

JUL 07 2015

ATS-14-1049

Form 3160-3
(March 2012)

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

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

(H)

1a. Type of work: ☒ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No. N/A	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		8. Lease Name and Well No. BUCK 30 FEDERAL COM W1 6H (313012)	
2. Name of Operator CONOCOPHILLIPS COMPANY (217817)		9. API Well No. 30-025- 42675 (98065)	
3a. Address 600 N. Dairy Ashford P.O. Box 3087 Houston, Texas 77079		10. Field and Pool, or Exploratory WC-023 G-08 5263205N; W16A WC	
3b. Phone No. (include area code) (281)206-5282		11. Sec., T. R. M. or Bld. and Survey or Area NENW 30-26S-32E	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 283' FNL & 2464' FWL 30-26S-32E (C) At proposed prod. zone 50' FSL & 2360' FWL 31-26S-32E (F3)		12. County or Parish LEA	
15. Distance in miles and direction from nearest town or post office* Approximately 44.9 miles southwest of Jal, NM		13. State NM	
16. No. of acres in lease NMLC-068281B: 1841.48 NMNM-120910: 1218.62		17. Spacing Unit dedicated to this well 224.44	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 33'		20. BLM/BIA Bond No. on file ES0085	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3156' UNGRADED		22. Approximate date work will start* 01/01/2015	
23. Estimated duration 30 Days		24. Attachments	
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:			
1. Well plat certified by a registered surveyor.		4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).	
2. A Drilling Plan.		5. Operator certification	
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).		6. Such other site specific information and/or plans as may be required by the BLM.	
25. Signature <i>Kristina Mickens</i>		Name (Printed/Typed) KRISTINA MICKENS	
Title Sr. Regulatory Specialist		Date 08/21/2014	
Approved by <i>Steve Caffey</i>		Name (Printed/Typed) JUL 1 - 2015	
Title FIELD MANAGER		Office CARLSBAD FIELD OFFICE	
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.			
Conditions of approval, if any, are attached.			
APPROVAL FOR TWO YEARS			

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

(Continued on page 2)

*(Instructions on page 2)

Kz
07/07/15

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

JUL 08 2015

Drilling Program
 ConocoPhillips Company
 Buck 30 Federal COM W1 06H
 283' FNL 2,464' FWL (SHL)
 Sec 30-T26S-R32E
 50' FSL 2,360' FWL (BHL)
 Sec 31-T26S-R32E
 Lea County, New Mexico

HOBBS OCD

JUL 07 2015

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1. Estimated tops of geological formations:

Geologic Formation at surface: Quaternary

Formation	TVD (ft)
Base Fresh Water	300
Rustler	1,110
Salado Top/Top Salt	1,305
Castile	2,410
Base Salt/Delaware Top	4,205
Ford Shale	4,305
* Cherry Canyon	5,145
* Brushy Canyon	6,885
* Bone Springs Top	7,995
* Bone Spring 3rd Carb	10,255
* WolfCamp	11,430
* WolfCamp 1	11,585

2. Estimated depth/thickness of freshwater and/or hydrocarbons:

Water: Fresh water is anticipated above the Rustler at 300' and will be protected by surface casing at ~1,000' and cemented to surface.

Hydrocarbons: Oil and gas are anticipated in the formations annotated above (*). These zones will be isolated as necessary.

3. Pressure Control Equipment:

*Please see attached BOPE and Choke Manifold Schematic for more detail.

A 13-5/8" BOP system will be installed and tested prior to drilling out of the surface casing shoe. The BOP system will be utilized to drill the intermediate and production hole sections, and will be tested per BLM Onshore Oil & Gas Order No. 2 per each hole section specified in the final column of the table in section four.

Multibowl well head

Pressure tests will be conducted at the initial installation of the BOPE and again if needed 30 days from the initial test as per BLM Onshore Oil and Gas Order No. 2. BOPE controls will be installed prior to drilling under the surface casing and will be used until the completion of drilling operations. The intermediate 1 and intermediate 2 string will be tested per 5M working system requirements. The production interval will be tested per 10M working system requirements.

See COA

ConocoPhillips Company requests a variance to use a flexible line between the BOP and the choke. The testing and manufacturing specifications for this equipment is attached. The line will be kept as straight as possible with minimum turns.

4. Proposed Casing Program

*All tubulars used for this design will be new.

Hole Size (in)	Casing (in)	Wt/Ft	Grade	Connection	Thread & Cplg. OD (in)	Csg Interval Depth (ft)	Hole Depth (ftTVD)	Hole Depth (ftMD)
17 1/2	13 3/8	54.5	J-55	BTC	14.375	0-1,135	1,135	1,135
12 1/4	9 5/8	40.0	L-80	BTC	10.625	0-4,320	4,320	4,320
8 3/4	7 5/8	33.7	P-110	Wedge 523	7.775	0-11,665	11,645	11,692
6 5/8	5	21.4	P-110	Tenaris Blue	5.693	0-11,192	11,165	11,192
6 5/8	4 1/2	15.1	P-110	Tenaris XP BTC	5.100	11,192-19,333	11,845	19,333

See COA 1270

11,692

Drilling Program
ConocoPhillips Company
 Buck 30 Federal COM W1 06H
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 Lea County, New Mexico

Minimum casing design factors: Burst 1.0, Collapse 1.125, Tensile Strength 1.6 dry / 1.8 buoyant

Hole Size (in)	Casing (in)	Burst	Collapse	Tension	Minimum Clearance (in)	BOPE System
17 1/2	13 3/8	5.08	2.10	16.01	1.5625	N/A
12 1/4	9 5/8	2.53	1.36	6.27	0.8125	5M
8 3/4	7 5/8	1.93	1.40	3.17	0.4875	5M
6 5/8	5	2.32	2.42	3.56	0.5360	10M
6 5/8	4 1/2	1.87	1.86	3.35	0.7625	10M

5. Proposed Cementing Program

		Volume (sx)	Type	Weight (ppg)	Yield (ft ³ /sx)	Water (Gal/sx)	Excess	Cement Top
Surface	Lead	700	Class C	13.7	1.68	8.684	100%	Surface
	Tail	310	Class C	14.8	1.35	6.349	100%	835ft
Additives (BWOB): 4% Extender, 2% CaCl ₂ , 0.125 lb/sx LCM, 0.2% Anti-Foam								
Intermediate 1	Lead	1,070	Class C	11.9	2.58	15.392	120%	Surface
	Tail	420	Class C	14.8	1.35	6.199	120%	3820ft
Additives (BWOB): 4% Extender, 2% CaCl ₂ , 0.125 lb/sx LCM, 0.2% Anti-Foam								
Intermediate 2	Lead	680	Tuned Light	9.7	2.44	9.116	120%	3820ft
	Tail	140	TXI	13.2	1.53	7.474	100%	11192ft
Additives (BWOB): 0.4% Dispersant, 1 lb/sx Salt, 0.1% Retarder, 0.5% Fluid Loss, 3 lb/sx LCM								
Intermediate 2 (Optional DV)	Depth (ft):	8,000						
	Lead	390	Tuned Light	9.7	2.44	9.116	120%	3820ft
Additives (BWOB): 0.4% Dispersant, 1 lb/sx Salt, 0.1% Retarder, 0.5% Fluid Loss, 3 lb/sx LCM								
Production	Lead							
	Tail	1,330	50:50 / TXI:H	15.0	1.14	3.216	35%	11192ft
Additives (BWOB): 0.4% Retarder, 0.2% Anti-foam, 0.7 Anti-gelling, 0.4% Fluid Loss, 2% Expanding Agent, 5.0% Silica								

6. Proposed Fluids Program

Depth (ft)	Type	Mud Weight (ppg)	Viscosity	Fluid Loss
0 to 1,135	Spud Mud	8.4 - 9.3	32-36	NC
1,135 to 4,320	Brine	9.3 - 10.2	28-30	≤5
4,320 to 11,692	Cut Brine	8.6 - 9.2	30-40	≤5
11,692 to 19,333	Oil Based Mud	12.0 - 14.0	30-40	≤5

Sufficient fluid volume, weight material, and additives will be available onsite at all times. Visual and electronic mud monitoring equipment will be in place to indicate gain or loss.

7. Formation Evaluation Program

Samples: Dry samples taken 30' from intermediate 1 casing point to TD. GC Tracers KOP to TD.
 Logging: GR/Neutron from base salt to surface. GR from 200' above KOP to TD. Not log in the lateral.

