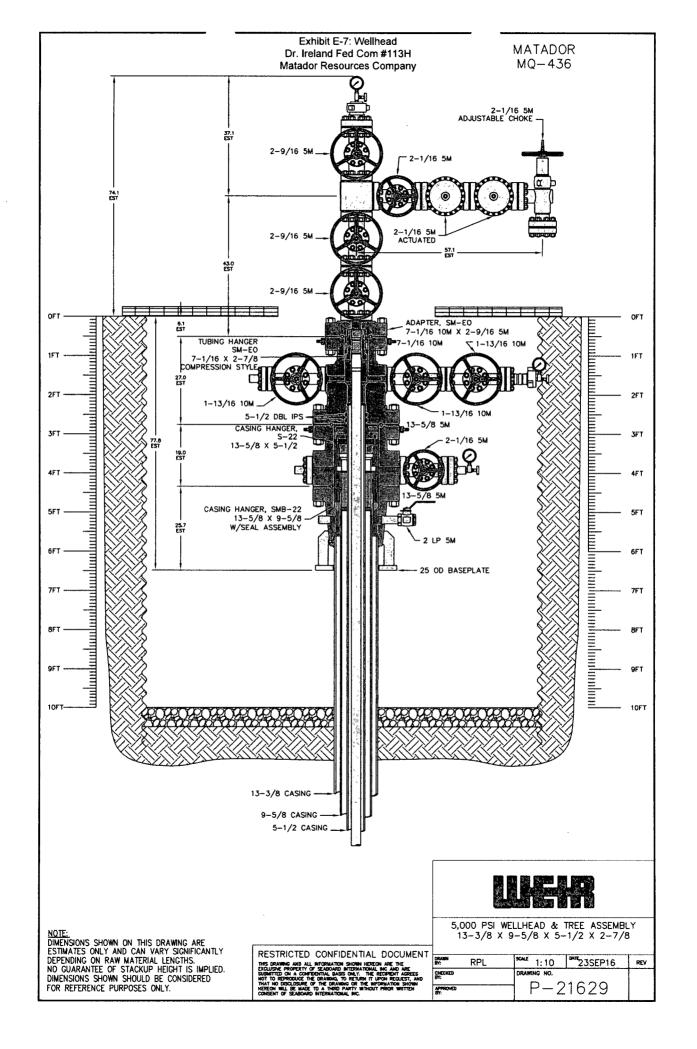
- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud
 gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient
 of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).



Closed-Loop System

Operating and Maintenance Plan:

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

Closure Plan:

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

10'

O.D.



Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

Pick Ticket #: 284918

Verification

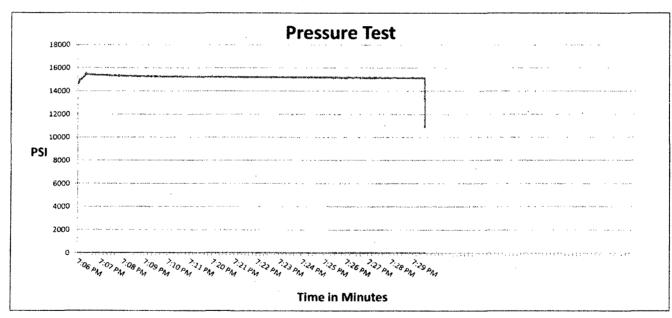
Hose Specifications

Hose Type Length Ck LD. 3ª 4.79" **Working Pressure Burst Pressure** 10000 PSI

Type of Fitting 4-1/16 10K Die Size 5.37" Hose Serial # Standard Safety Multiplier Applies 10490

Coupling Method Swage Final O.D. 5.37" Hose Assembly Serial #

284918-2



Test Pressure 15000 PSI

Time Held at Test Pressure 15 2/4 Minutes

Actual Burst Pressure

Peak Pressure 15732 PSI

Comments: Hose assembly pressure tested with water at ambient temperature

Tested By: Tyler H

Approved By: Ryan Adams



Midwest Hose & Specialty, Inc.

