Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5 Lease Serial No. NMNM103877 BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. ✓ DRILL REENTER 1a. Type of work: 1b. Type of Well: Oil Well ✓ Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing ✓ Single Zone Multiple Zone EASY COMPANY 36/35 WOHG FED COM 2. Name of Operator 9. API Well No. MEWBOURNE OIL COMPANY 30-015-49165 10. Field and Pool, or Exploratory 3a. Address 3b. Phone No. (include area code) **BURTON FLAT EAST-UPPR WOLFCAMI** PO Box 5270, Hobbs, NM 88240 (575) 393-5905 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 36/T20S/R28E/NMP At surface SENE / 1460 FNL / 435 FEL / LAT 32.533262 / LONG -104.1241653 At proposed prod. zone SWNE / 2040 FNL / 2540 FEL / LAT 32.5316542 / LONG -104.1482284 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13 State **EDDY** NM 10 miles 15. Distance from proposed\* 16. No of acres in lease 17. Spacing Unit dedicated to this well 210 feet location to nearest 640.0 property or lease line, ft. (Also to nearest drig. unit line, if any) 18. Distance from proposed location\* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 330 feet 9150 feet / 16920 feet FED: NM 1693 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 3236 feet 05/10/2021 60 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan. Item 20 above). 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the 25. Signature Name (Printed/Typed) Date BRADLEY BISHOP / Ph: (575) 393-5905 (Electronic Submission) 08/03/2020 Title Regulatory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) Cody Layton / Ph: (575) 234-5959 12/02/2021 Title Office Assistant Field Manager Lands & Minerals 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.

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



Conditions of approval, if any, are attached.

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
12210 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

UL or lot no.

G

Section

35

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

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

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Numbe	er	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name						
30-015-49165		98315	WCBURTON FLAT UPPER WOLFO	CAMP EAST OIL					
<sup>4</sup> Property Code			pperty Name	6 Well Number					
331851		EASY COMPANY 3	36/35 WOHG FED COM	1H					
7 OGRID NO.		8 Op	erator Name	<sup>9</sup> Elevation					
14744		MEWBOURNE	E OIL COMPANY	3236'					
		10 Sur	face Location						

UL or lot no. Lot Idn Feet from the North/South line Feet From the East/West line Section Township Range County H 36 **20S** 28E 1460 NORTH 435 **EAST EDDY** <sup>11</sup> Bottom Hole Location If Different From Surface

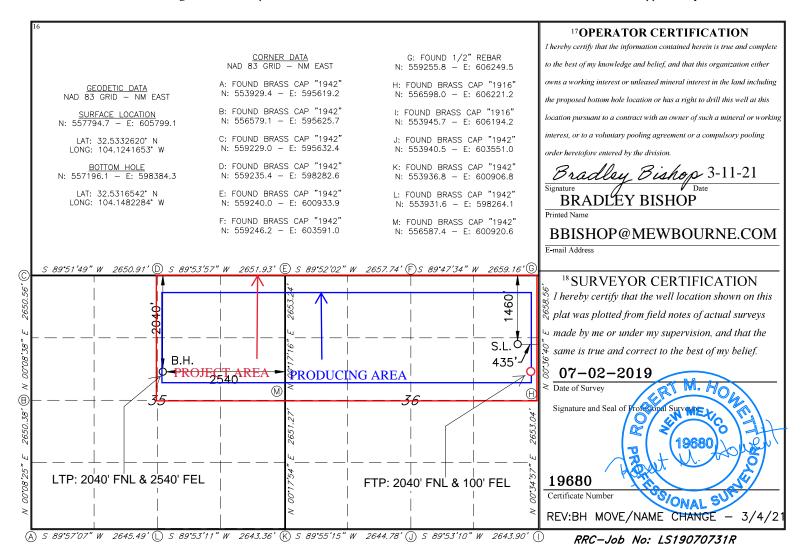
Range Lot Idn Feet from the North/South line Feet from the East/West line County
28E 2040 NORTH 2540 EAST EDDY

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

Township

**20S** 

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



# State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

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

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.										
	Section 1 — Plan Description  Effective May 25, 2021									
I. Operator: Me	wbourne (	Oil Co.	OGRID:	14744	Date	8/1	3/21			
II. Type: X Original	☐ Amendment	due to □ 19.15.27.	9.D(6)(a) NMA(	C □ 19.15.27.9.D(	6)(b) NMAC □	Other.				
If Other, please describ	oe:									
III. Well(s): Provide t be recompleted from a	he following int single well pad	formation for each i or connected to a c	new or recomple entral delivery p	ted well or set of voint.	wells proposed t	o be dri	lled or proposed to			
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	P	Anticipated roduced Water BBL/D			
Easy Company 36/35 W0HG Fed	Com 1H	N 36 20S 28E	1460' FNL x 435' F	L 1500	2500	3000				
IV. Central Delivery  V. Anticipated Sched proposed to be recomp	ule: Provide the	Easy Company 36 e following informa	tion for each new	v or recompleted w	rell or set of we	ls propo				
Well Name	API	Spud Date	TD Reached Date	Completion Commencement			First Production Date			
Easy Company 36/35 W0HG Fed	Com 1H	10/13/21	11/13/21	12/13/21	12/28	3/21	12/28/21			
VI. Separation Equip VII. Operational Pra Subsection A through VIII. Best Managem during active and plan	nctices: 🖾 Attack F of 19.15.27.8 ent Practices:	ch a complete descr NMAC.	ription of the act	tions Operator wil	l take to compl	y with t	he requirements of			

	Section 2 – Enhanced Plan  EFFECTIVE APRIL 1, 2022										
Beginning April 1, reporting area must	2022, an operator the complete this section	at is not in compliance	with its statewide natural ga	as capture requirement for the applicable							
☐ Operator certifie capture requirement	s that it is not requir for the applicable re	red to complete this sect porting area.	tion because Operator is in o	compliance with its statewide natural gas							
IX. Anticipated Na	tural Gas Productio	on:									
W	ell	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF							
X. Natural Gas Ga	thering System (NG	GGS):									
Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in							
production operation the segment or portion the segment or portion.  XII. Line Capacity production volume:  XIII. Line Pressur natural gas gatherin  Attach Operator:  XIV. Confidential: Section 2 as provide	ns to the existing or pon of the natural gas  The natural gas gas  from the well prior to  Compared to the existing of the compared to the com	planned interconnect of to gathering system(s) to we thering system will to the date of first product does not anticipate the dabove will continue to eduction in response to the tests confidentiality purs	he natural gas gathering systewhich the well(s) will be considered will not have capacity to getion.  at its existing well(s) connect meet anticipated increases in the increased line pressure.  uant to Section 71-2-8 NMS 27.9 NMAC, and attaches a section of the system of the increased line pressure.	ticipated pipeline route(s) connecting the em(s), and the maximum daily capacity of nected.  ather 100% of the anticipated natural gas ted to the same segment, or portion, of the a line pressure caused by the new well(s).  SA 1978 for the information provided in full description of the specific information							

## Section 3 - Certifications Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☑ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or
 ☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one

hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### Section 4 - Notices

- 1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:
- (a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or
- (b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- 2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 2	Bradley Bishop
Printed Name:	BRADLEY BISHOP
Title:	REGULATORY MANAGER
E-mail Address:	BBISHOP@MEWBOURNE.COM
Date:	8/13/21
Phone:	575-393-5905
	OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of App	oroval:

#### Mewbourne Oil Company

#### Natural Gas Management Plan - Attachment

- VI. Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing ProMax modelling software to ensure adequate capacity for anticipated production volumes and conditions.
- VII. Mewbourne Oil Company (MOC) will take following actions to comply with the regulations listed in 19.15.27.8:
  - A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
  - B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
  - C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
  - D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
  - E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.
  - F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021 that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.