Drilling Program
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 Lea County, New Mexico

8. Anticipated Wellbore Conditions

	Value	Comments
Bottom Hole Pressure (psi)	6,661	Assumes 0.78psi/ft - 0.22psi/ft Partial Evacuation
Bottom Hole Temperature (°F)	191	Assumes 0.01deg/100ft
Abnormal Pressure / Potential Hazards	Losses below Delaware will be mitigated with lost circulation material. Potential overpressure below the top of Wolfcamp will be mitigated with mud weight. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation being used to drill this well.	

9. Directional Plan:

Kick off Point (ft)	Landing TVD (ft)	TD TVD (ft)	Total Measured Depth (ft)
11,348	11,895	11,845	19,333

* ConocoPhillips proposes to drill a vertical wellbore to kick off point (with its respective nudge) and then drill horizontally to TD. Please see the attached directional plan for more detail.

** The drilling plan consider to drill 280 ft past the LTP (BHL at 50 ft South of the Section Line) but will not produce pass that point (LTP).

10. Spudder Rig and Skid Operations.

The reasons for using the spudder rig to drill and pre-set surface casing are: Time & Cost Saving.

The "Pinnergy #1" Rig will be used to drill the surface hole and pre-set surface casing on all of the wells in the same pad. Once each surface hole section has been drilled, it will be cased and cemented according to all applicable rules and regulations (OnShore order). the wellhead will be nipped up and tested as soon as 13-3/8" surface casing is cut off after the applicable WOC time has been reached. A blind flange of the same pressure rating as the wellhead will be utilized to seal the wellbore on all casing strings. Pressure will be monitored via wing valves on each wellhead section and a means for intervention will be maintained while the drilling rig is not over the well. Spudder rig operation is expected to take 7-10 days for a quad pad and 4-6 days for a dual pad. The BLM will be contacted / notified 24 hours prior to commencing spudder rig operations.

Drilling operation will start with a big Drilling Rig (H&P Flex 3 rig type) and an approved BOP stack will be nipped up and tested on the wellhead before drilling operations resumes on each well. The rig will skid between the wells until each well's section has been drilled as planned (see Attachment #10). The BLM will be contacted / notified 24 hours before the big rig moves back on the location.

~~Once "Spudder Rig" has left the location, The "big Drilling Rig" will be on location within 90 days to drill each well in the Pad as batch drilling operations~~

*taken out due to NO Batch Drilling Plan
HGR 6-29-15*

Attachments:

- Attachment #1: Directional Plan.
- Attachment #2: Wellbore Casing & Cementing Schematic.
- Attachment #3: WellHead Schematic.
- Attachment #4: BOP Schematic.
- Attachment #5: Choke Schematic.
- Attachment #6: Special (Premium) Connections.
- Attachment #7: Flex Hose Documentation.
- Attachment #8: Spudder Rig Specifications.
- Attachment #9: WellHead Schematic for Pre-set Surface.
- Attachment #10: Skid-Batch Drilling Operations.

Attachment #1



ConocoPhillips

Lea County, NM

Buck 30 Federal COM

W1 06H

Original Hole

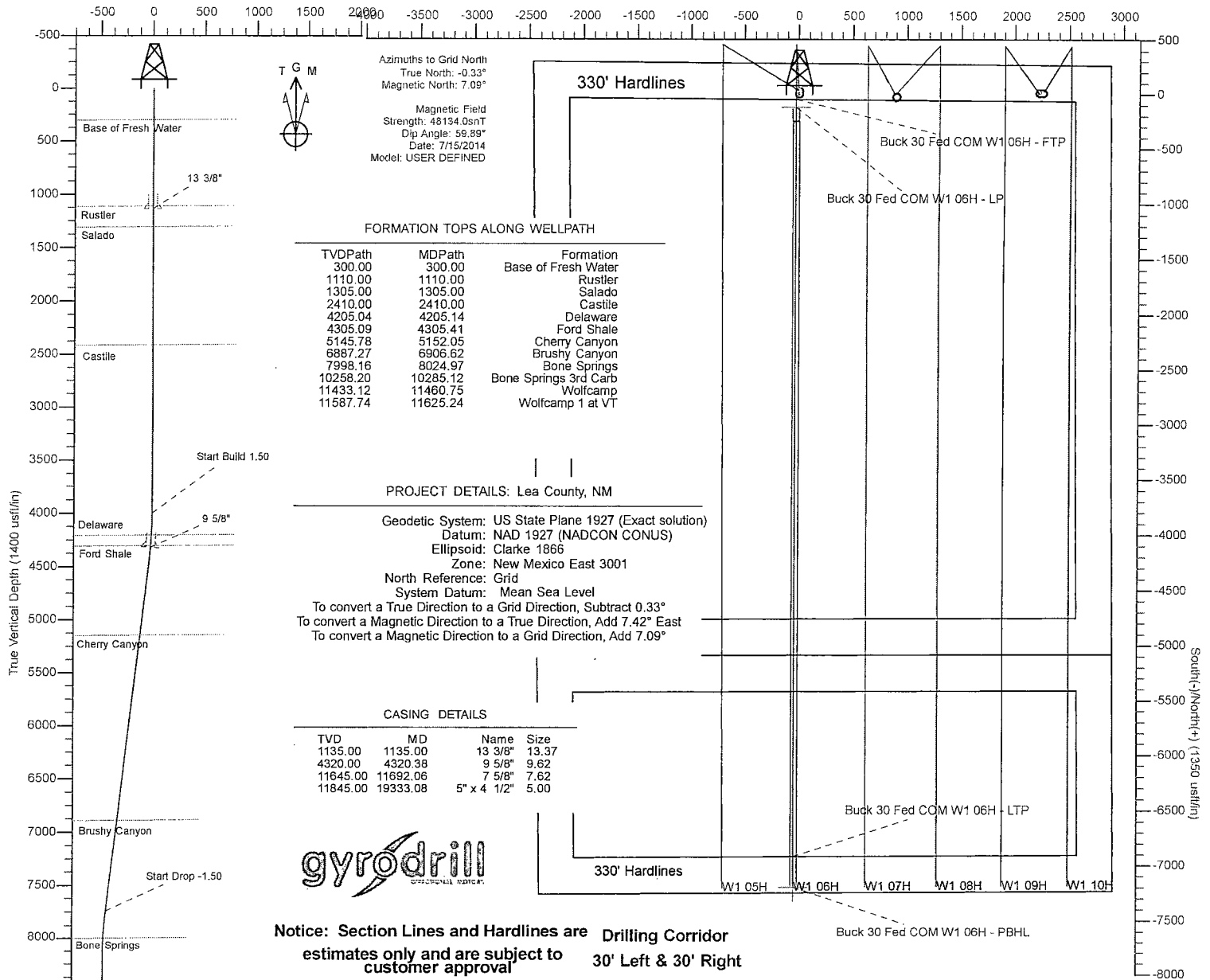
Plan: Design #2

Standard Planning Report

23 July, 2014

Original Hole
Plan: Design #2 (W1 06H/Original Hole)
Well @ 3181.00usft (RKB: 25' + GL: 3156')

Vertical Section at 179.98° (1400 usft/in)



