Form 3160-3 (September 2001)

Expires January 31, 2004

#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

5. Lease Serial No.

#### NM-83584 & NM-31183 NMNM 15003 BHL

6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO	DRILL O	R REENTER		6. If Indian, Allottee or Tribe Name				
la. Type of Work: DRILL REEN	TER			7. If Unit or CA Agree	ement, Name and	d No.		
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		Single Zone  Multi	iple Zone	8. Lease Name and We	II No.	<i>5</i> >		
2. Name of Operator			<u> </u>	9. API Well No.				
Mewbourne Oil Company (14744)				30-015-	3837	حا		
3a. Address	3b. Phor	ne No. (include area code)		10. Field and Pool, or Exploratory North Burton Flat				
PO Box 5270 Hobbs, NM 88241	575-393	3-5905						
4. Location of Well (Report location clearly and in accordance wit	th any State	requirements. *)		11. Sec., T., R., M., or I	31k. and Survey	or Area		
At surface 330' FNL & 1980' FWL (Unit C)								
At proposed prod. zone 330' FSL & 1720' FWL Unit N				Sec 8-T20S-R28E				
14. Distance in miles and direction from nearest town or post office*				12. County or Parish	13. St	ate		
9 Miles North of Carlsbad, NM				Eddy	ddy NM			
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'	16. No. 280	of Acres in lease	17. Spacin	Eddy NM Unit dedicated to this well				
18. Distance from proposed location*		Proposed Depth 20. BLM/BIA Bond No. on file						
to nearest well, drilling, completed,		TVD						
applied for, on this lease, ft. 1961'		MD 10523	NM1693,	Nationwide				
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Ap	proximate date work will s	tart*	23. Estimated duration				
3299' GL	ASAP			30				
	24. <i>A</i>	Attachments						
The following, completed in accordance with the requirements of Ons	shore Oil and	Gas Order No.1, shall be at	tached to thi	s form:				
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Syste SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	m Lands, th	Item 20 above). 5. Operator certific	ation. specific info	s unless covered by an ex	•			
25. Signature	N	Iame (Printed/Typed)	<u>.</u>	Ţ	Date			
Dark : Father)	) Ja	ackie Lathan		C	8/30/10			
Title Hobbs Regulatory								
Approved by (Signature)	N	lame (Printed/Typed)	DEC 3	2010				
Title FIELD MANAGER		ffice		LSBAD FIELD OFFICE	existing bond on file (se s may be required by the Date 08/30/10  Date DEC 3 2010			
Application approval does not warrant or certify that the applicant hold operations thereon.  Conditions of approval, if any, are attached.	ds legal or eq	uitable title to those rights in	n the subject	lease which would entitle APPROVAL F	the applicant to OR TWO	conduct YEAR		

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.

\*(Instructions on reverse)

Capitan Controlled Water Basin



Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

#### United States Department of the Interior Bureau of Land Management Carlsbad Field Office 620 E Greene Street Carlsbad, New Mexico 88201-1287

#### **Statement Accepting Responsibility for Operations**

Operator Name:

Mewbourne Oil Company

Street or Box:

P.O. Box 5270

City, State:

Hobbs, New Mexico

Zip Code:

88241

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted of the leased land or portion thereof, as described below.

Lease Number:

Lease Number #NM-83584

Legal Description of Land:

Section 8, T-20S, R-28E Eddy County, New Mexico.

Location @ 330' FNL & 1980' FWL.

Formation (if applicable): Bone Springs

Bond Coverage:

\$150,000

BLM Bond File:

NM1693, Nationwide

Authorized Signature: Mull Uus

Name: NM (Micky) Young Title: District Manager

Date: August 26, 2010

#### <u>Drilling Program</u> Mewbourne Oil Company

Federal "V" #5H 330' FNL & 1980' FWL (SHL) Sec 8-T20S-R28E Eddy County, New Mexico

#### 1. The estimated tops of geological markers are as follows:

\*Yates 810'
\*Delaware 2900'
\*Bone Spring 4540'
\*1<sup>st</sup> Bone Springs Sand 6040'

#### 2. Estimated depths of anticipated fresh water, oil, or gas:

Water Fresh water will be protected by setting surface casing at 300' and

cementing to surface.