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

## Drilling Plan Data Report

12/02/2021

APD ID: 10400057376

**Submission Date: 08/03/2020** 

Highlighted data reflects the most recent changes

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: EASY COMPANY 36/35 WOHG FED COM

Well Number: 1H

**Show Final Text** 

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

## **Section 1 - Geologic Formations**

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
742979	UNKNOWN	3236	28	28	OTHER: Topsoil	NONE	N
742991	BASE OF SALT	2381	855	855	SALT	NONE	N
742994	YATES	2151	1085	1085	SANDSTONE	NATURAL GAS, OIL	N
742995	CAPITAN REEF	1846	1390	1390	DOLOMITE, LIMESTONE	USEABLE WATER	N
742993	DELAWARE	161	3075	3075	LIMESTONE	NATURAL GAS, OIL	N
742987	BONE SPRING	-2414	5650	5650	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
742988	BONE SPRING 1ST	-3534	6770	6770	SANDSTONE	NATURAL GAS, OIL	N
742989	BONE SPRING 2ND	-4224	7460	7460	SANDSTONE	NATURAL GAS, OIL	N
742998	BONE SPRING 3RD	-5499	8735	8735	SANDSTONE	NATURAL GAS, OIL	N
1650092	WOLFCAMP	-5894	9130	9130	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

#### **Section 2 - Blowout Prevention**

Pressure Rating (PSI): 3M Rating Depth: 16920

Equipment: Annular Pipe Rams Blind Rams Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. Anchors are not required by manufacturer. A variance is requested to use a multi-bowl

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

**Choke Diagram Attachment:** 

Well Name: EASY COMPANY 36/35 W0HG FED COM Well Number: 1H

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_Flex\_Line\_Specs\_20210311092438.pdf

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_Flex\_Line\_Specs\_API\_16C\_20210311092439.pdf

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_BOPE\_Choke\_Diagram\_rev\_1\_15\_19\_20210311092440.xlsx

#### **BOP Diagram Attachment:**

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_5M\_BOPE\_Schematic\_4\_18\_17\_20210311092446.pdf
Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_Multi\_Bowl\_Surface\_Running\_Procedure\_20210311092447.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	26	20.0	NEW	API	N	0	375	0	375	3236	2861	375	J-55	94	BUTT	3.03	12.3	DRY	39.7 7	DRY	41.9 9
	INTERMED IATE	17.5	13.375	NEW	API	N	0	1340	0	1340	3317	1896	1340	J-55	54.5	ST&C	1.84	4.45	DRY	7.04	DRY	11.6 8
	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	3000	0	3000		236	3000	J-55	36	LT&C	1.29	2.26	DRY	4.19	DRY	5.22
	PRODUCTI ON	8.75	7.0	NEW	API	N	0	9450	0	9234		-5998	9450	P- 110	26	LT&C	1.37	2.18	DRY	2.6	DRY	3.38
5	LINER	6.12 5	4.5	NEW	API	N	8758	16920	8699	9150	-5463	-5914	8162	P- 110	13.5	LT&C	2.22	2.57	DRY	3.07	DRY	3.83

#### **Casing Attachments**

**Operator Name: MEWBOURNE OIL COMPANY** Well Name: EASY COMPANY 36/35 W0HG FED COM Well Number: 1H **Casing Attachments** Casing ID: 1 String Type: SURFACE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_CA\_20210309095429.pdf Casing ID: 2 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_CA\_20210309095233.pdf Casing ID: 3 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_CA\_20210309095408.pdf

Well Name: EASY COMPANY 36/35 W0HG FED COM Well Number: 1H

#### **Casing Attachments**

Casing ID: 4

String Type: PRODUCTION

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_CA\_20210309095418.pdf

Casing ID: 5

String Type:LINER

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_CA\_20210309095358.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	286	410	2.12	12.5	869	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		286	375	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead	1390	0	1093	240	2.12	12.5	509	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1093	1390	100	1.34	14.8	134	25	Class C	Retarder
INTERMEDIATE	Lead		0	1169	870	2.12	12.5	1844	100	Class C	Salt, Gel, Extender, LCM

Well Name: EASY COMPANY 36/35 W0HG FED COM Well Number: 1H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		1169	1340	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead	1390	1390	2315	180	2.12	12.5	382	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		2315	3000	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead		1300	6538	500	2.12	12.5	1060	25	Class C	Salt, Gel, Extender, LCM
PRODUCTION	Tail		6538	9450	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		8758	1692 0	320	2.97	11.2	949	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

## **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: Lost circulation material, sweeps, mud scavengers

Describe the mud monitoring system utilized: Pason/PVT/visual monitoring

## **Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	375	SPUD MUD	8.6	8.8							

Well Name: EASY COMPANY 36/35 W0HG FED COM Well Number: 1H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
375	1340	SALT SATURATED	10	10							
1340	9150	WATER-BASED MUD	8.6	9.5							
9150	9272	OIL-BASED MUD	9.5	10							

## **Section 6 - Test, Logging, Coring**

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

Will run GR/CNL in deeper offset Easy Company 36/35 W0AB Fed Com #1H

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

COMPENSATED NEUTRON LOG, DIRECTIONAL SURVEY, GAMMA RAY LOG, MEASUREMENT WHILE DRILLING, MUD LOG/GEOLOGIC LITHOLOGY LOG, MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

None

#### **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 6267 Anticipated Surface Pressure: 4253

Anticipated Bottom Hole Temperature(F): 150

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:

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_\_20210309100255

Well Name: EASY COMPANY 36/35 W0HG FED COM Well Number: 1H

### **Section 8 - Other Information**

#### Proposed horizontal/directional/multi-lateral plan submission:

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_Dir\_plan\_20210309100325.pdf Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_Dir\_plot\_20210309100325.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Easy\_Company\_36\_35\_W0HG\_Fed\_Com\_1H\_Add\_Info\_20210309100337.pdf

**Other Variance attachment:** 



GATES E & S NORTH AMERICA, INC. 134 44TH STREET **CORPUS CHRISTI, TEXAS 78405** 

PHONE: 361-887-9807 FAX:

361-887-0812 EMAIL: Tim.Cantu@gates.com

WEB: www.gates.com

#### 10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

Customer: Customer Ref.:

Invoice No.:

AUSTIN DISTRIBUTING 4060578 500506

Test Date: Hose Serial No.: Created By:

4/30/2015 D-043015-7 JUSTIN CROPPER

Product Description:

10K3.548.0CK4.1/1610KFLGE/E LE

End Fitting 1:

Gates Part No. : Working Pressure:

4 1/16 10K FLG 4773-6290 10,000 PSI

End Fitting 2: Assembly Code:

Test Pressure:

4 1/16 10K FLG

L36554102914D-043015-7

15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality Manager:

Date:

Signature:

QUALITY

4/30/2015

Produciton:

Date:

Signature :

**PRODUCTION** 

4/30/2015

Forn PTC - 01 Rev.0 2





GATES ENGINEERING & SERVICES NORTH AMERICA 7603 Prairie Oak Dr. Houston, TX 77086 PHONE: (281) 602 - 4119

FAX:

EMAIL: Troy.Schmidt@gates.com

WEB: www.gates.com

## **10K CHOKE & KILL ASSEMBLY PRESSURE TEST CERTIFICATE**

Test Date: 8/20/2018 A-7 AUSTIN INC DBA AUSTIN HOSE Customer: Hose Serial No.: H-082018-10 Customer Ref .: 4101901 Created By: Moosa Nagvi Invoice No.: 511956 10KF3.035.0CK41/1610KFLGFXDxFLT\_L/E Product Description: End Fitting 2: End Fitting 1: 4 1/16 in. Fixed Flange 4 1/16 in. Float Flange Assembly Code: L40695052218H-082018-10 Gates Part No.: 68503010-9721632 Test Pressure: 15,000 psi. Working Pressure: 10,000 psi.