General Infor	mation	Hose Specifi	cations
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	ОКС	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
	Fit	tings	
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 (Fleat#)	
Dies Used	5.3	7 Dies Used	5.3
	Hydrostatic Te	est Requirements	
Test Pressure (psi)	15,000	Hose assembly was tested	with ambient water
	15 1/2		



Midwest Hose & Specialty, Inc.

		Certificate	of Conformity	
Customer:	PATTERSON E	3&E	Customer P.O.# 260471	:
Sales Order #	236404		Date Assembled: 12/8/2014	
		Speci	ifications	
Hose Asser	mbly 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
Far Allana	12/9/2014



Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

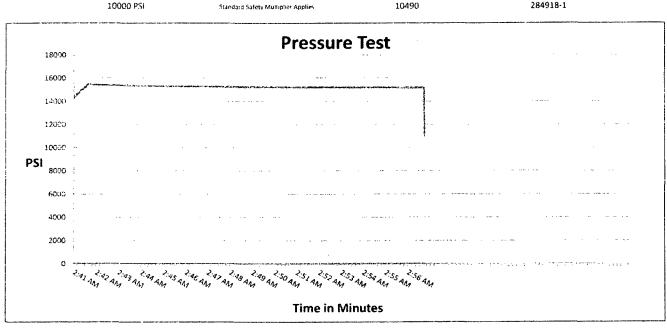
Hose Specifications

Hose Type	
Ck	
<u>l.D.</u>	
3"	
Working Pressure	

Length
20'
O.D.
4.77"
Burst Pressure
Standard Safety Multiplier Applies

<u>Verification</u>

Type of Fitting	Coupling Method
4-1/16 10K	Swage
Die Size	Final O.D.
5.37"	5.40"
Hose Serial #	Hose Assembly Serial #
10400	28/018-1



Test Pressure

Time Held at Test Pressure 15 2/4 Minutes **Actual Burst Pressure**

Peak Pressure 15893 PSI

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

Tested By: Tyler Hill

Approved By: Ryan Adams



Midwest Hose & Specialty, Inc.

General Information		Hose Specifi	cations	
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	ОКС	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	
	Fit	tings		
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	5.3	7 Dies Used 5		
	Hydrostatic Te	st Requirements		
	15,000	Hose assembly was tested with ambient water		
Test Pressure (psi)		temperature.		



Midwest Hose & Specialty, Inc.

		, me.	
	Certificato	e of Conformity	
Customer: PATTERSON B&E		Customer P.O.# 260471	
Sales Order # 236404		Date Assembled: 12/8/2014	
	Spec	cifications	
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 abov to the requirements of the purc		d for the referenced purchase order rent industry standards.	to be true according
		*	
Supplier:			
Midwest Hose & Specialty, Inc. 3312 S I-35 Service Rd			•
Oklahoma City, OK 73129			
Comments:			
Approved I	Ву	Date	
Frank	7		

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December 9, 2014



Internal Hydrostatic Test Graph

Customer: Patterson

Pick Ticket #: 284918

Verification

Hose Specifications

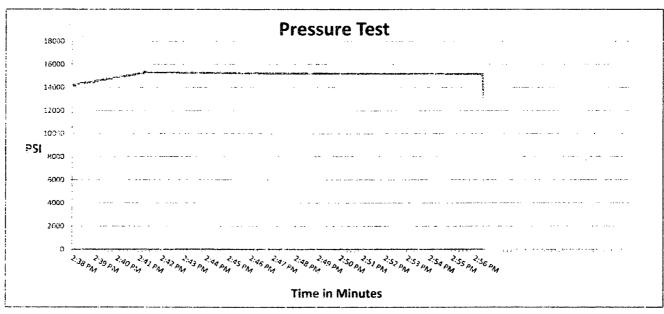
Hose Type Mud LD. **Working Pressure**

10000 PSI

Length 70' Q,D4,79" **Burst Pressure** Standard Safety Multiplier Applies Type of Fitting 4 1/16 10K Die Size 5.37" Hose Serial # 10490

Coupling Method Swage Final O.D. 5.37" Hose Assembly Serial #

284918-3



Test Pressure 15000 PSI

Time Held at Test Pressure 16 3/4 Minutes

Actual Burst Pressure

Peak Pressure 15410 PSI

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

Tested By: Ayler Hill

Approved By: Ryan Agams



Midwest Hose & Specialty, Inc.