SECTION DETAILS

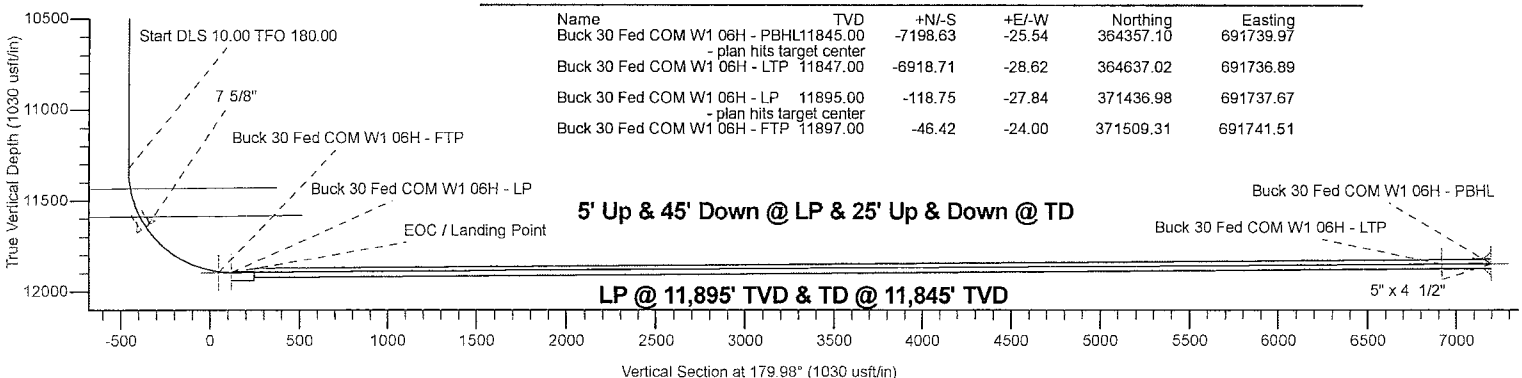
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
3	4466.67	7.00	356.50	4465.51	28.42	-1.74	1.50	356.50	-28.42	Start Drop -1.50
4	7766.67	7.00	356.50	7740.91	429.84	-26.29	0.00	0.00	-429.85	
5	8233.33	0.00	0.00	8206.41	458.26	-28.03	1.50	180.00	-458.27	
6	11348.97	0.00	0.00	11322.06	458.26	-28.03	0.00	0.00	-458.27	Start DLS 10.00 TFO 180.00
7	12253.02	90.40	179.98	11895.00	-118.75	-27.84	10.00	179.98	118.74	EOC / Landing Point
8	19333.08	90.40	179.98	11845.00	-7198.63	-25.54	0.00	0.00	7198.62	

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
Buck 30 Fed COM W1 06H - PBHL	11845.00	-7198.63	-25.54	364357.10	691739.97
Buck 30 Fed COM W1 06H - LTP	11847.00	-6918.71	-28.62	364637.02	691736.89
Buck 30 Fed COM W1 06H - LP	11895.00	-118.75	-27.84	371436.98	691737.67
Buck 30 Fed COM W1 06H - FTP	11897.00	-46.42	-24.00	371509.31	691741.51

5' Up & 45' Down @ LP & 25' Up & Down @ TD

LP @ 11,895' TVD & TD @ 11,845' TVD



Vertical Section at 179.98° (1030 usft/in)

Database: Gyrodata NWDB
Company: ConocoPhillips
Project: Lea County, NM
Site: Buck 30 Federal COM
Well: W1 06H
Wellbore: Original Hole
Design: Design #2

Local Co-ordinate Reference: Well W1 06H
TVD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
MD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Buck 30 Federal COM		
Site Position:		Northing:	371,501.22 usft
From:	Map	Easting:	689,667.38 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	32° 1' 11.62 N
		Longitude:	103° 43' 16.92 W
		Grid Convergence:	0.32 °

Well	W1 06H		
Well Position	+N/-S	54.51 usft	Northing: 371,555.73 usft
	+E/-W	2,098.13 usft	Easting: 691,765.51 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 1' 12.04 N
		Longitude:	103° 42' 52.54 W
		Ground Level:	3,156.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	User Defined	7/15/2014	7.42	59.89	48,134

Design	Design #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	179.98

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,466.67	7.00	356.50	4,465.51	28.42	-1.74	1.50	1.50	0.00	356.50	
7,766.67	7.00	356.50	7,740.91	429.84	-26.29	0.00	0.00	0.00	0.00	
8,233.33	0.00	0.00	8,206.41	458.26	-28.03	1.50	-1.50	0.00	180.00	
11,348.97	0.00	0.00	11,322.06	458.26	-28.03	0.00	0.00	0.00	0.00	
12,253.02	90.40	179.98	11,895.00	-118.75	-27.84	10.00	10.00	19.91	179.98	
19,333.08	90.40	179.98	11,845.00	-7,198.63	-25.54	0.00	0.00	0.00	0.00	Buck 30 Fed COM W



Gyrodatab Inc.
Planning Report



Database: Gyrodatab NWDB
Company: ConocoPhillips
Project: Lea County, NM
Site: Buck 30 Federal COM
Well: W1 06H
Wellbore: Original Hole
Design: Design #2

Local Co-ordinate Reference: Well W1 06H
TVD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
MD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	1.50	356.50	4,099.99	1.31	-0.08	-1.31	1.50	1.50	0.00
4,200.00	3.00	356.50	4,199.91	5.23	-0.32	-5.23	1.50	1.50	0.00
4,300.00	4.50	356.50	4,299.69	11.75	-0.72	-11.75	1.50	1.50	0.00
4,400.00	6.00	356.50	4,399.27	20.89	-1.28	-20.89	1.50	1.50	0.00
4,466.67	7.00	356.50	4,465.51	28.42	-1.74	-28.42	1.50	1.50	0.00
4,500.00	7.00	356.50	4,498.59	32.47	-1.99	-32.47	0.00	0.00	0.00
4,600.00	7.00	356.50	4,597.85	44.64	-2.73	-44.64	0.00	0.00	0.00
4,700.00	7.00	356.50	4,697.10	56.80	-3.47	-56.80	0.00	0.00	0.00
4,800.00	7.00	356.50	4,796.36	68.97	-4.22	-68.97	0.00	0.00	0.00
4,900.00	7.00	356.50	4,895.61	81.13	-4.96	-81.13	0.00	0.00	0.00
5,000.00	7.00	356.50	4,994.86	93.29	-5.71	-93.30	0.00	0.00	0.00
5,100.00	7.00	356.50	5,094.12	105.46	-6.45	-105.46	0.00	0.00	0.00
5,200.00	7.00	356.50	5,193.37	117.62	-7.19	-117.63	0.00	0.00	0.00



Gyrodata Inc.
Planning Report



Database: Gyrodata NWDB
Company: ConocoPhillips
Project: Lea County, NM
Site: Buck 30 Federal COM
Well: W1 06H
Wellbore: Original Hole
Design: Design #2