Gates Engineering & Services North America certifies that the following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements.

Quality:

Date : Signature : QUALITY

8/20/2018

Production: Date:

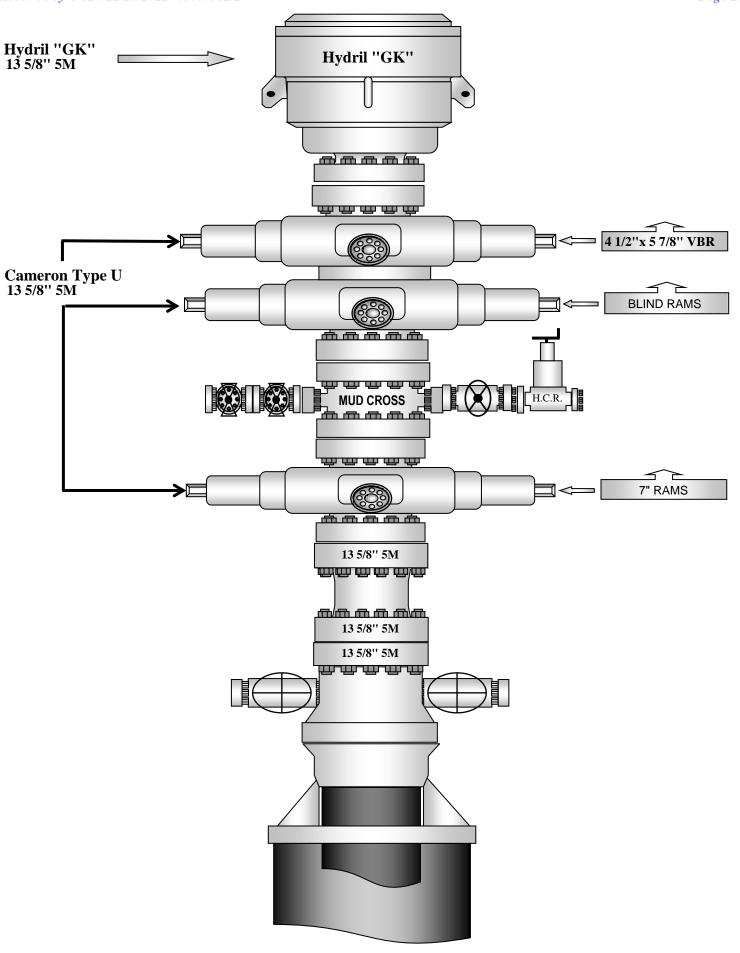
Signature :

Form PTC - 01 Rev.0 2



MODUCTION

8/20/2018



Hole	Casing Interval Csg.		Weight	Grade	Conn.	SF	SF	SF Jt	SF Body	
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	375'	20"	94	J55	BTC	3.03	12.30	39.77	41.99
17.5"	0'	1340'	13.375"	48	H40	STC	1.26	2.82	5.01	8.41
12.25"	0'	3000'	9.625"	36	J55	LTC	1.29	2.26	4.19	5.22
8.75"	0'	9450'	7"	26	HCP110	LTC	1.84	4.45	7.04	11.68
6.125"	8758'	16920'	4.5"	13.5	P110	LTC	2.22	2.57	3.83	3.07
-	•			BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry
				Factor					1.8 Wet	1.8 Wet

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	_

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	375'	20"	94	J55	BTC	3.03	12.30	39.77	41.99
17.5"	0'	1340'	13.375"	48	H40	STC	1.26	2.82	5.01	8.41
12.25"	0'	3000'	9.625"	36	J55	LTC	1.29	2.26	4.19	5.22
8.75"	0'	9450'	7"	26	HCP110	LTC	1.84	4.45	7.04	11.68
6.125"	8758'	16920'	4.5"	13.5	P110	LTC	2.22	2.57	3.83	3.07
			•	BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-P?  If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back	N
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	375'	20"	94	J55	BTC	3.03	12.30	39.77	41.99
17.5"	0'	1340'	13.375"	48	H40	STC	1.26	2.82	5.01	8.41
12.25"	0'	3000'	9.625"	36	J55	LTC	1.29	2.26	4.19	5.22
8.75"	0'	9450'	7"	26	HCP110	LTC	1.84	4.45	7.04	11.68
6.125"	8758'	16920'	4.5"	13.5	P110	LTC	2.22	2.57	3.83	3.07
				BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	_

Hole	Casing	Interval	Csg. Weight		Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	375'	20"	94	J55	BTC	3.03	12.30	39.77	41.99
17.5"	0'	1340'	13.375"	48	H40	STC	1.26	2.82	5.01	8.41
12.25"	0'	3000'	9.625"	36	J55	LTC	1.29	2.26	4.19	5.22
8.75"	0'	9450'	7"	26	HCP110	LTC	1.84	4.45	7.04	11.68
6.125"	8758'	16920'	4.5"	13.5	P110	LTC	2.22	2.57	3.83	3.07
-	•			BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	_

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	375'	20"	94	J55	BTC	3.03	12.30	39.77	41.99
17.5"	0'	1340'	13.375"	48	H40	STC	1.26	2.82	5.01	8.41
12.25"	0'	3000'	9.625"	36	J55	LTC	1.29	2.26	4.19	5.22
8.75"	0'	9450'	7"	26	HCP110	LTC	1.84	4.45	7.04	11.68
6.125"	8758'	16920'	4.5"	13.5	P110	LTC	2.22	2.57	3.83	3.07
				BLM Minimum Safety 1		1.125	1	1.6 Dry	1.6 Dry	
						Factor			1.8 Wet	1.8 Wet

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-P?  If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back	N
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

## **Mewbourne Oil Company**

Eddy County, New Mexico NAD 83
Easy Company 36/35 W0HG Fed Com #1H

Sec 36, T20S, R28E

SHL: 1460' FNL & 435' FEL, Sec 36 BHL: 2200' FNL & 2549' FEL, Sec 35

Plan: Design #1

## **Standard Planning Report**

08 March, 2021

TVD Reference:

MD Reference:

Hobbs Database:

Well:

Wellbore:

Design:

Local Co-ordinate Reference:

Site Easy Company 36/35 W0HG Fed Com

Mewbourne Oil Company Company: Eddy County, New Mexico NAD 83 Project: Site:

Easy Company 36/35 W0HG Fed Com #1H

BHL: 2200' FNL & 2549' FEL, Sec 35

North Reference: Sec 36, T20S, R28E

**Survey Calculation Method:** 

WELL @ 3264.0usft (Original Well Elev) WELL @ 3264.0usft (Original Well Elev)

Grid

Minimum Curvature

**Project** Eddy County, New Mexico NAD 83

Design #1

US State Plane 1983 Map System: North American Datum 1983

Geo Datum: Map Zone: New Mexico Eastern Zone

Ground Level System Datum:

Site Easy Company 36/35 W0HG Fed Com #1H

Northing: 557.794.70 usft Site Position: 32.5332621 Latitude: Easting: 605,799.10 usft -104.1241652 From: Мар Longitude:

Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 '

Well Sec 36, T20S, R28E

**Well Position** +N/-S 0.3 usft Northing: 557,795.00 usft Latitude: 32.5332629 +E/-W -0.1 usft Easting: 605,799.00 usft Longitude: -104.1241655

**Position Uncertainty** 0.0 usft Wellhead Elevation: 3,263.0 usft **Ground Level:** 3,236.0 usft

**Grid Convergence:** 0.11 °

Wellbore BHL: 2200' FNL & 2549' FEL, Sec 35

Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (°) (°) (nT) IGRF2010 12/31/2014 7.43 60.29 48,364.08737417

Design #1 Design Audit Notes: PROTOTYPE 0.0 Version: Tie On Depth: Phase: Vertical Section: Depth From (TVD) Direction +N/-S +E/-W (usft) (usft) (usft) (°) 0.0 0.3 -0.1 265.38

3/4/2021 **Plan Survey Tool Program** Date

Depth From Depth To

(usft) (usft) Survey (Wellbore) **Tool Name** Remarks

0.0 16,919.8 Design #1 (BHL: 2200' FNL & 254

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
0.0	0.00	0.00	0.0	0.3	-0.1	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.3	-0.1	0.00	0.00	0.00	0.00	
5,651.7	13.25	144.14	5,628.1	-247.1	178.7	0.50	0.50	0.00	144.14	
6,106.6	13.25	144.14	6,070.9	-331.5	239.8	0.00	0.00	0.00	0.00	
8,758.2	0.00	0.00	8,699.0	-578.9	418.6	0.50	-0.50	0.00	180.00	KOP: 2200' FNL & 10
9,668.1	90.96	269.86	9,272.0	-580.4	-164.1	10.00	10.00	0.00	-90.14	
16,919.8	90.96	269.86	9,150.0	-598.6	-7,414.8	0.00	0.00	0.00	0.00	BHL: 2040' FNL & 25 <sup>2</sup>

Database: Hobbs

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico NAD 83

Site: Easy Company 36/35 W0HG Fed Com #1H

Well: Sec 36, T20S, R28E

Wellbore: BHL: 2200' FNL & 2549' FEL, Sec 35

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Easy Company 36/35 W0HG Fed Com

#11

WELL @ 3264.0usft (Original Well Elev) WELL @ 3264.0usft (Original Well Elev)

Grid

ed 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)
0.0	0.00	0.00	0.0	0.3	-0.1	0.0	0.00	0.00	0.00
	FNL & 435' FEL (	•							
100.0	0.00	0.00	100.0	0.3	-0.1	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.3	-0.1	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.3	-0.1	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.3	-0.1	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.3	-0.1	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.3	-0.1	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.3	-0.1	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.3	-0.1	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.3	-0.1	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.3	-0.1	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.3	-0.1	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.3	-0.1	0.0	0.00	0.00	0.00
3,100.0	0.50	144.14	3,100.0	-0.1	0.2	-0.2	0.50	0.50	0.00
3,200.0	1.00	144.14	3.200.0	-1.1	0.9	-0.9	0.50	0.50	0.00
3,300.0	1.50	144.14	3,300.0	-2.9	2.2	-2.0	0.50	0.50	0.00
3,400.0	2.00	144.14	3,399.9	-5.4	4.0	-3.6	0.50	0.50	0.00
3,500.0	2.50	144.14	3.499.8	-8.5	6.3	-5.7	0.50	0.50	0.00
3,600.0	3.00	144.14	3,599.7	-6.5 -12.4	9.1	-3. <i>1</i> -8.1	0.50	0.50	0.00
3,700.0	3.50	144.14	3,699.6	-12.4 -17.0	12.4	-0.1 -11.1	0.50	0.50	0.00
3,800.0	4.00	144.14	3,799.4	-22.3	16.2	-14.5	0.50	0.50	0.00
3,900.0	4.50	144.14	3,899.1	-28.3	20.6	-14.3	0.50	0.50	0.00
4,000.0	5.00	144.14	3,998.7	-35.0	25.4	-22.6	0.50	0.50	0.00
4,000.0	5.50	144.14	3,998.7 4,098.3	-35.0 -42.4	25.4 30.8	-22.6 -27.3	0.50	0.50	0.00
4,100.0	6.00	144.14	4,098.3 4,197.8	-42.4 -50.5	30.8 36.7	-27.3 -32.5	0.50	0.50	0.00
4,200.0	6.50	144.14	4,197.8 4,297.2	-50.5 -59.4	43.0	-32.5 -38.2	0.50	0.50	0.00
4,300.0	6.99	144.14	4,297.2 4,396.5	-59.4 -68.9	43.0 49.9	-38.2 -44.3	0.50	0.50	0.00
4,500.0	7.49	144.14	4,495.7	-79.1	57.3	-50.8	0.50	0.50	0.00
4,600.0	7.99	144.14	4,594.8	-90.0	65.2	-57.8	0.50	0.50	0.00
4,700.0	8.49	144.14	4,693.8	-101.6	73.6	-65.2	0.50	0.50	0.00
4,800.0	8.99	144.14	4,792.6	-114.0	82.5	-73.1	0.50	0.50	0.00
4,900.0	9.49	144.14	4,891.3	-127.0	91.9	-81.5	0.50	0.50	0.00
5,000.0	9.99	144.14	4,989.9	-140.7	101.8	-90.2	0.50	0.50	0.00
5,100.0	10.49	144.14	5,088.3	-155.1	112.2	-99.5	0.50	0.50	0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Easy Company 36/35 W0HG Fed Com #1H

Well: Sec 36, T20S, R28E

**Wellbore:** BHL: 2200' FNL & 2549' FEL, Sec 35

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Site Easy Company 36/35 W0HG Fed Com

#11

WELL @ 3264.0usft (Original Well Elev) WELL @ 3264.0usft (Original Well Elev)