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	ОКС	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	
	Fitt	ings		
End A		End B		
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB	
Stem (Heat #)	A141420	Stem (Heot #)	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	5.3	
	Hydrostatic Tes	t Requirements		
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water		
	16 3/4	temperature.		



Midwest Hose & Specialty, Inc.

	Certificate o	f Conformity	
Customer: PATTERSON B	&E	Customer P.O.# 260471	
Sales Order # 236404		Date Assembled: 12/8/2014	
	Specifi	cations	
Hose Assembly Type:	Choke & Kill		
Assembly Serial #	287918-3	Hose Lot # and Date Code	10490-01/13
Hose Working Pressure (psi)	10000	Test Pressure (psi)	15000

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

Supplier:

Midwest Hose & Specialty, Inc. 3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

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Drilling Operations Plan Dr. Ireland Fed Com #113H **Matador Resources Company**

Sec. 19, 23S, 35E Lea County, NM

Surface Location:

570' FSL & 1280' FEL, Sec. 19

Bottom Hole Location:

240' FNL & 1650' FEL, Sec. 19

Elevation Above Sea Level: 3387'

Geologic Name of Surface Formation:

First Bone Spring

Type of Well: Horizontal well, No Pilot Hole, Drilled with conventional rotary tools

Proposed Drilling Depth:

14,692' MD / 9,920' TVD

Estimated Tops of Geological Markers w/ Mineral Bearing Formation:

	Est	
Formation Name	Тор	Bearing
Rustler	1396	Water
Salado	1771	Barren
Base of Salt	4043	Barren
Bell Canyon	5542	Hydrocarbo
Bell Carlyon	3342	n
Brushy Canyon	7492	Hydrocarbo
Didsity Carryott	7432	l n
Bone Spring Lime	8801	Hydrocarbo
Bone Spring Lime	0001	n
First Bone Spring Carb	9522	Hydrocarbo
L	9322	n
First Bone Spring Sand	9840	Hydrocarbo
That bone apring Sand	3040	n
Second Bone Spring	9988	Hydrocarbo
Carb	3300	n

OSE Ground Water Estimated Depth:

280'

Casing Program

Name	Hole Size	Casing Size	Wt/Grad e	Thread Collar	Setting Depth	Top Cement
			54.5# J-			
Surface	17-1/2"	13-3/8" (new)	55	втс	850	Surface
Intermediat						
е	12-1/4"	9-5/8" (new)	40# J-55	втс	5400	Surface
			20# P-			
Production	8-3/4"	5-1/2" (new)	110	BTC/TXP	14692	4400

Minimum Safety Factors:

Burst: 1.125

Collapse: 1.125

Tension 1.8

Drilling Operations Plan Dr. Ireland Fed Com #113H Matador Resources Company Sec. 19, 23S, 35E Lea County, NM

Cementing Program

Name	Туре	Sacks	Yield	Weight	Blend
Surface	Lead	210	1.82	12.8	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM
	Tail	720	1.38	14.8	Class C + 5% NaCl + LCM
TOC =	0'	10	00% Exce	ss	Centralizers per Onshore Order 2.III.B.1f
Intermediat e	Lead	1170	2.13	12.6	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	620	1.38	14.8	Class C + 5% NaCl + LCM
TOC = 0' 100% Excess		2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface			
Production	Lead	580	2.35	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	1500	1.39	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 44	TOC = 4400' 35% Excess		2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC)		

Pressure Control Equipment:

See Exhibit E-1. A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. 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.