Hydrocarbons Oil and gas are anticipated in the above (\*) formations. These zones will

be protected by casing as necessary.

#### 3. Pressure control equipment:

A 3000# WP Double Ram BOP and 3000# WP Annular will be installed after running 9 % casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a 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 when the Kelly is not in use. Will test the 9 % BOPE to 3000# and the Annular to 1500# with a third party testing company before drilling below each shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

4. MOC proposes to drill a vertical wellbore to 5550' & kick off to horizontal @ 6123' TVD. The well will be drilled to 10523' MD (6187' TVD). See attached directional plan.

#### 5. Proposed casing and cementing program:

A. Casin	g Program:				
<u>Hole Size</u>	Casing	Wt/Ft.	<u>Grade</u>	Depth 0'-300' See COA	Jt Type
12 ¼"	9 <b>⅓</b> " (new)	36#	J55	0'-300'	LT&C
8 3/4"	7" (new)	26#	P110	0'-5550' MD	LT&C
	,				
8 3/4"	7" (new)	26#	P110	5550'-6441' MD	BT&C
6 1/8"	4 ½" (new)	11.6#	P110	6200'-1 <del>053</del> 7' MD 10,523	LT&C

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8. \*Subject to availability of casing.)

See COA

Drilling Program Mewbourne Oil Company Federal "V" #5H Page 2

#### **B.** Cementing Program:

Surface Casing: 100 sks Class C cement containing 2% CaCl. Yield at 1.34 i. cuft/sk. Cmt circulated to surface.

ii Intermediate Casing: 450 sacks Class H light cement with additives. Yield at 2.12 cuft/sk. 400 sacks Class H cement Containing FLA. Yield at 1.18 cuft/sk Cmt circulated to surface.

ii. Production Liner: This will be a Packer/Port completion from TD up inside 7" casing with packer type liner hanger.

See COA Mewbourne Oil Company reserves the right to change cement designs as hole conditions may warrant.

#### 6. Mud Program:

<u>Interval</u>	Type System	Weight	<u>Viscosity</u>	Fluid Loss
0'-300' 300'-6441'	FW spud mud	8.6-9.0	32-34	NA
300'-6441'	Brine water	10.0-10.2	28-30	NA
6441'- TD	FW w/Polymer	8.5-8.7	32-35	15

### 7. Evaluation Program: See COA

Samples:

10' samples from surface casing to TD

Logging:

Tie-in GR & Gyro from KOP (5550') to surface. GR from 5550' to TD.

#### 8. Downhole Conditions

Zones of abnormal pressure:

None anticipated

Zones of lost circulation:

Anticipated in surface and intermediate holes

Maximum bottom hole temperature:

120 degree F

Maximum bottom hole pressure:

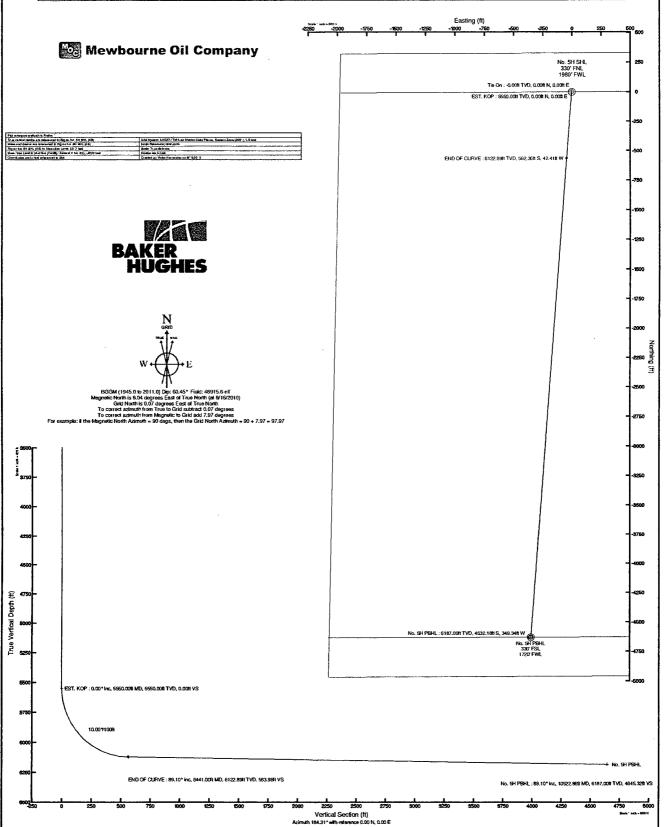
8.3 lbs/gal gradient or less

#### 9. Anticipated Starting Date:

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 45 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

### Mewbourne Oil Company Location: Eddy Countly, NM Fleict: (Fed V) Se 08, 1/20S, R28E Facility: Federal V No. 5H Weelt No. 5H Weeltbore: No. 5H PWB

	Well Profile Data										
Design Comment	Design Comment   MD (ft)   Inc (9   Az (9   TVD (ft)   Local N (ft)   Local E (ft)   DLS (9100ft)   VS (ft)										
Tie On	0.00	0.000	184.313	0.00	0.00	0.00	0.00	0.00			
EST. KOP	5550.00	0.000	184.313	5550.00	0.00	0.00	0.00	0.00			
END OF CURVE	6441.00	89.100	184.313	6122.89	-562.36	-42.41	10.00	563.96			
No. 5H PBHL	10522.86	89.100	184.313	6187.00	-4632.16	-349.34	0.00	4645.32			





# Planned Wellpath Report Prelim\_1 Page 1 of 4



REFER	ENCE WELLPATH IDENTIFICATION		
Operator	Mewbourne Oil Company	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Fed V) Sec 8, T20S, R28E	Wellbore	No. 5H PWB
Facility	Federal V No. 5H		

REPORT SETUP	INFORMATION		
Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999911	Report Generated	8/16/2010 at 3:03:58 PM
Convergence at slot	0.07° East	Database/Source file	WA_Midland/No5H_PWB.xml

WELLEPATH LOCAT	ION					
	Local coo	rdinates	Grid co	ordinates	Geographi	c coordinates
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	540665.31	579951.34	32°35'39.560"N	104°12'04.658"W
Facility Reference Pt			540665.31	579951.34	32°35'39.560"N	104°12'04.658"W
Field Reference Pt			540665.31	579951.34	32°35'39.560"N	104°12'04.658"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 5H SHL (KB) to GL	18.00ft
Horizontal Reference Pt	Slot	Rig on No. 5H SHL (KB) to Mean Sea Level	3317.00ft
Vertical Reference Pt	Rig on No. 5H SHL (KB)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 5H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	184.31°

#### Mewbourne Oil Company

## Planned Wellpath Report Prelim\_1 Page 2 of 4



RODOR	ENCE WELLPATH IDENTIFICATION		
Operator	Mewbourne Oil Company	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Fed V) Sec 8, T20S, R28E	Wellbore	No. 5H PWB
Facility	Federal V No. 5H		