Local Co-ordinate Reference: Well W1 06H
TVD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
MD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,300.00	7.00	356.50	5,292.63	129.79	-7.94	-129.79	0.00	0.00	0.00
5,400.00	7.00	356.50	5,391.88	141.95	-8.68	-141.95	0.00	0.00	0.00
5,500.00	7.00	356.50	5,491.14	154.12	-9.43	-154.12	0.00	0.00	0.00
5,600.00	7.00	356.50	5,590.39	166.28	-10.17	-166.28	0.00	0.00	0.00
5,700.00	7.00	356.50	5,689.65	178.44	-10.91	-178.45	0.00	0.00	0.00
5,800.00	7.00	356.50	5,788.90	190.61	-11.66	-190.61	0.00	0.00	0.00
5,900.00	7.00	356.50	5,888.16	202.77	-12.40	-202.78	0.00	0.00	0.00
6,000.00	7.00	356.50	5,987.41	214.94	-13.15	-214.94	0.00	0.00	0.00
6,100.00	7.00	356.50	6,086.67	227.10	-13.89	-227.11	0.00	0.00	0.00
6,200.00	7.00	356.50	6,185.92	239.26	-14.63	-239.27	0.00	0.00	0.00
6,300.00	7.00	356.50	6,285.17	251.43	-15.38	-251.43	0.00	0.00	0.00
6,400.00	7.00	356.50	6,384.43	263.59	-16.12	-263.60	0.00	0.00	0.00
6,500.00	7.00	356.50	6,483.68	275.76	-16.87	-275.76	0.00	0.00	0.00
6,600.00	7.00	356.50	6,582.94	287.92	-17.61	-287.93	0.00	0.00	0.00
6,700.00	7.00	356.50	6,682.19	300.09	-18.35	-300.09	0.00	0.00	0.00
6,800.00	7.00	356.50	6,781.45	312.25	-19.10	-312.26	0.00	0.00	0.00
6,900.00	7.00	356.50	6,880.70	324.41	-19.84	-324.42	0.00	0.00	0.00
7,000.00	7.00	356.50	6,979.96	336.58	-20.59	-336.59	0.00	0.00	0.00
7,100.00	7.00	356.50	7,079.21	348.74	-21.33	-348.75	0.00	0.00	0.00
7,200.00	7.00	356.50	7,178.47	360.91	-22.07	-360.91	0.00	0.00	0.00
7,300.00	7.00	356.50	7,277.72	373.07	-22.82	-373.08	0.00	0.00	0.00
7,400.00	7.00	356.50	7,376.98	385.24	-23.56	-385.24	0.00	0.00	0.00
7,500.00	7.00	356.50	7,476.23	397.40	-24.31	-397.41	0.00	0.00	0.00
7,600.00	7.00	356.50	7,575.48	409.56	-25.05	-409.57	0.00	0.00	0.00
7,700.00	7.00	356.50	7,674.74	421.73	-25.79	-421.74	0.00	0.00	0.00
7,766.67	7.00	356.50	7,740.91	429.84	-26.29	-429.85	0.00	0.00	0.00
7,800.00	6.50	356.50	7,774.01	433.75	-26.53	-433.76	1.50	-1.50	0.00
7,900.00	5.00	356.50	7,873.51	443.75	-27.14	-443.76	1.50	-1.50	0.00
8,000.00	3.50	356.50	7,973.23	451.14	-27.59	-451.15	1.50	-1.50	0.00
8,100.00	2.00	356.50	8,073.11	455.93	-27.89	-455.94	1.50	-1.50	0.00
8,200.00	0.50	356.50	8,173.08	458.11	-28.02	-458.12	1.50	-1.50	0.00
8,233.33	0.00	0.00	8,206.41	458.26	-28.03	-458.27	1.50	-1.50	0.00
8,300.00	0.00	0.00	8,273.08	458.26	-28.03	-458.27	0.00	0.00	0.00
8,400.00	0.00	0.00	8,373.08	458.26	-28.03	-458.27	0.00	0.00	0.00
8,500.00	0.00	0.00	8,473.08	458.26	-28.03	-458.27	0.00	0.00	0.00
8,600.00	0.00	0.00	8,573.08	458.26	-28.03	-458.27	0.00	0.00	0.00
8,700.00	0.00	0.00	8,673.08	458.26	-28.03	-458.27	0.00	0.00	0.00
8,800.00	0.00	0.00	8,773.08	458.26	-28.03	-458.27	0.00	0.00	0.00
8,900.00	0.00	0.00	8,873.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,000.00	0.00	0.00	8,973.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,100.00	0.00	0.00	9,073.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,200.00	0.00	0.00	9,173.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,300.00	0.00	0.00	9,273.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,400.00	0.00	0.00	9,373.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,500.00	0.00	0.00	9,473.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,600.00	0.00	0.00	9,573.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,700.00	0.00	0.00	9,673.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,800.00	0.00	0.00	9,773.08	458.26	-28.03	-458.27	0.00	0.00	0.00
9,900.00	0.00	0.00	9,873.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,000.00	0.00	0.00	9,973.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,100.00	0.00	0.00	10,073.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,200.00	0.00	0.00	10,173.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,300.00	0.00	0.00	10,273.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,400.00	0.00	0.00	10,373.08	458.26	-28.03	-458.27	0.00	0.00	0.00

Database: Gyrodata NWDB
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Project: Lea County, NM
Site: Buck 30 Federal COM
Well: W1 06H
Wellbore: Original Hole
Design: Design #2

Local Co-ordinate Reference: Well W1 06H
TVD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
MD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,500.00	0.00	0.00	10,473.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,600.00	0.00	0.00	10,573.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,700.00	0.00	0.00	10,673.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,800.00	0.00	0.00	10,773.08	458.26	-28.03	-458.27	0.00	0.00	0.00
10,900.00	0.00	0.00	10,873.08	458.26	-28.03	-458.27	0.00	0.00	0.00
11,000.00	0.00	0.00	10,973.08	458.26	-28.03	-458.27	0.00	0.00	0.00
11,100.00	0.00	0.00	11,073.08	458.26	-28.03	-458.27	0.00	0.00	0.00
11,200.00	0.00	0.00	11,173.08	458.26	-28.03	-458.27	0.00	0.00	0.00
11,300.00	0.00	0.00	11,273.08	458.26	-28.03	-458.27	0.00	0.00	0.00
11,348.97	0.00	0.00	11,322.06	458.26	-28.03	-458.27	0.00	0.00	0.00
11,400.00	5.10	179.98	11,373.02	455.98	-28.03	-455.99	10.00	10.00	0.00
11,500.00	15.10	179.98	11,471.34	438.47	-28.02	-438.48	10.00	10.00	0.00
11,600.00	25.10	179.98	11,565.13	404.14	-28.01	-404.15	10.00	10.00	0.00
11,700.00	35.10	179.98	11,651.53	354.05	-27.99	-354.06	10.00	10.00	0.00
11,800.00	45.10	179.98	11,727.92	289.71	-27.97	-289.72	10.00	10.00	0.00
11,900.00	55.10	179.98	11,791.98	213.09	-27.95	-213.10	10.00	10.00	0.00
12,000.00	65.10	179.98	11,841.76	126.51	-27.92	-126.52	10.00	10.00	0.00
12,100.00	75.10	179.98	11,875.75	32.60	-27.89	-32.61	10.00	10.00	0.00
12,200.00	85.10	179.98	11,892.92	-65.79	-27.86	65.78	10.00	10.00	0.00
12,253.02	90.40	179.98	11,895.00	-118.75	-27.84	118.74	10.00	10.00	0.00
12,300.00	90.40	179.98	11,894.67	-165.73	-27.83	165.72	0.00	0.00	0.00
12,400.00	90.40	179.98	11,893.96	-265.73	-27.79	265.72	0.00	0.00	0.00
12,500.00	90.40	179.98	11,893.25	-365.72	-27.76	365.71	0.00	0.00	0.00
12,600.00	90.40	179.98	11,892.55	-465.72	-27.73	465.71	0.00	0.00	0.00
12,700.00	90.40	179.98	11,891.84	-565.72	-27.70	565.71	0.00	0.00	0.00
12,800.00	90.40	179.98	11,891.13	-665.72	-27.66	665.71	0.00	0.00	0.00
12,900.00	90.40	179.98	11,890.43	-765.71	-27.63	765.70	0.00	0.00	0.00
13,000.00	90.40	179.98	11,889.72	-865.71	-27.60	865.70	0.00	0.00	0.00
13,100.00	90.40	179.98	11,889.02	-965.71	-27.57	965.70	0.00	0.00	0.00
13,200.00	90.40	179.98	11,888.31	-1,065.71	-27.53	1,065.70	0.00	0.00	0.00
13,300.00	90.40	179.98	11,887.60	-1,165.70	-27.50	1,165.69	0.00	0.00	0.00
13,400.00	90.40	179.98	11,886.90	-1,265.70	-27.47	1,265.69	0.00	0.00	0.00
13,500.00	90.40	179.98	11,886.19	-1,365.70	-27.44	1,365.69	0.00	0.00	0.00
13,600.00	90.40	179.98	11,885.49	-1,465.70	-27.40	1,465.69	0.00	0.00	0.00
13,700.00	90.40	179.98	11,884.78	-1,565.69	-27.37	1,565.68	0.00	0.00	0.00
13,800.00	90.40	179.98	11,884.07	-1,665.69	-27.34	1,665.68	0.00	0.00	0.00
13,900.00	90.40	179.98	11,883.37	-1,765.69	-27.31	1,765.68	0.00	0.00	0.00
14,000.00	90.40	179.98	11,882.66	-1,865.69	-27.27	1,865.68	0.00	0.00	0.00
14,100.00	90.40	179.98	11,881.95	-1,965.68	-27.24	1,965.67	0.00	0.00	0.00
14,200.00	90.40	179.98	11,881.25	-2,065.68	-27.21	2,065.67	0.00	0.00	0.00
14,300.00	90.40	179.98	11,880.54	-2,165.68	-27.18	2,165.67	0.00	0.00	0.00
14,400.00	90.40	179.98	11,879.84	-2,265.68	-27.14	2,265.67	0.00	0.00	0.00
14,500.00	90.40	179.98	11,879.13	-2,365.67	-27.11	2,365.66	0.00	0.00	0.00
14,600.00	90.40	179.98	11,878.42	-2,465.67	-27.08	2,465.66	0.00	0.00	0.00
14,700.00	90.40	179.98	11,877.72	-2,565.67	-27.05	2,565.66	0.00	0.00	0.00
14,800.00	90.40	179.98	11,877.01	-2,665.67	-27.01	2,665.66	0.00	0.00	0.00
14,900.00	90.40	179.98	11,876.31	-2,765.66	-26.98	2,765.65	0.00	0.00	0.00
15,000.00	90.40	179.98	11,875.60	-2,865.66	-26.95	2,865.65	0.00	0.00	0.00
15,100.00	90.40	179.98	11,874.89	-2,965.66	-26.92	2,965.65	0.00	0.00	0.00
15,200.00	90.40	179.98	11,874.19	-3,065.66	-26.88	3,065.65	0.00	0.00	0.00
15,300.00	90.40	179.98	11,873.48	-3,165.65	-26.85	3,165.64	0.00	0.00	0.00
15,400.00	90.40	179.98	11,872.77	-3,265.65	-26.82	3,265.64	0.00	0.00	0.00
15,500.00	90.40	179.98	11,872.07	-3,365.65	-26.79	3,365.64	0.00	0.00	0.00
15,600.00	90.40	179.98	11,871.36	-3,465.65	-26.75	3,465.64	0.00	0.00	0.00