After setting surface casing and before drilling below the surface casing shoe, a minimum of a 2M BOPE system will be installed and tested to 250 psi low and 2000 psi high with the annular being tested to 250 psi low and 1000 psi high. After setting intermediate casing, a minimum of a 3M system will be installed and tested to 250 psi low and 3000 psi high with the annular being tested to 250 psi low and 2500 psi high.

The operator requests a variance to have the option of running a speed head for setting the intermediate strings. In the case of running a speed head with landing mandrel for 9-5/8" casing, a minimum of a 3M BOPE system will be installed after surface casing is set. BOP test pressures will be 250 psi low and 3000 psi high with the annular being tested to 250 psi low and 2500 psi high before drilling below surface shoe. A diagram of the speed head is attached.

Drilling Operations Plan
Dr. Ireland Fed Com #113H
Matador Resources Company
Sec. 19, 23S, 35E
Lea County, NM

Matador Resources 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 (see Exhibit E-2). 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.

Proposed Mud System:

Name	Hole Size	Mud Weight	Visc	Fluid Loss	Type Mud
Surface	17-1/2"	8.30	28	NC	FW Spud Mud
Intermediat					
е	12-1/4"	10.00	30-32	NC	Brine Water
Production	8-3/4"	9.00	30-32	NC	FW/Cut Brine

All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program subject to change due to hole conditions.

The Mud Monitoring System is an electronic Pason system satisfying requirements of Onshore Order 1.

Testing, Logging & Coring Program:

- Mud Logging Program: 2 man unit from 5400 TD
- Electric Logging Program: No electric logs are planned at this time. GR will be collected through the MWD tools from Inter. Csg to TD
- No DSTs or cores are planned at this time
- CBL w/ CCL from as far as gravity will let it fall to TOC

Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H_2S from the surface to the Bone Spring formations 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 we have an 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

Estimated BHP: 4500 Estimated BHT: 135°

Construction and Drilling:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 25 days. If production casing is run an additional 30 days will be required to complete and construct surface facilities

ells that are scheduled to be drilled to be foreseeable future to Energy Transfer Parts. If changes occur that will affect e drilling and completion schedule, Matador Production Company will notify Energy Transfer Partners. Additionally, this produced from the well will be processed at a processing plant further downstream and, although unanticipated, and sues with downstream facilities could cause flaring at the wellhead. The actual flow of the gas will be based of impression operating parameters and gathering system pressures measured when the well starts producing.

lowback Strategy

fter the fracture treatment/completion operations (flowback), the well will be produced to temporary production tanks an e gas will be flared or vented. During flowback, the fluids and sand content will be monitored. If the produced fluid intain minimal sand, then the well will be turned to production facilities. The gas sales should start as soon as the well start awing through the production facilities, unless there are operational issues on the midstream system at that time. Based our trent information, it is Matador's belief the system will be able to take the gas upon completion of the well.

afety requirements during cleanout operations may necessitate that sand and non-pipeline quality gas be vented and/o ared rather than sold on a temporary basis.

Iternatives to Reduce Flaring

elow are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
 - Operating a generator will only utilize a portion of the produced gas and the remainder of gas would still nee to be flared.
 - o Power Company has to be willing to purchase gas back and if they are willing they require a 5 year commitment to supply the agreed upon amount of power back to them. With gas decline rates an unpredictability of markets it is impossible to agree to such long term demands. If the demands are not mention operator is burdened with penalty for not delivering.
- Compressed Natural Gas On lease
 - o Compressed Natural Gas is likely to be uneconomic to operate when the gas volume declines.
- NGL Removal On lease
- NGL Removal requires a plant and is expensive on such a small scale rendering it uneconomic and stirequires residue gas to be flared.