Grid

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)
5,200.0		144.14	5,186.5	-170.2	123.2	-109.1	0.50	0.50	0.00
5,300.0		144.14	5,284.6	-186.0	134.6	-119.2	0.50	0.50	0.00
5,400.0	11.99	144.14	5,382.5	-202.5	146.5	-129.8	0.50	0.50	0.00
5,500.0	12.49	144.14	5,480.2	-219.7	158.9	-140.8	0.50	0.50	0.00
5,600.0	12.99	144.14	5,577.8	-237.5	171.8	-152.2	0.50	0.50	0.00
5,651.7	13.25	144.14	5,628.1	-247.1	178.7	-158.3	0.50	0.50	0.00
5,700.0	13.25	144.14	5,675.1	-256.0	185.2	-164.1	0.00	0.00	0.00
5,800.0	13.25	144.14	5,772.5	-274.6	198.6	-176.0	0.00	0.00	0.00
5,900.0	13.25	144.14	5,869.8	-293.2	212.1	-187.8	0.00	0.00	0.00
6,000.0		144.14	5,967.2	-311.8	225.5	-199.7	0.00	0.00	0.00
6,106.6		144.14	6,070.9	-331.5	239.8	-199.7	0.00	0.00	0.00
6,200.0		144.14	6,161.9	-348.6	252.1	-212.4	0.50	-0.50	0.00
6,300.0		144.14	6,259.5	-366.2	264.8	-234.6	0.50	-0.50	0.00
6,400.0		144.14	6,357.3	-383.1	277.0	-245.4	0.50	-0.50	0.00
6,500.0		144.14	6,455.3	-399.3	288.8	-255.7	0.50	-0.50	0.00
6,600.0		144.14	6,553.5	-414.8	300.0	-265.7	0.50	-0.50	0.00
6,700.0		144.14	6,651.8	-429.6	310.7	-275.2	0.50	-0.50	0.00
6,800.0	9.78	144.14	6,750.3	-443.7	320.9	-284.2	0.50	-0.50	0.00
6,900.0	9.28	144.14	6,848.9	-457.1	330.6	-292.8	0.50	-0.50	0.00
7,000.0		144.14	6,947.6	-469.9	339.8	-300.9	0.50	-0.50	0.00
7,100.0		144.14	7.046.5	-481.9	348.5	-308.6	0.50	-0.50	0.00
7,200.0		144.14	7,145.5	-493.2	356.7	-315.9	0.50	-0.50	0.00
7,300.0		144.14	7,244.7	-503.9	364.4	-322.7	0.50	-0.50	0.00
7,400.0		144.14	7,343.9	-513.8	371.5	-329.0	0.50	-0.50	0.00
7,500.0		144.14	7,443.3	-523.0	378.2	-334.9	0.50	-0.50	0.00
7,600.0		144.14	7,542.7	-531.5	384.4	-340.4	0.50	-0.50	0.00
7,700.0		144.14	7,642.3	-539.4	390.0	-345.4	0.50	-0.50	0.00
7,800.0	4.79	144.14	7,741.9	-546.5	395.2	-350.0	0.50	-0.50	0.00
7,900.0	4.29	144.14	7,841.6	-552.9	399.8	-354.1	0.50	-0.50	0.00
8,000.0	3.79	144.14	7,941.3	-558.6	403.9	-357.7	0.50	-0.50	0.00
8,100.0	3.29	144.14	8,041.1	-563.6	407.5	-360.9	0.50	-0.50	0.00
8,200.0	2.79	144.14	8,141.0	-567.9	410.6	-363.7	0.50	-0.50	0.00
8,300.0	2.29	144.14	8,240.9	-571.5	413.2	-366.0	0.50	-0.50	0.00
8,400.0	1.79	144.14	8,340.8	-574.4	415.3	-367.8	0.50	-0.50	0.00
8,400.0 8,500.0		144.14 144.14	8,340.8 8,440.8	-574.4 -576.5	415.3 416.9	-367.8 -369.2	0.50	-0.50 -0.50	0.00
8,600.0		144.14 144.14	8,440.8 8,540.8	-576.5 -578.0	416.9	-369.2 -370.1	0.50	-0.50 -0.50	0.00
8,700.0		144.14	8,640.8	-576.0 -578.8	418.5	-370.1	0.50	-0.50 -0.50	0.00
8,758.2		0.00	8,699.0	-576.6 -578.9	418.6	-370.6 -370.7	0.50	-0.50 -0.50	0.00
	' FNL & 10' FEL (S		5,033.0	-370.3	710.0	-510.1	0.50	-0.50	0.00
	•	,							
8,800.0		269.86	8,740.7	-578.9	417.1	-369.2	10.00	10.00	0.00
8,850.0		269.86	8,790.4	-578.9	411.3	-363.4	10.00	10.00	0.00
8,900.0		269.86	8,839.3	-578.9	401.2	-353.3	10.00	10.00	0.00
8,950.0		269.86	8,887.2	-579.0	386.8	-339.0	10.00	10.00	0.00
9,000.0	24.17	269.86	8,933.6	-579.0	368.4	-320.6	10.00	10.00	0.00
9,050.0	29.17	269.86	8,978.3	-579.1	345.9	-298.3	10.00	10.00	0.00
9,030.0		269.86	8,997.0	-579.1	335.0	-290.3 -287.4	10.00	10.00	0.00
	FNL & 100' FEI (3		0,337.0	-37 3.1	333.0	-207.4	10.00	10.00	0.00
9,100.0	•	269.86	9,020.9	-579.1	319.7	-272.1	10.00	10.00	0.00
9,100.0 9,150.0		269.86 269.86	9,020.9	-579.1 -579.2	289.8	-272.1 -242.3	10.00	10.00	0.00
9,150.0		269.86	9,080.9	-579.2 -579.3	269.6 256.6	-242.3 -209.2	10.00	10.00	0.00
9,250.0		269.86	9,132.6	-579.4	220.2	-173.0	10.00	10.00	0.00
9,300.0		269.86	9,163.6	-579.5	181.0	-133.9	10.00	10.00	0.00
9,350.0	59.16	269.86	9,191.1	-579.6	139.3	-92.2	10.00	10.00	0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Easy Company 36/35 W0HG Fed Com #1H

Well: Sec 36, T20S, R28E

**Wellbore:** BHL: 2200' FNL & 2549' FEL, Sec 35

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Easy Company 36/35 W0HG Fed Com

#11

WELL @ 3264.0usft (Original Well Elev) WELL @ 3264.0usft (Original Well Elev)