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North Reference: Grid
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,700.00	90.40	179.98	11,870.66	-3,565.64	-26.72	3,565.63	0.00	0.00	0.00
15,800.00	90.40	179.98	11,869.95	-3,665.64	-26.69	3,665.63	0.00	0.00	0.00
15,900.00	90.40	179.98	11,869.24	-3,765.64	-26.66	3,765.63	0.00	0.00	0.00
16,000.00	90.40	179.98	11,868.54	-3,865.64	-26.62	3,865.63	0.00	0.00	0.00
16,100.00	90.40	179.98	11,867.83	-3,965.63	-26.59	3,965.62	0.00	0.00	0.00
16,200.00	90.40	179.98	11,867.13	-4,065.63	-26.56	4,065.62	0.00	0.00	0.00
16,300.00	90.40	179.98	11,866.42	-4,165.63	-26.53	4,165.62	0.00	0.00	0.00
16,400.00	90.40	179.98	11,865.71	-4,265.63	-26.49	4,265.62	0.00	0.00	0.00
16,500.00	90.40	179.98	11,865.01	-4,365.62	-26.46	4,365.61	0.00	0.00	0.00
16,600.00	90.40	179.98	11,864.30	-4,465.62	-26.43	4,465.61	0.00	0.00	0.00
16,700.00	90.40	179.98	11,863.59	-4,565.62	-26.40	4,565.61	0.00	0.00	0.00
16,800.00	90.40	179.98	11,862.89	-4,665.62	-26.36	4,665.61	0.00	0.00	0.00
16,900.00	90.40	179.98	11,862.18	-4,765.61	-26.33	4,765.60	0.00	0.00	0.00
17,000.00	90.40	179.98	11,861.48	-4,865.61	-26.30	4,865.60	0.00	0.00	0.00
17,100.00	90.40	179.98	11,860.77	-4,965.61	-26.27	4,965.60	0.00	0.00	0.00
17,200.00	90.40	179.98	11,860.06	-5,065.61	-26.23	5,065.60	0.00	0.00	0.00
17,300.00	90.40	179.98	11,859.36	-5,165.60	-26.20	5,165.59	0.00	0.00	0.00
17,400.00	90.40	179.98	11,858.65	-5,265.60	-26.17	5,265.59	0.00	0.00	0.00
17,500.00	90.40	179.98	11,857.94	-5,365.60	-26.14	5,365.59	0.00	0.00	0.00
17,600.00	90.40	179.98	11,857.24	-5,465.60	-26.10	5,465.59	0.00	0.00	0.00
17,700.00	90.40	179.98	11,856.53	-5,565.59	-26.07	5,565.58	0.00	0.00	0.00
17,800.00	90.40	179.98	11,855.83	-5,665.59	-26.04	5,665.58	0.00	0.00	0.00
17,900.00	90.40	179.98	11,855.12	-5,765.59	-26.01	5,765.58	0.00	0.00	0.00
18,000.00	90.40	179.98	11,854.41	-5,865.59	-25.97	5,865.58	0.00	0.00	0.00
18,100.00	90.40	179.98	11,853.71	-5,965.58	-25.94	5,965.57	0.00	0.00	0.00
18,200.00	90.40	179.98	11,853.00	-6,065.58	-25.91	6,065.57	0.00	0.00	0.00
18,300.00	90.40	179.98	11,852.30	-6,165.58	-25.88	6,165.57	0.00	0.00	0.00
18,400.00	90.40	179.98	11,851.59	-6,265.58	-25.84	6,265.57	0.00	0.00	0.00
18,500.00	90.40	179.98	11,850.88	-6,365.57	-25.81	6,365.56	0.00	0.00	0.00
18,600.00	90.40	179.98	11,850.18	-6,465.57	-25.78	6,465.56	0.00	0.00	0.00
18,700.00	90.40	179.98	11,849.47	-6,565.57	-25.75	6,565.56	0.00	0.00	0.00
18,800.00	90.40	179.98	11,848.76	-6,665.57	-25.71	6,665.56	0.00	0.00	0.00
18,900.00	90.40	179.98	11,848.06	-6,765.56	-25.68	6,765.55	0.00	0.00	0.00
19,000.00	90.40	179.98	11,847.35	-6,865.56	-25.65	6,865.55	0.00	0.00	0.00
19,100.00	90.40	179.98	11,846.65	-6,965.56	-25.62	6,965.55	0.00	0.00	0.00
19,200.00	90.40	179.98	11,845.94	-7,065.56	-25.58	7,065.55	0.00	0.00	0.00
19,300.00	90.40	179.98	11,845.23	-7,165.55	-25.55	7,165.54	0.00	0.00	0.00
19,333.08	90.40	179.98	11,845.00	-7,198.63	-25.54	7,198.62	0.00	0.00	0.00

Database: Gyrodatab NWDB
Company: ConocoPhillips
Project: Lea County, NM
Site: Buck 30 Federal COM
Well: W1 06H
Wellbore: Original Hole
Design: Design #2

Local Co-ordinate Reference: Well W1 06H
TVD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
MD Reference: Well @ 3181.00usft (RKB: 25' + GL: 3156')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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
Buck 30 Fed COM W1 0 - plan hits target center - Rectangle (sides W60.00 H50.00 D6,950.00)	89.57	180.00	11,845.00	-7,198.63	-25.54	364,357.10	691,739.97	32° 0' 0.80 N	103° 42' 53.32 W
Buck 30 Fed COM W1 0 - plan misses target center by 2.99usft at 19053.15usft MD (11846.98 TVD, -6918.71 N, -25.63 E) - Point	0.00	0.00	11,847.00	-6,918.71	-28.62	364,637.02	691,736.89	32° 0' 3.57 N	103° 42' 53.33 W
Buck 30 Fed COM W1 0 - plan hits target center - Rectangle (sides W60.00 H50.00 D125.00)	89.57	180.00	11,895.00	-118.75	-27.84	371,436.98	691,737.67	32° 1' 10.87 N	103° 42' 52.87 W
Buck 30 Fed COM W1 0 - plan misses target center by 7.17usft at 12181.60usft MD (11891.06 TVD, -47.48 N, -27.86 E) - Point	0.00	0.01	11,897.00	-46.42	-24.00	371,509.31	691,741.51	32° 1' 11.58 N	103° 42' 52.82 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,135.00	1,135.00	13 3/8"	13.37	17.50
4,320.38	4,320.00	9 5/8"	9.62	12.25
11,692.06	11,645.00	7 5/8"	7.62	7.62
19,333.08	11,845.00	5" x 4 1/2"	5.00	5.50

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
300.00	300.00	Base of Fresh Water		-0.40	179.98
1,110.00	1,110.00	Rustler		-0.40	179.98
1,305.00	1,305.00	Salado		-0.40	179.98
2,410.00	2,410.00	Castile		-0.40	179.98
4,205.14	4,205.04	Delaware		-0.40	179.98
4,305.41	4,305.09	Ford Shale		-0.40	179.98
5,152.05	5,145.78	Cherry Canyon		-0.40	179.98
6,906.62	6,887.27	Brushy Canyon		-0.40	179.98
8,024.97	7,998.16	Bone Springs		-0.40	179.98
10,285.12	10,258.20	Bone Springs 3rd Carb		-0.40	179.98
11,460.75	11,433.12	Wolfcamp		-0.40	179.98
11,625.24	11,587.74	Wolfcamp 1 at VT		-0.40	179.98