U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

SUPO Data Report

APD ID: 10400028330 **Submission Date**: 03/30/2018

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FED COM Well Number: 113H

Well Type: OIL WELL Well Work Type: Drill



Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_34_S_20180214143930.PDF

EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_33_S_20180214143929.PDF

EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_36_S_20180214143932.PDF

EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_24_S_20180214143927.PDF

EP_DR IRELAND FED COM ROAD_EASEMENT_25_S 20180214143928.PDF

EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_19_S_20180214155448.PDF

EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_35_S_20180214143930.PDF

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Caliche cap

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Project_Area_APD_Layout_20180226_20180226113622.jpg

New road type: LOCAL

Length: 1395

Feet

Width (ft.): 30

Max slope (%): 0

Max grade (%): 1

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

Operator Name: MATADOR PROD. . . ION COMPANY

Well Name: DR IRELAND FED COM Well Number: 113H

New road access erosion control: Crowned and ditched

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: No drainages present

Road Drainage Control Structures (DCS) description: Ditches on either side of road

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Existing_Well_Map_Slot_3_20180315123229.JPG

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description:

Operator Name: MATADOR PRC

TION COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

Production Facilities map:

Location_Layout_20180313123505.pdf 44924p01_Facility_Layout_S3_20180329_20180329162852.jpg

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: DUST CONTROL,

Water source type: RECYCLED

INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE

CASING

Describe type:

Source longitude:

Source latitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: PRIVATE

Water source transport method: TRUCKING

Source transportation land ownership: PRIVATE

Water source volume (barrels): 180000 Source volume (acre-feet): 23.200758

Source volume (gal): 7560000

Water source and transportation map:

Dr._Ireland_Water_Information_20180213161731.jpg

Water source comments:

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Operator Name: MATADOR PROD. . . . (

. ION COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Caliche from BLM approved source.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill cuttings, mud, salts, and other chemicals

Amount of waste: 2000

barrels

Waste disposal frequency: Daily

Safe containment description: Steel tanks

Safe containment attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal locat

Disposal location ownership: PRIVATE

FACILITY

Disposal type description:

Disposal location description: Halfway, NM

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.)

Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Operator Name: MATADOR PRC

FION COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Location_Layout_20180313145407.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: DR IRELAND FEDERAL

Multiple Well Pad Number: 4

Recontouring attachment:

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

1.58

Well pad proposed disturbance

(acres): 5.72

Road proposed disturbance (acres):

0.96

Powerline proposed disturbance

Total proposed disturbance: 6.68

(acres): 0

Pipeline proposed disturbance

(acres): 0

Other proposed disturbance (acres): 0

Pipeline interim reclamation (acres): 0

Other interim reclamation (acres): 0

Total interim reclamation: 2.09

Well pad interim reclamation (acres): Well pad long term disturbance

(acres): 4.14

Road interim reclamation (acres): 0.51 Road long term disturbance (acres):

Powerline interim reclamation (acres):

Powerline long term disturbance

(acres): 0

Pipeline long term disturbance

(acres): 0

Other long term disturbance (acres): 0

Total long term disturbance: 4.59

Disturbance Comments:

Reconstruction method: Interim reclamation will be completed within 6 months of completing the last well on the pad. Disturbed areas will be contoured to match pre-construction grades. Once the last well is plugged, then the rest of the pad

Operator Name: MATADOR PROD. ..ON COMPANY

Well Name: DR IRELAND FED COM Well Number: 113H

will be similarly reclaimed within 6 months of plugging.

Topsoil redistribution: Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with the surface owner's requirements.

Soil treatment: None planned.