Grid

Planned Survey									
_									
Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
` ,	( )		(40.17)	(usit)		` '	( / 10000010,	( / 1000011)	(71000011)
9,400.0	64.16	269.86	9,214.8	-579.7	95.3	-48.4	10.00	10.00	0.00
9,450.0	69.16	269.86	9,234.6	-579.8	49.4	-2.6	10.00	10.00	0.00
9,500.0	74.16	269.86	9,250.3	-579.9	1.9	44.7	10.00	10.00	0.00
9,550.0	79.16	269.86	9,261.9	-580.1	-46.7	93.2	10.00	10.00	0.00
9,600.0	84.16	269.86	9,269.1	-580.2	-96.1	142.5	10.00	10.00	0.00
9,650.0	89.16	269.86	9,272.0	-580.3	-146.0	192.2	10.00	10.00	0.00
9,668.1	90.96	269.86	9,272.0	-580.4	-164.1	210.2	10.00	10.00	0.00
9,700.0	90.96	269.86	9,271.5	-580.4	-196.0	242.1	0.00	0.00	0.00
9,800.0	90.96	269.86	9,269.8	-580.7	-296.0	341.7	0.00	0.00	0.00
9,900.0	90.96	269.86	9,268.1	-580.9	-396.0	441.4	0.00	0.00	0.00
10,000.0	90.96	269.86	9,266.4	-581.2	-496.0	541.1	0.00	0.00	0.00
10,100.0	90.96	269.86	9,264.7	-581.5	-596.0	640.8	0.00	0.00	0.00
10,200.0	90.96	269.86	9,263.1	-581.7	-696.0	740.5	0.00	0.00	0.00
10,200.0	90.96 90.96	269.86 269.86	9,263.1 9,261.4	-581.7 -582.0	-696.0 -796.0	740.5 840.1	0.00	0.00	0.00
10,300.0	90.96 90.96	269.86 269.86	9,261.4 9,259.7	-582.0 -582.2	-796.0 -895.9	939.8	0.00	0.00	0.00
·									
10,500.0	90.96	269.86	9,258.0	-582.5	-995.9	1,039.5	0.00	0.00	0.00
10,600.0	90.96	269.86	9,256.3	-582.7	-1,095.9	1,139.2	0.00	0.00	0.00
10,700.0	90.96	269.86	9,254.6	-583.0	-1,195.9	1,238.9	0.00	0.00	0.00
10,800.0	90.96	269.86	9,253.0	-583.2	-1,295.9	1,338.5	0.00	0.00	0.00
10,900.0	90.96	269.86	9,251.3	-583.5	-1,395.9	1,438.2	0.00	0.00	0.00
11,000.0	90.96	269.86	9,249.6	-583.7	-1,495.8	1,537.9	0.00	0.00	0.00
11,100.0	90.96	269.86	9,247.9	-584.0	-1,595.8	1,637.6	0.00	0.00	0.00
•									
11,200.0	90.96	269.86	9,246.2	-584.2	-1,695.8	1,737.3	0.00	0.00	0.00
11,300.0	90.96	269.86	9,244.5	-584.5	-1,795.8	1,837.0	0.00	0.00	0.00
11,400.0	90.96	269.86	9,242.9	-584.7	-1,895.8	1,936.6	0.00	0.00	0.00
11,500.0	90.96	269.86	9,241.2	-585.0	-1,995.8	2,036.3	0.00	0.00	0.00
11,600.0	90.96	269.86	9,239.5	-585.2	-2,095.8	2,136.0	0.00	0.00	0.00
11,700.0	90.96	269.86	9,237.8	-585.5	-2,195.7	2,235.7	0.00	0.00	0.00
11,800.0	90.96	269.86	9,236.1	-585.7	-2,295.7	2,335.4	0.00	0.00	0.00
11,900.0	90.96	269.86	9,234.5	-586.0	-2,395.7	2,435.0	0.00	0.00	0.00
12,000.0	90.96	269.86	9,232.8	-586.2	-2,495.7	2,534.7	0.00	0.00	0.00
12,100.0	90.96	269.86	9,231.1	-586.5	-2,595.7	2,634.4	0.00	0.00	0.00
•									
12,200.0	90.96	269.86	9,229.4	-586.7	-2,695.7	2,734.1	0.00	0.00	0.00
12,300.0	90.96	269.86	9,227.7	-587.0	-2,795.7	2,833.8	0.00	0.00	0.00
12,400.0	90.96	269.86	9,226.0	-587.2	-2,895.6	2,933.4	0.00	0.00	0.00
12,500.0	90.96	269.86	9,224.4	-587.5	-2,995.6	3,033.1	0.00	0.00	0.00
12,600.0	90.96	269.86	9,222.7	-587.7	-3,095.6	3,132.8	0.00	0.00	0.00
12.700.0	90.96	269.86	9,221.0	-588.0	-3,195.6	3,232.5	0.00	0.00	0.00
12,800.0	90.96	269.86	9,219.3	-588.2	-3,295.6	3,332.2	0.00	0.00	0.00
12,900.0	90.96	269.86	9,217.6	-588.5	-3,395.6	3,431.9	0.00	0.00	0.00
13,000.0	90.96	269.86	9,215.9	-588.7	-3,495.6	3,531.5	0.00	0.00	0.00
13,100.0	90.96	269.86	9,214.3	-589.0	-3,595.5	3,631.2	0.00	0.00	0.00
ŕ									
13,200.0	90.96	269.86	9,212.6	-589.2	-3,695.5	3,730.9	0.00	0.00	0.00
13,300.0	90.96	269.86	9,210.9	-589.5	-3,795.5	3,830.6	0.00	0.00	0.00
13,400.0	90.96	269.86	9,209.2	-589.7	-3,895.5	3,930.3	0.00	0.00	0.00
13,500.0	90.96	269.86	9,207.5	-590.0	-3,995.5	4,029.9	0.00	0.00	0.00
13,600.0	90.96	269.86	9,205.9	-590.3	-4,095.5	4,129.6	0.00	0.00	0.00
13,700.0	90.96	269.86	9,204.2	E00 E	/ 105 F	4,229.3	0.00	0.00	0.00
,		269.86 269.86	,	-590.5	-4,195.5 4 205 4	4,229.3 4,329.0	0.00	0.00	
13,800.0	90.96		9,202.5	-590.8 501.0	-4,295.4 4 305.4		0.00		0.00
13,900.0	90.96	269.86	9,200.8	-591.0	-4,395.4 4,405.4	4,428.7	0.00	0.00	0.00
14,000.0	90.96	269.86	9,199.1	-591.3	-4,495.4 4 505.4	4,528.3	0.00	0.00	0.00
14,100.0	90.96	269.86	9,197.4	-591.5	-4,595.4	4,628.0	0.00	0.00	0.00
,									

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Easy Company 36/35 W0HG Fed Com #1H

Well: Sec 36, T20S, R28E
Wellbore: BHL: 2200' FNL & 2549' FEL, Sec 35

Wellbore: BHL: 2200'
Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Easy Company 36/35 W0HG Fed Com

#1H

WELL @ 3264.0usft (Original Well Elev) WELL @ 3264.0usft (Original Well Elev)