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,000.00	4,000.00	0.00	0.00	Start Build 1.50
7,766.67	7,740.91	429.84	-26.29	Start Drop -1.50
11,348.97	11,322.05	458.26	-28.03	Start DLS 10.00 TFO 180.00
12,253.02	11,895.00	-118.75	-27.84	EOC / Landing Point

BUCK 30 FEDERAL COM W1 06H

Attachment #2

MD Formation Top
0 ft

1,110 ft Rustler
1,135 ft Surface Shoe
1,305 ft Anhydrite/ Top Salt

2,410 ft Castile

4,205 ft Delaware/Base Salt
4,305 ft Ford Shale

4,320 ft Interm1 Shoe

5,152 ft Cherry Canyon
6,906 ft Brushy Canyon

8,024 ft Bone Spring Top

10,285 ft 3rd BS Carbonate

11,348 ft KOP
11,460 ft WolfCamp Top
11,625 ft WolfCamp 1 Top
11,692 ft Interm2 Shoe

WolfCamp 1 Shale

Surface Section:

- Objective: Protect fresh water horizons.
- Drill 17-1/2" hole to +/- 1,135 ft, 25' inside "Rustler".
- Mud weight: 8.6 – 9.3 ppg FW-Native Mud.
- Set 13-3/8" 54.5# J-55 BTC casing.**
- Cement to surface.

Intermediate1 Section:

- Objective: Isolate the Salado Salt and Delaware Sand interval.
- Drill 12-1/4" hole to +/- 4,320 ft , 15'-20'-TVD inside "Ford Shale".
- Mud weight: 9.3 - 10.2 ppg Brine.
- Set 9-5/8" 40# L-80 BTC casing.**
- Cement to surface.

Intermediate2 Section:

- Objective: Isolate depleted/weak formations above WC1.
- Drill 8-3/4" hole to +/- 11,692 ft. 60'-70' TVD inside WC1 Top.
- Mud weight: 8.6 – 9.2 ppg Cut Brine.
- Set 7-5/8" 33.7# P-110 Tenaris W523 casing.**
- Cement lap 500 ft above previous shoe.

Production Section:

- Objective: Provide zonal isolation of production interval and provide medium for stimulation.
- Drill 6-5/8" hole to +/-19,333 ft, "Production TD".
- Mud Weight: 12.0 – 13.5 ppg (14.0 ppg Max) OBM.
- Set 5" 21.4# P-110 TenBlue X 4-1/2" 15.1# P-110 Ten XP BTC casing.**
- Cement lap 500 ft above previous shoe (near KOP).

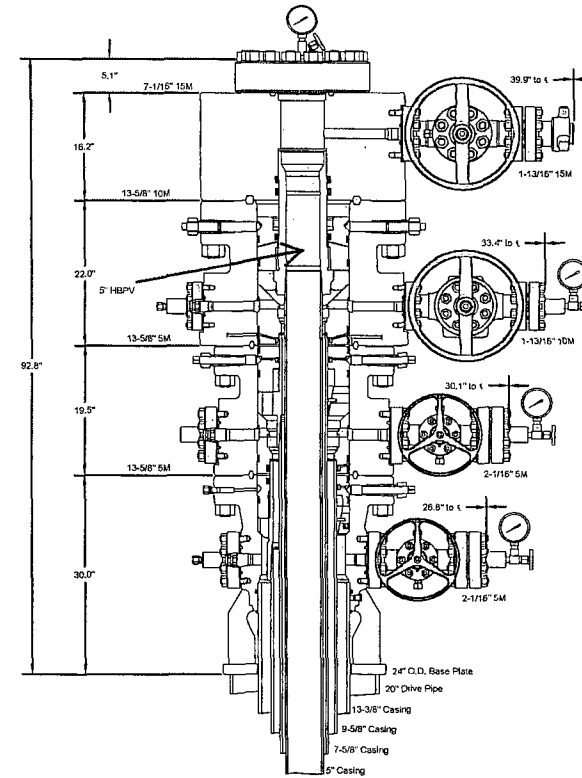
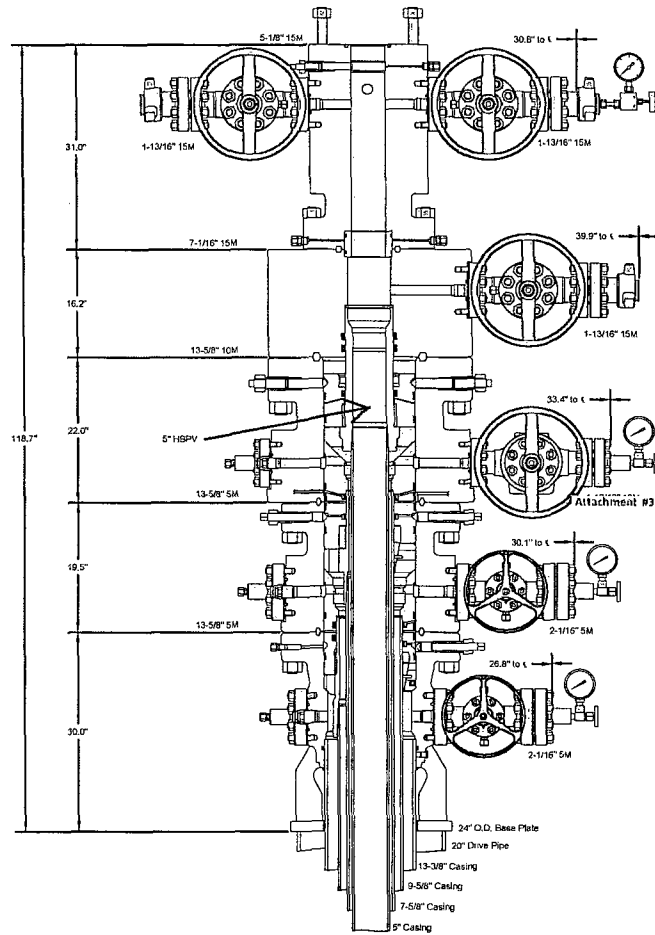
19,333 ft Prod Shoe
19,333 ft TD

Completion	
Type:	Plug and Perf. GAS LIFT.
Tubing Design:	2-3/8" 4.7#/ft. L-80, BRD
Total Stages:	22



GE Oil & Gas

Attachment #3



ALL DIMENSIONS ARE APPROXIMATE

This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.