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

Operator Name: MATADOR PRC

TION COMPANY

Well Name: DR IRELAND FED COM

Well Number: 113H

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type

Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name:

Last Name:

Phone:

Email:

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM standards

Weed treatment plan attachment:

Monitoring plan description: To BLM standards

Monitoring plan attachment:

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

Well Name: DR IRELAND FED COM	Well Number: 113H	
NPS Local Office:		
State Local Office:		
Military Local Office:		
USFWS Local Office:		
Other Local Office:		
USFS Region:		
USFS Forest/Grassland:	USFS Ranger District:	
Disturbance type: EXISTING ACCESS ROAD		
Describe:		
Surface Owner: PRIVATE OWNERSHIP,STATE G	OVERNMENT	
Other surface owner description:		
BIA Local Office:		
BOR Local Office:		
COE Local Office:		
DOD Local Office:		
NPS Local Office:		
State Local Office: CARLSBAD, NM		
Military Local Office:		
USFWS Local Office:		
Other Local Office:		
USFS Region:		
USFS Forest/Grassland:	USFS Ranger District:	

Disturbance type: NEW ACCESS ROAD

Operator Name: MATADOR PROD. ...ON COMPANY

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

TION COMPANY Operator Name: MATADOR PRC Well Name: DR IRELAND FED COM Well Number: 113H **BOR Local Office: COE Local Office: DOD Local Office: NPS Local Office:** State Local Office: **Military Local Office: USFWS Local Office: Other Local Office: USFS Region: USFS Forest/Grassland: USFS Ranger District:** Section 12 - Other Information Right of Way needed? NO Use APD as ROW? ROW Type(s): **ROW Applications**

SUPO Additional Information:

Use a previously conducted onsite? YES

Previous Onsite information: Onsite conducted for four slots and water tank with Vance Wolf on 10/5/2017.

Other SUPO Attachment



U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

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Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

PWD disturbance (acres):

Section 3 - Unlined Pits

Injection well mineral owner:

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:	
PWD surface owner:	PWD disturbance (acres):
Unlined pit PWD on or off channel:	
Unlined pit PWD discharge volume (bbl/day):	
Unlined pit specifications:	
Precipitated solids disposal:	
Decribe precipitated solids disposal:	
Precipitated solids disposal permit:	
Unlined pit precipitated solids disposal schedule:	
Unlined pit precipitated solids disposal schedule attachment:	
Unlined pit reclamation description:	
Unlined pit reclamation attachment:	
Unlined pit Monitor description:	
Unlined pit Monitor attachment:	
Do you propose to put the produced water to beneficial use?	
Beneficial use user confirmation:	
Estimated depth of the shallowest aquifer (feet):	
Does the produced water have an annual average Total Disso that of the existing water to be protected?	lved Solids (TDS) concentration equal to or less than
TDS lab results:	
Geologic and hydrologic evidence:	
State authorization:	
Unlined Produced Water Pit Estimated percolation:	
Unlined pit: do you have a reclamation bond for the pit?	
Is the reclamation bond a rider under the BLM bond?	
Unlined pit bond number:	
Unlined pit bond amount:	
Additional bond information attachment:	
Section 4 - Injection	
Would you like to utilize Injection PWD options? NO	
Produced Water Disposal (PWD) Location:	
PWD surface owner:	PWD disturbance (acres):
Injection PWD discharge volume (bbl/day):	

Injection well type:	
Injection well number:	Injection well name:
Assigned injection well API number?	Injection well API number:
Injection well new surface disturbance (acres):	
Minerals protection information:	
Mineral protection attachment:	
Underground Injection Control (UIC) Permit?	
UIC Permit attachment:	
Section 5 - Surface Discharge	
Would you like to utilize Surface Discharge PWD options? NO	
Produced Water Disposal (PWD) Location:	
PWD surface owner:	PWD disturbance (acres):
Surface discharge PWD discharge volume (bbl/day):	•
Surface Discharge NPDES Permit?	
Surface Discharge NPDES Permit attachment:	
Surface Discharge site facilities information:	
Surface discharge site facilities map:	
Section 6 - Other	
Would you like to utilize Other PWD options? NO	
Produced Water Disposal (PWD) Location:	
PWD surface owner:	PWD disturbance (acres):
Other PWD discharge volume (bbl/day):	
Other PWD type description:	
Other PWD type attachment:	
Have other regulatory requirements been met?	
Other regulatory requirements attachment:	



U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

Band Info Data Report 07/18/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001079

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

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