Grid

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)
14,300.0	90.96	269.86	9,194.1	-592.0	-4,795.4	4,827.4	0.00	0.00	0.00
14,376.6	90.96	269.86	9,192.8	-592.2	-4,872.0	4,903.8	0.00	0.00	0.00
PPP2: 2040'	FNL & 0' FEL (35	5)							
14,400.0	90.96	269.86	9,192.4	-592.3	-4,895.4	4,927.1	0.00	0.00	0.00
14,500.0	90.96	269.86	9,190.7	-592.5	-4,995.3	5,026.8	0.00	0.00	0.00
14,600.0	90.96	269.86	9,189.0	-592.8	-5,095.3	5,126.4	0.00	0.00	0.00
14,700.0	90.96	269.86	9,187.3	-593.0	-5,195.3	5,226.1	0.00	0.00	0.00
14,800.0	90.96	269.86	9,185.7	-593.3	-5,295.3	5,325.8	0.00	0.00	0.00
14,900.0	90.96	269.86	9,184.0	-593.5	-5,395.3	5,425.5	0.00	0.00	0.00
15,000.0 15,100.0	90.96 90.96	269.86 269.86	9,182.3 9,180.6	-593.8 -594.0	-5,495.3 -5,595.3	5,525.2 5,624.8	0.00	0.00	0.00 0.00
15,200.0	90.96	269.86	9,178.9	-594.3	-5,695.2	5,724.5	0.00	0.00	0.00
15,300.0	90.96	269.86	9,177.3	-594.5	-5,795.2	5,824.2	0.00	0.00	0.00
15,400.0	90.96	269.86	9,175.6	-594.8	-5,895.2	5,923.9	0.00	0.00	0.00
15,500.0 15,600.0	90.96 90.96	269.86 269.86	9,173.9 9,172.2	-595.0 -595.3	-5,995.2 -6,095.2	6,023.6 6,123.2	0.00	0.00	0.00 0.00
15,700.0	90.96	269.86	9,170.5	-595.5	-6,195.2	6,222.9	0.00	0.00	0.00
15,800.0	90.96	269.86	9,168.8	-595.8	-6,295.2	6,322.6	0.00	0.00	0.00
15,900.0	90.96	269.86	9,167.2	-596.0	-6,395.1	6,422.3	0.00	0.00	0.00
16,000.0	90.96	269.86	9,165.5	-596.3	-6,495.1	6,522.0		0.00	0.00
16,100.0	90.96	269.86	9,163.8	-596.5	-6,595.1	6,621.7	0.00	0.00	0.00
16,200.0	90.96	269.86	9,162.1	-596.8	-6,695.1	6,721.3	0.00	0.00	0.00
16,300.0	90.96	269.86	9,160.4	-597.0	-6,795.1	6,821.0	0.00	0.00	0.00
16,400.0	90.96	269.86	9,158.7	-597.3	-6,895.1	6,920.7	0.00	0.00	0.00
16,500.0	90.96	269.86	9,157.1	-597.5	-6,995.1	7,020.4	0.00	0.00	0.00
16,600.0	90.96	269.86	9,155.4	-597.8	-7,095.0	7,120.1	0.00	0.00	0.00
16,700.0	90.96	269.86	9,153.7	-598.0	-7,195.0	7,219.7	0.00	0.00	0.00
16,800.0	90.96	269.86	9,152.0	-598.3	-7,295.0	7,319.4	0.00	0.00	0.00
16,900.0	90.96	269.86	9,150.3	-598.6	-7,395.0	7,419.1	0.00	0.00	0.00
16,919.8	90.96	269.86	9,150.0	-598.6	-7,414.8	7,438.8	0.00	0.00	0.00

Database: Hobbs

Site:

Mewbourne Oil Company Company:

Project: Eddy County, New Mexico NAD 83 Easy Company 36/35 W0HG Fed Com #1H

Well: Sec 36, T20S, R28E

BHL: 2200' FNL & 2549' FEL, Sec 35 Wellbore:

Design #1 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

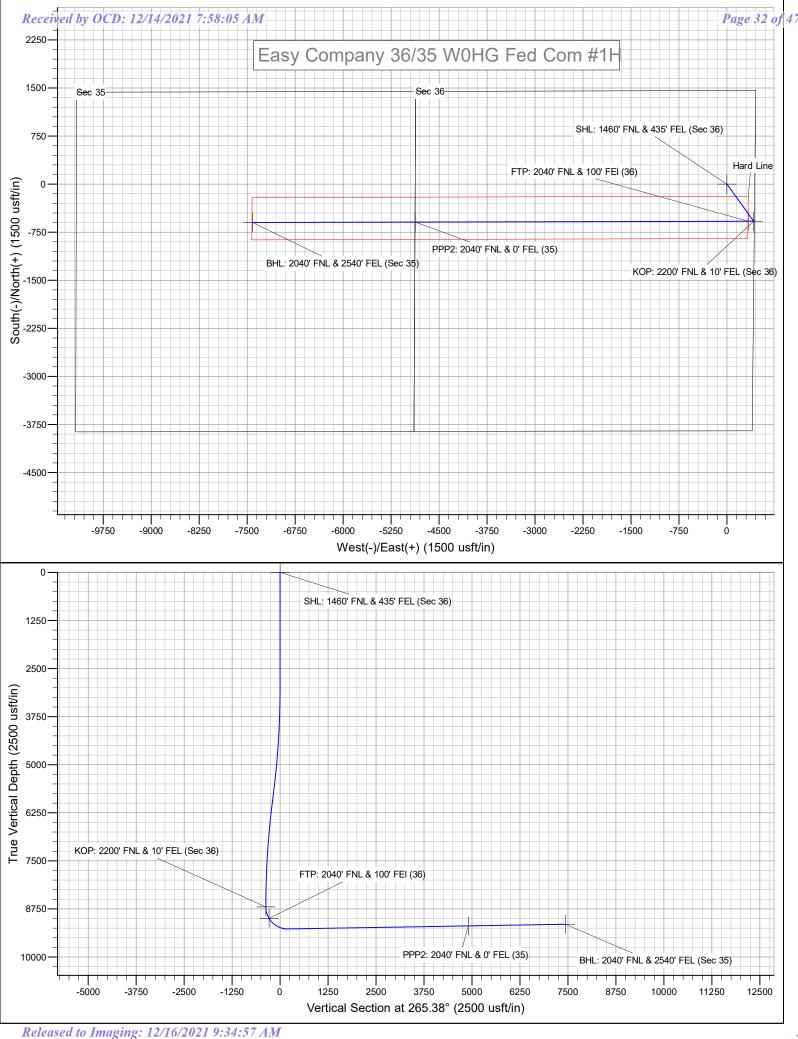
**Survey Calculation Method:** 

Site Easy Company 36/35 W0HG Fed Com

WELL @ 3264.0usft (Original Well Elev) WELL @ 3264.0usft (Original Well Elev)

Grid

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
SHL: 1460' FNL & 435' F - plan hits target cent - Point	0.00 er	0.00	0.0	0.3	-0.1	557,795.00	605,799.00	32.5332629	-104.1241655
KOP: 2200' FNL & 10' Fl - plan hits target cent - Point	0.00 er	0.00	8,699.0	-578.9	418.6	557,215.80	606,217.70	32.5316685	-104.1228106
FTP: 2040' FNL & 100' F - plan hits target cent - Point	0.00 er	0.00	8,997.0	-579.1	335.0	557,215.58	606,134.10	32.5316684	-104.1230819
BHL: 2040' FNL & 2540' - plan hits target cent - Point	0.00 er	0.00	9,150.0	-598.6	-7,414.8	557,196.10	598,384.30	32.5316544	-104.1482284
PPP2: 2040' FNL & 0' Ft - plan misses target o - Point	0.00 center by 0.7u	0.00 usft at 14376.	9,192.8 .6usft MD (9	-592.9 192.8 TVD, -5	-4,872.0 92.2 N, -4872	557,201.82 .0 E)	600,927.10	32.5316577	-104.1399775



Inten	t X	As Dril	led											
API #	ŧ													
Operator Name: Mewbourne Oil Co.						Property Name: Easy Company 36/35 W0HG Fed Com						d Com	Well Number 1H	
Kick (	Off Point	(KOP)												
UL <b>H</b>	Section 36	Township 20S	Range 28E	Lot	Feet 2040		From N	/S	Feet 10		From E	n E/W	County <b>Eddy</b>	
Latit	ude 53166	85			Longitu		8106	6					NAD 83	
													ı	
First	Take Poir	nt (FTP)												
UL <b>H</b>	Section 36	Township 20S	Range 28E	Lot	Feet 2040		From N	/S	Feet 100		From	n E/W	County Eddy	
Latit. 32.	<sup>ude</sup> 53166	84			Longitu -104.		0819	)					NAD 83	
Last T	Гаke Poin	nt (LTP)												
UL G	Section 35	Township 20S	Range 28E	Lot	Feet <b>2040</b>	From N	n N/S	Feet <b>254</b>		From E	E/W	Count		
Latit	ude 53165	42			Longitu -104						NAD 83			
ls thi	s well the	e defining v	vell for th	e Horiz	zontal Sp	oacing	Unit?	Ŋ	′	]				
ls this	s well an	infill well?		N										
	ll is yes p ng Unit.	lease prov	ide API if a	availab	ole, Oper	rator N	lame a	and w	vell n	umbei	r for [	Definiı	ng well fo	r Horizontal
API #	ŧ													
Оре	erator Na	me:				Prope	erty N	ame:						Well Number
														V7.06 /20 /201