20" x 13-3/8" x 9-5/8" x 7-5/8" x 5" 10/15M
SH2/Conventional Wellhead Assembly

CONOCO PHILLIPS
WOLFCAMP

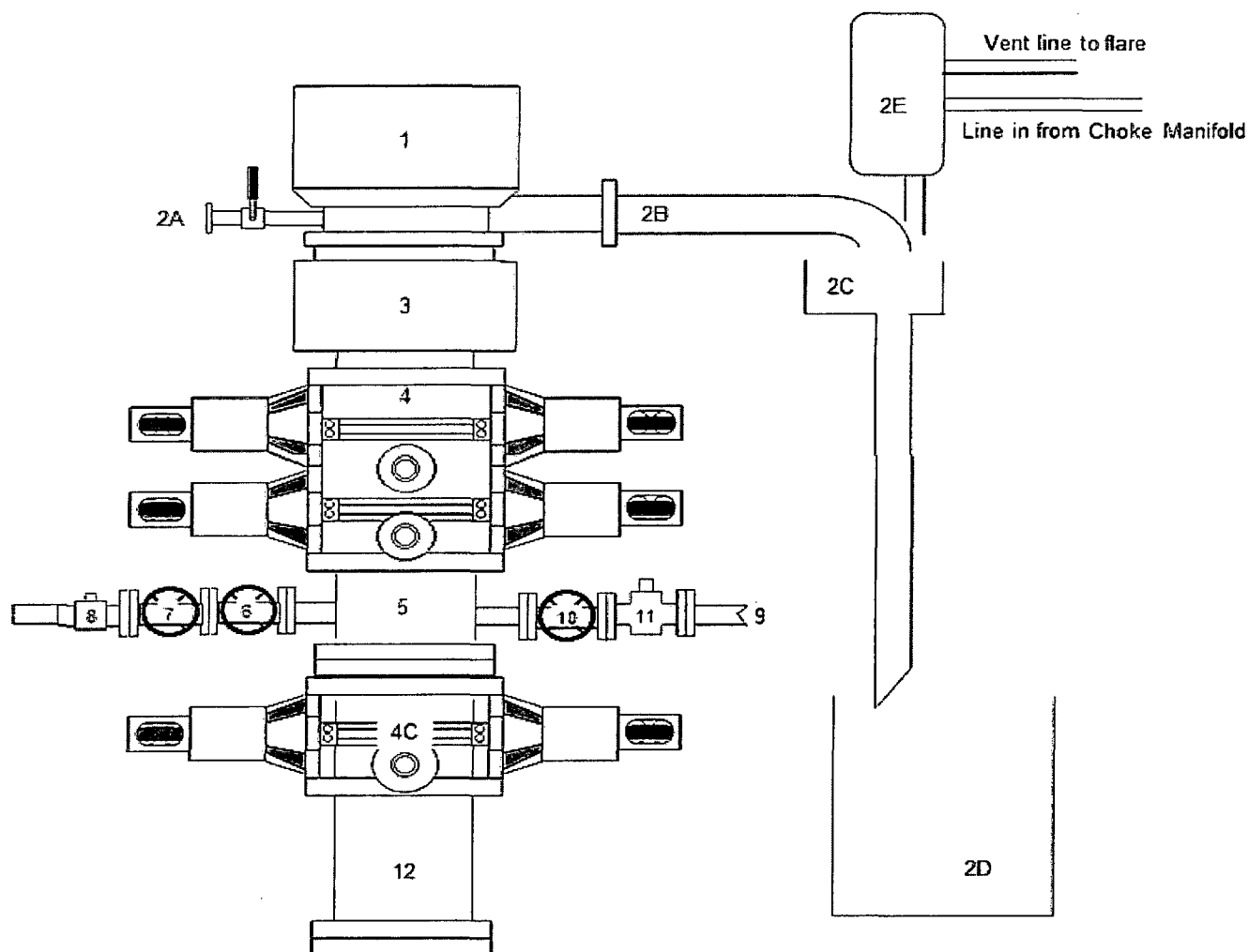
DRAWN	CDG	06JUN14
APPRV	VJK	06JUN14

FOR REFERENCE ONLY
DRAWING NO. PE00577

Attachment #4

BLOWOUT PREVENTER ARRANGEMENT - H&P486

10M System per Onshore Oil and Gas Order No. 2 utilizing 10M Rated Equipment



Item	Description
1	Rotating Head
2A	Fill up Line and Valve
2B	Flow Line (8")
2C	Shale Shakers and Centrifuges
2D	Cuttings Bins for Zero Discharge
2E	Mud Gas Separator with vent line to flare and return line to mud system
3	Annular Preventer (13-5/8", 10M)
4	Double Ram (13-5/8", 10M, Bline Ram bottom x Pipe Ram top)
5	Drilling Spool (13-5/8" 10M)
4C	Single Ram (13-5/8", 10M, Pipe Rams)
6	Kill Line Gate Valve, Inner (4-1/16", 10k psi WP)
7	Kill Line Gate Valve, Outer (4-1/16", 10k psi WP)
8	Kill Line Check Valve (4-1/16", 10k psi WP)
9	CoFlex hoke Line (4-1/16", 10k psi WP)
10	Choke Line Gate Valve, Inner (4-1/16", 10k psi WP)
11	Choke Line Hydraulically Operated Gate Valve, Outer, (4-1/6" 10k psi WP HCR)
12	Drilling Spool Adapter (13-5/8", 10M)

Drawn by:

James Chen, P.E.

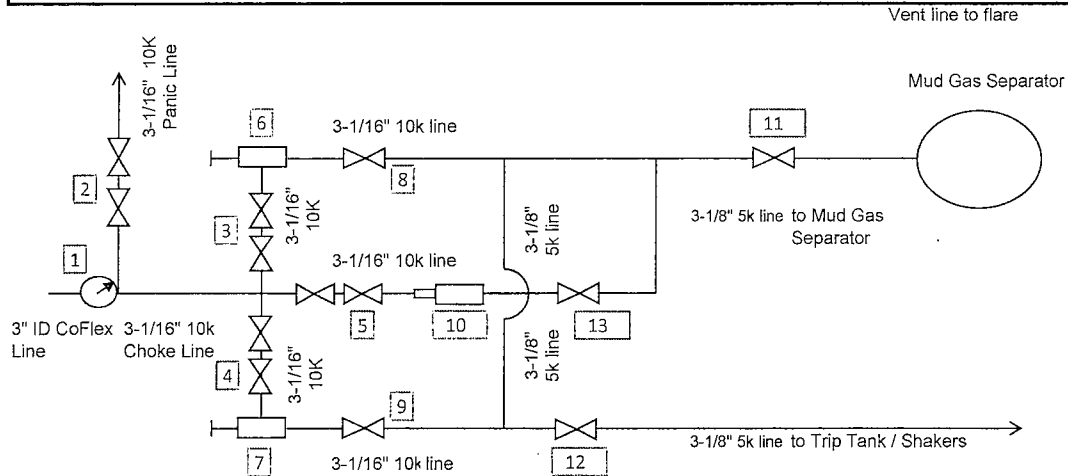
Drilling Engineer, ConocoPhillips Company

Date: June 25th-2014

Attachment #5

CHOKE MANIFOLD ARRANGEMENT - HP486

10M System per Onshore Oil and Gas Order No. 2 utilizing 5M/10M Equipment



Item	Description
1	Pressure Gauge
2	2 Gate Valves, 3-1/16" 10M
3	2 Gate Valves, 3-1/16" 10M
4	2 Gate Valves, 3-1/16" 10M
5	2 Gate Valves, 3-1/16" 10M
6	Upper Manual Adjustable Choke, 4-1/16", 10M
7	Lower Manual Adjustable Choke, 4-1/16", 10M
8	Gate Valve, 3-1/16" 10M
9	Gate Valve, 3-1/16" 10M
10	Remote Controlled Hydraulic Adjustable Choke, 4-1/16", 10M
11	Gate Valve, 3-1/8" 5M
12	Gate Valve, 3-1/8" 5M
13	Gate Valve, 3-1/16" 10M

The 10M Choke Manifold & Valves will be tested to rated working pressure.

Drawn by:
James Chen, P.E.
Drilling Engineer, ConocoPhillips Company
Date: June 25th-2014

Attachment #6

February 04 2014



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

Size: 4.500 in.
Wall: 0.337 in.
Weight: 15.10 lbs/ft
Grade: P110
Min. Wall Thickness: 87.5 %

PIPE BODY DATA			
GEOMETRY			
Nominal OD	4.500 in.	Nominal Weight	15.10 lbs/ft
Nominal ID	3.826 in.	Wall Thickness	0.337 in.
Plain End Weight	15.00 lbs/ft	Standard Drift Diameter	3.701 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	485 x 1000 lbs	Internal Yield	14420 psi
Collapse	14350 psi	SMYS	110000 psi
TENARISXP BTC CONNECTION DATA			
GEOMETRY			
Connection OD	5.100 in.	Coupling Length	9.075 in.
Critical Section Area	4.407 sq. in.	Threads per in.	5.00
		Connection ID	3.814 in.
		Make-Up Loss	4.016 in.
PERFORMANCE			
Tension Efficiency	100 %	Joint Yield Strength	485 x 1000 lbs
Structural Compression Efficiency	100 %	Structural Compression Strength	485 x 1000 lbs
External Pressure Capacity	14350 psi	Internal Pressure Capacity ⁽¹⁾	14420 psi
		Structural Bending ⁽²⁾	112 °/100 ft
ESTIMATED MAKE-UP TORQUES ⁽³⁾			
Minimum	7960 ft-lbs	Target	8840 ft-lbs
		Maximum	9720 ft-lbs
BLANKING DIMENSIONS			
Blanking Dimensions			

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

July 07 2014



Connection: Blue®
Casing/Tubing: CAS
Coupling Option: REGULAR

Size: 5.000 in.
Wall: 0.437 in.
Weight: 21.40 lbs/ft
Grade: P110
Min. Wall Thickness: 87.5 %