WELLF	PATH DA	TA (53	station	s) †=	interpola	ited/ext	rapolated	station				
MD [ft]	Inclination [°]	Azimuth	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00		184.313		0.00	0.00	0.00	540665.31	579951.34	32°35'39.560"N	104°12'04.658"W	0.00	Tie On
5550.00	0.000	184.313	5550.00	0.00	0.00	0.00	540665.31	579951.34	32°35'39.560"N	104°12'04.658"W	0.00	EST. KOP
5650.00†	10.000	184.313	5649.49	8.70	-8.68	-0.65	540664.66	579942.66	32°35'39.474"N	104°12'04.666"W	10.00	
5750.00†	20.000	184.313	5745.96	34.55	-34.46	-2.60	540662.71	579916.89	32°35'39.219"N	104°12'04.689"W	10.00	
5850.001	30.000	184.313	5836.48	76.76	-76:54	-5.77	540659.54	579874.80	32°35 38:803  N	104°12'04'727"W	10.00	
5950.00†	40.000	184.313	5918.29	134.05	-133.67	-10.08	540655.23	579817.69	32°35'38.238"N	104°12'04.778"W	10.00	
6050.00†	50.000	184.313	5988.91	204.67	-204.09	-15.39	540649.92	579747.27	32°35'37.541"N	104°12'04.841"W	10.00	
6150.00†	60.000	184.313	6046.20	286.48	-285.67	-21.54	540643.77	579665.70	32°35'36.734"N	104°12'04.914"W	10.00	
6250.00†	70.000	184.313	6088.40	376.99	-375.93	-28.35	540636.96	579575.45	32°35'35.841"N	104°12'04.995"W	10.00	
6350:00†	× 80.000	184,313	6114.25	473.46	472.12	35:61	540629.71	579479:26	-32°35'34'889"N	104°12'05'081"W	10.00	
6441.00	89.100	184.313	6122.89	563.96	-562.36	-42.41	540622.90	579389.03	32°35'33.996"N	104°12'05.162"W	10.00	END OF CURVE
6450.00†	89.100	184.313	6123.03	572.96	-571.33	-43.09	540622.23	579380.06	32°35'33.908"N	104°12'05.170"W	0.00	
6550.00†		184.313		672.94	-671.04	-50.61	540614.71	579280.36	32°35'32.921"N	104°12'05.259"W	0.00	
6650.00†		184.313		772.93	-770.74	-58.13	540607.19	579180.67	32°35'31.935"N	104°12'05.349"W	0.00	
6750:00	***89:100	184.313	6127.74	(872.92	-870.45	-65.65	540599:67	579080.97	32°35'30.948"N	104°12'05'438"W	0.00	
6850.00†		184.313		972.91	-970.15	-73.17	540592.15	1	32°35'29.962"N	104°12'05.527"W	0.00	
6950.00†	89.100	184.313	6130.88	1072.90	-1069.86	-80.68	540584.63	578881.58	32°35'28.975"N	104°12'05.617"W	0.00	
7050.00†		184.313		1172.88	-1169.56	-88.20	540577.11	578781.88	32°35'27.989"N	104°12'05.706"W	0.00	
7150.00†			6134.02	1272.87	-1269.27	-95.72	540569.59	578682.19	32°35'27.002"N	104°12'05.795"W	0.00	
7250.001							540562!08	578582.49	32°35'26'016"N	104°,12'05'885#W	0.00	71
7350.00†			6137.16		****		540554.56	578482.80	32°35'25.029"N	104°12'05.974"W	0.00	
7450.00†			6138.74	1572.83	-1568.38	-118.28	540547.04	578383.10	32°35'24.043"N	104°12'06.063"W	0.00	
7550.00†		184.313		1672.82	-1668.08	-125.80	540539.52	578283.41	32°35'23.056"N	104°12'06.153"W	0.00	
7650.00†		184.313		1772.81	-1767.79	-133.32	540532.00	578183.71	32°35'22.070"N	104°12'06.242"W	0.00	
7750:00%									32°35'21'083"N	104°12'06'331"W	0.00	
7850.00†			6145.02				540516.96		32°35'20.097"N	104°12'06.421"W	0.00	
7950.00†		184.313		2072.77	-2066.90		540509.45	577884.63	32°35'19.110"N	104°12'06.510"W	0.00	
8050.00†		184.313		2172.76	-2166.61	-163.40	540501.93	577784.93	32°35'18.124"N	104°12'06.599"W	0.00	
8150.00÷	L	184.313		2272.75	-2266.31	-170.92	540494.41	577685.23	32°35'17.138"N	104°12'06.689"W	0.00	
8250.001	89.100	184.313	6151/30,	2372.74	-2366.02	-178 44	540486.89	57,7585,54	32°35'16.151"N	104°12'06.778'W	0.00	



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RIBBER	ENCE WELLPATHOLDENTIFICATION		
Operator	Mewbourne Oil Company	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Fed V) Sec 8, T20S, R28E	Wellbore	No. 5H PWB
Facility	Federal V No. 5H		