KZ 06/29/2018

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: | MEWBOURNE OIL COMPANY

LEASE NO.: | NMNM103877

**WELL NAME & NO.:** EASY COMPANY 36-35 WOHG FED COM 1H

**SURFACE HOLE FOOTAGE:** 1460'/N & 435'/E **BOTTOM HOLE FOOTAGE** 2040'/N & 2540'/E

**LOCATION:** | SECTION 36, T20S, R28E, NMP

**COUNTY:** | Eddy County, New Mexico

COA

H2S	• Yes	O No	
Potash	None	Secretary	© R-111-P
Cave/Karst Potential	O Low	O Medium	• High
Cave/Karst Potential	Critical		
Variance	O None	Flex Hose	Other
Wellhead	Conventional	• Multibowl	O Both
Other	✓ 4 String Area		□WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	<b>☑</b> COM	□ Unit

#### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Undesignated** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

#### **B. CASING**

#### **Casing Design:**

- 1. The **20** inch surface casing shall be set at approximately **375** feet (a minimum of **70 feet** (**Eddy County**) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - 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 will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- 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 13-3/8 inch first intermediate casing shall be set at approximately 1,340 feet. The minimum required fill of cement behind the 13-3/8 inch first 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 or potash.
  - ❖ In <u>High Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
  - ❖ In <u>Capitan Reef Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
  - ❖ Special Capitan Reef requirements. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
    (Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the capitan interval)
    - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
    - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

3. The **9-5/8** inch second intermediate casing shall be set at approximately **3,000** feet. The minimum required fill of cement behind the **9-5/8** inch second intermediate casing is:

#### **Option 1 (Single Stage):**

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 or potash.
 Excess cement calculates to -35%, additional cement might be required.

#### Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

- 4. The minimum required fill of cement behind the 7 inch production casing is:
  - Cement should tie-back at least 50 feet on top of Capitan Reef top. If cement does not circulate see B.1.a, c-d above.
     Excess cement calculates to 23%, additional cement might be required.
- 5. The minimum required fill of cement behind the 4-1/2 inch production liner is:

Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

Excess cement calculates to 22%, additional cement might be required.

#### C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
  - 2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000** (**5M**) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

#### D. 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.

## GENERAL 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. 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.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. 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 are located, this does not include the dog house or stairway area.
- 3. 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.

#### A. CASING

- 1. 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.
- 2. Wait on cement (WOC) for Potash Areas: 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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. 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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. 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.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. 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.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

#### B. 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 RP 53 Sec. 17.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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.
- 3. 5M or higher 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.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. 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. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. 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).
- d. 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.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. 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.

#### C. 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.

#### D. 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.

#### OTA11232021

## Hydrogen Sulfide Drilling Operations Plan Mewbourne Oil Company

#### 1. General Requirements

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H2S were found. MOC will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

#### 2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

- 1. The hazards and characteristics of hydrogen sulfide gas.
- 2. The proper use of personal protective equipment and life support systems.
- 3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
- 4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

#### 3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 9 5/8" intermediate casing.

#### 1. Well Control Equipment

- A. Choke manifold with minimum of one adjustable choke/remote choke.
- B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- C. Auxiliary equipment including annular type blowout preventer.
- 2. <u>Protective Equipment for Essential Personnel</u>

Thirty minute self contained work unit located in the dog house and at briefing areas.

Additionally: If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas. If higher concentrations of H2S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed.

#### 3. <u>Hydrogen Sulfide Protection and Monitoring Equipment</u>

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

#### 4. <u>Visual Warning Systems</u>

- A. Wind direction indicators as indicated on the wellsite diagram.
- B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

## 4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

#### 5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

#### 6. Communications

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

#### 7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

#### 8. Emergency Phone Numbers

<b>Eddy County Sheriff's Office</b>	911 or 575-887-7551
Ambulance Service	911 or 575-885-2111
Carlsbad Fire Dept	911 or 575-885-2111
Loco Hills Volunteer Fire Dept.	911 or 575-677-3266
<b>Closest Medical Facility - Columbia Medical Center</b>	of Carlsbad 575-492-5000

Mewbourne Oil Company	Hobbs District Office Fax 2 <sup>nd</sup> Fax	575-393-5905 575-397-6252 575-393-7259
District Manager	Robin Terrell	575-390-4816
<b>Drilling Superintendent</b>	Frosty Lathan	575-390-4103
	<b>Bradley Bishop</b>	575-390-6838
<b>Drilling Foreman</b>	Wesley Noseff	575-441-0729

Well Name: EASY COMPANY 36/35 W0HG FED COM Well Number: 1H

Waste type: GARBAGE

Waste content description: Garbage & Trash

Amount of waste: 1500 pounds

Waste disposal frequency: One Time Only

Safe containment description: Enclosed trash trailer

Safe containment attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE

**FACILITY** 

Disposal type description:

**Disposal location description:** Waste Management facility in Carlsbad.

#### **Reserve Pit**

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

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? N

**Description of cuttings location** 

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

Well Number: 1H Well Name: EASY COMPANY 36/35 WOHG FED COM

## **Section 8 - Ancillary Facilities**

Are you requesting any Ancillary Facilities?: N

**Ancillary Facilities attachment:** 

Comments:

**Section 9 - Well Site Layout** 

**Well Site Layout Diagram:** 

Easycompany36\_35W0HGFedCom1H\_wellsitelayout\_20210310140451.pdf

Comments:

#### **Section 10 - Plans for Surface Reclamation**

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: Easy Company 36/35 AB/HG

Multiple Well Pad Number: 3

Recontouring attachment:

**Drainage/Erosion control construction:** NONE

**Drainage/Erosion control reclamation: NONE** 

Well pad proposed disturbance

(acres): 4.22

Road proposed disturbance (acres):

0.53

Powerline proposed disturbance

(acres): 0

Pipeline proposed disturbance

(acres): 1.87

Other proposed disturbance (acres): 0

Total proposed disturbance: 6.62

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

Road interim reclamation (acres): 0

(acres): 2.88

Road long term disturbance (acres): 0

Powerline interim reclamation (acres): Powerline long term disturbance

(acres): 0

Pipeline interim reclamation (acres): 0 Pipeline long term disturbance

Other interim reclamation (acres): 0

Total interim reclamation: 1.34

(acres): 0

Other long term disturbance (acres): 0

Total long term disturbance: 2.88

Disturbance Comments: In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

Reconstruction method: The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ration, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To see the area, the proper BLM seed mixture, free of noxious weeks, will be used.

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 Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

## **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 66824

#### **CONDITIONS**

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	66824
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

#### CONDITIONS

Created By	Condition	Condition Date				
kpickford	Notify OCD 24 hours prior to casing & cement					
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104					
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	12/16/2021				
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	12/16/2021				
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	12/16/2021				