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	DLS	Comments
[ft]	[°]	[°]	[n]	[ft]	[ft]	[ft]	[srv ft]	[srv ft]			[°/100ft]	
8350.00†	89.100	184.313	6152.87	2472.72	-2465.72	-185.96	540479.37	577485.84	32°35'15.165"N	104°12'06.867"W	0.00	
8450.00†	89.100	184.313	6154.44	2572.71	-2565.43	-193.48	540471.85	577386.15	32°35'14.178"N	104°12'06.957"W	0.00	
8550.00†	89.100	184.313	6156.01	2672.70	-2665.13	-200.99	540464.33	577286.45	32°35'13.192"N	104°12'07.046"W	0.00	
8650.00†	89.100	184.313	6157.58	2772.69	-2764.83	-208.51	540456.81	577186.76	32°35'12.205"N	104°12'07.135"W	0.00	
8750.001	±4,89:100	184.313	6159:15	2872.67	-2864.54	-216.03	540449.30	577087.06	32°35'11 219"N	-104°12'07/225"W	0.00	
8850.00†	89.100	184.313	6160.72	2972.66	-2964.24	-223.55	540441.78	576987.37	32°35'10.232"N	104°12'07.314"W	0.00	
8950.00*	89.100	184.313	6162.30	3072.65	-3063.95	-231.07	540434.26	576887.67	32°35'09.246"N	104°12'07.403"W	0.00	
9050.00†	89.100	184.313	6163.87	3172.64	-3163.65	-238.59	540426.74	576787.98	32°35'08.259"N	104°12'07.493"W	0.00	
9150.00†	89.100	184.313	6165.44	3272.62	-3263.36	-246.11	540419.22	576688.28	32°35'07.273"N	104°12'07.582"W	0.00	
*9250.00†	89:100	184.313	6167:01	3372.61	£3363:06	-253.63	540411 70	576588 58	32°35'06.286"N	-104°12'07.671"W	0.00	
9350.00†	89.100	184.313	6168.58	3472.60	-3462.77	-261.15	540404.18	576488.89	32°35'05.300"N	104°12'07.760"W	0.00	
9450.00†	89.100	184.313	6170.15	3572.59	-3562.47	-268.67	540396.67	576389.19	32°35'04.313"N	104°12'07.850"W	0.00	
9550.00†	89.100	184.313	6171.72	3672.57	-3662.17	-276.19	540389.15	576289.50	32°35'03.327"N	104°12'07.939"W	0.00	
9650.00*	89.100	184.313	6173.29	3772.56	-3761.88	-283.71	540381.63	576189.80	32°35'02.340"N	104°12'08.028"W	0.00	
9750.00†	89:100	184313	6174.86	3872.55	≛3861.58	-291:23	540374:11	576090 11	32°35'01.354"N	104°12'08'118"W	0.00	100
9850.00†	89.100	184.313	6176.43	3972.54	-3961.29	-298.75	540366.59	575990.41	32°35'00.367"N	104°12'08.207"W	0.00	
9950.00†	89.100	184.313	6178.00	4072.53	-4060.99	-306.27	540359.07	575890.72	32°34'59.381"N	104° 12'08.296"W	0.00	
10050.00†	89.100	184.313	6179.57	4172.51	-4160.70	-313.79	540351.55	575791.02	32°34'58.395"N	104°12'08.386"W	0.00	
10150.00†	89.100	184.313	6181.14	4272.50	-4260.40	-321.30	540344.03	575691.33	32°34'57.408"N	104°12'08.475"W	0.00	
10250/00†	delle to Galletonia to and the Band	1184.313	6182.71	4372.49	-4360:11	328.82	540336.52	575591.63	32°34'56.422"N	" 104° 12'08:564"W	0.00	
10350.00†	89.100	184.313	6184.28	4472.48	-4459.81	-336.34	540329.00	575491.93	32°34'55.435"N	104°12'08.654"W	0.00	
10450.00†	89.100	184.313	6185.86	4572.46	-4559.52	-343.86	540321.48	575392.24	32°34'54.449"N	104°12'08.743"W	0.00	
10522.86	89.100	184.313	6187.00 <sup>1</sup>	4645.32	-4632.16	-349:34	*540316.00	575319.60	32°34'53:730"N	104°12'08:808"W	0.00	No. 5H PBHL



## Planned Wellpath Report Prelim\_1 Page 4 of 4



REFERENCE WELLPATH IDENTIFICATION							
Operator	Mewbourne Oil Company	Slot	No. 5H SHL				
Area	Eddy County, NM	Well	No. 5H				
Field	(Fed V) Sec 8, T20S, R28E	Wellbore	No. 5H PWB				
Facility	Federal V No. 5H						

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 5H PBHL	10522.86	6187.00	-4632.16	-349.34	540316.00	575319.60	32°34'53 730"N	104°12'08.808"W	point

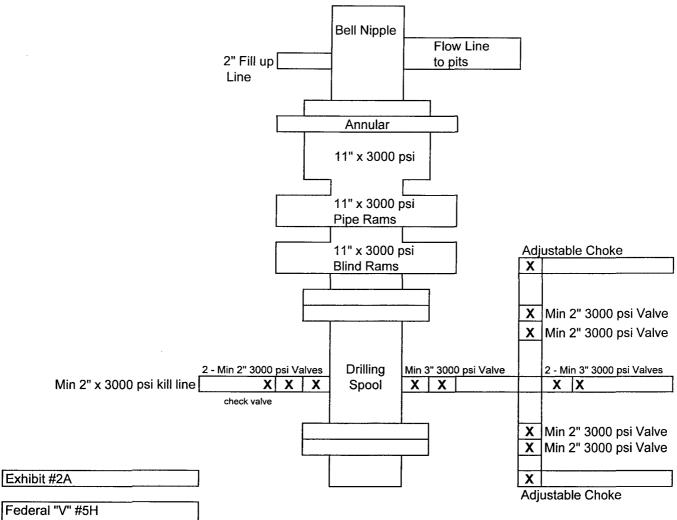
SURVEY PROGRAM Ref Wellbore: No. 5H PWB Ref Wellpath: Prelim_1							
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore			
18.00	10522.86	NaviTrak (Standard)		No. 5H PWB			

### Notes Regarding Blowout Preventer Mewbourne Oil Company

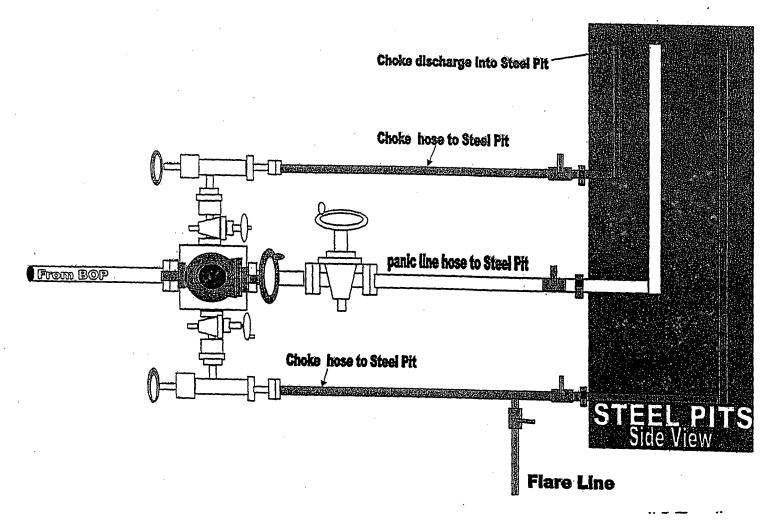
Federal "V" #5H 330' FNL & 1980' FWL (SL) Sec 8-T20S-R28E Eddy County, New Mexico

- I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.
- II. Blowout preventer and all fittings must be in good condition with a minimum 3000 psi working pressure on 9 5/8" casing and 3000 psi working pressure on 7" casing.
- III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 3000 psi working pressure.
- IV. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.
- V. A kelly cock shall be installed on the kelly at all times.

Blowout preventer closing equipment to include and accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.



Federal "V" #5H 330' FNL & 1980' FWL Sec 8-T20S-R28E Eddy, County New Mexico



2000#/3∞o#BOP manifold system

For Exhibit 2+2A