PIPE BODY DATA					
GEOMETRY					
Nominal OD	5.000 in.	Nominal Weight	21.40 lbs/ft	Standard Drift Diameter	4.001 in.
Nominal ID	4.126 in.	Wall Thickness	0.437 in.	Special Drift Diameter	N/A
Plain End Weight	21.32 lbs/ft				
PERFORMANCE					
Body Yield Strength	689 x 1000 lbs	Internal Yield	16820 psi	SMYS	110000 psi
Collapse	17550 psi				
BLUE® CONNECTION DATA					
GEOMETRY					
Connection OD	5.693 in.	Coupling Length	10.551 in.	Connection ID	4.185 in.
Critical Section Area	6.265 sq. in.	Make-Up Loss	4.579 in.	Threads per in.	5.00
PERFORMANCE					
Tension Efficiency	100 %	Joint Yield Strength	689 x 1000 lbs	Internal Pressure Capacity	16820 psi
Compression Efficiency	100 %	Compression Strength	689 x 1000 lbs	Bending	101 °/100 ft
External Pressure Capacity	17550 psi				
MAKE-UP TORQUES					
Minimum	7650 ft-lbs	Target	8500 ft-lbs	Maximum	9350 ft-lbs
Yield Torque	20810 ft-lbs				
SHOULDER TORQUES					
Minimum	1280 ft-lbs	Maximum	7230 ft-lbs		
BLANKING DIMENSIONS					

March 05 2014

**Size:** 7.625 in.**Wall:** 0.430 in.**Weight:** 33.70 lbs/ft**Grade:** P110**Connection:** Wedge 523™**Casing/Tubing:** CAS**Min. Wall Thickness:** 87.5 %

PIPE BODY DATA			
GEOMETRY			
Nominal OD	7.625 in.	Nominal Weight	33.70 lbs/ft
Nominal ID	6.765 in.	Wall Thickness	0.430 in.
Plain End Weight	33.07 lbs/ft	Standard Drift Diameter	6.640 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	1069 x 1000 lbs	Internal Yield	10860 psi
Collapse	7870 psi	SMYS	110000 psi
WEDGE 523™ CONNECTION DATA			
GEOMETRY			
Connection OD	7.775 in.	Connection ID	6.675 in.
Critical Section Area	7.057 sq. in.	Threads per in.	3.06
		Make-Up Loss	4.060 in.
PERFORMANCE			
Tension Efficiency	72.6 %	Joint Yield Strength	776 x 1000 lbs
Compression Strength	881 x 1000 lbs	Compression Efficiency	82.4 %
External Pressure Capacity	7870 psi	Internal Pressure Capacity	10860 psi
		Bending	48 °/100 ft
MAKE-UP TORQUES			
Minimum	9900 ft-lbs	Target	11900 ft-lbs
		Maximum (*)	17300 ft-lbs
OPERATIONAL LIMIT TORQUES			
Operating Torque	42000 ft-lbs	Yield Torque	63000 ft-lbs
BLANKING DIMENSIONS			
Blanking Dimensions			

* If you need to use torque values that are higher than the maximum indicated, please contact a local Tenaris technical sales representative.

Attachment #7

Request for Variance

ConocoPhillips Company

Rig: If drilled with H&P 486

Date: 7/24/2014

Request:

ConocoPhillips Company respectfully requests a variance to install a flexible choke line instead of a straight choke line prescribed in the Onshore Order No. 2, III.A.2.b Minimum standards and enforcement provisions for choke manifold equipment. This request is made under the provision of Onshore Order No. 2, IV Variances from Minimum Standard. The rig to be used to drill this well is equipped with a flexible choke line if the requested variance is approved and determined that the proposed alternative meets the objectives of the applicable minimum standards.

Justifications:

The applicability of the flexible choke line will reduce the number of target trees required to make up from the choke valve to the choke manifold. This configuration will facilitate ease of rig up and BOPE Testing.

Attachments:

- Attachment # 1 Specification from Manufacturer
- Attachment # 2 Mill & Test Certification from Manufacturer

Contact Information:

Program prepared by:

Jason A. Levinson

Drilling Engineer, ConocoPhillips Company

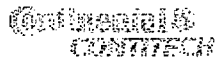
Phone (281) 206-5335

Cell (281) 682-2783

Date: 05 February 2014

Attachment # 1

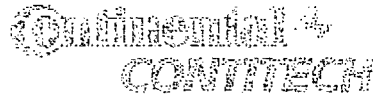
CONTITECH RUBBER Industrial Kit.	No: QC-DB- 45 / 2012
	Page: 9 / 50



Hose Data Sheet

CRI Order No.	516273
Customer	ContiTech Beattie Co.
Customer Order No	PO5438 STOCK
Item No.	3
Hose Type	Flexible Hose
Standard	API SPEC 16 C
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSIBX155 RING GROOVE
Type of coupling other end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSI BX155 RING GROOVE
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2.25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St steel outer wrap
Internal stripwound tube	No
Lining	OIL RESISTANT
Safety clamp	No
Lifting collar	No
Element C	No
Safety chain	No
Safety wire rope	No
Max design temperature [°C]	100
Min design temperature [°C]	-20
MBR operating [m]	1,60
MBR storage [m]	1,40
Type of packing	WOODEN CRATE ISPM-15

Attachment # 2



OC-DB- 45/2012

Page: 7/50

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 184	
PURCHASER: ContTech Beattie Co.				P.O. N°: 005438	
CONTITECH ORDER N°: 516273		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 61477		NOMINAL / ACTUAL LENGTH: 10,67 m / 10,71 m			
W.P. 68,9 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 20 MPa					
COUPLINGS Type	Serial N°	Quality	Heat N°		
3" coupling with	10178 10173	AISI 4130	20231		
4 1/16" 10K API Flange end		AISI 4130	33051		
NOT DESIGNED FOR WELL TESTING			API Spec 16 C		
			Temperature rate: "B"		
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:	Inspector	Quality Control			
30. January 2012.		ContTech Rubber Industrial Kft. Quality Control Dept. 			

ContTech Rubber Industrial Kft.
 Budapest 105, Sorogfalvi út 73/B
 PO Box 162 Sorogfalvi út 73/B
 Hungary

Phone: +36 62 665 737
 Fax: +36 62 665 735
 e-mail: info@conttech.hu
 Internet: www.conttech.hu

The Court of Original Courts at
 Registry Court
 Registry Court No. 11/05-05-00560
 Budapest 112, Rákóczi út

BANK DATA
 Commercial Bank
 Budapest
 1122005-20050053-00000000

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

No: 182, 184, 185

Page: 1 / 1


 Certified Rubber
 Industrial Kt.
 Quality Control Dept.
 40

24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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Request for Variance

ConocoPhillips Company

Rig: If drilled with H&P 453

Date: 7/24/2014

Request:

ConocoPhillips Company respectfully requests a variance to install a flexible choke line instead of a straight choke line prescribed in the Onshore Order No. 2, III.A.2.b Minimum standards and enforcement provisions for choke manifold equipment. This request is made under the provision of Onshore Order No. 2, IV Variances from Minimum Standard. The rig to be used to drill this well is equipped with a flexible choke line if the requested variance is approved and determined that the proposed alternative meets the objectives of the applicable minimum standards.

Justifications:

The applicability of the flexible choke line will reduce the number of target tees required to make up from the choke valve to the choke manifold. This configuration will facilitate ease of rig up and BOPE Testing.

Attachments:

- Attachment # 1 Specification from Manufacturer
- Attachment # 2 Mill & Test Certification from Manufacturer

Contact Information:

Program prepared by:

Jason A. Levinson

Drilling Engineer, ConocoPhillips Company

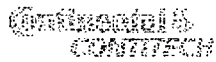
Phone (281) 206-5335

Cell (281) 682-2783

Date: 05 February 2014

Attachment # 1

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 45 / 2012
	Page: 9 / 50



Hose Data Sheet

CRI Order No.	516273
Customer	ContiTech Beattie Co.
Customer Order No	PO5438 STOCK
Item No.	3
Hose Type	Flexible Hose
Standard	API SPEC 16 C
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSIBX155 RING GROOVE
Type of coupling other end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSI BX155 RING GROOVE
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St steel outer wrap
Internal stripwound tube	No
Lining	OIL RESISTANT
Safety clamp	No
Lifting collar	No
Element C	No
Safety chain	No
Safety wire rope	No
Max design temperature [°C]	100
Min design temperature [°C]	-20
MBR operating [m]	1,60
MBR storage [m]	1,40
Type of packing	WOODEN CRATE ISPM-15

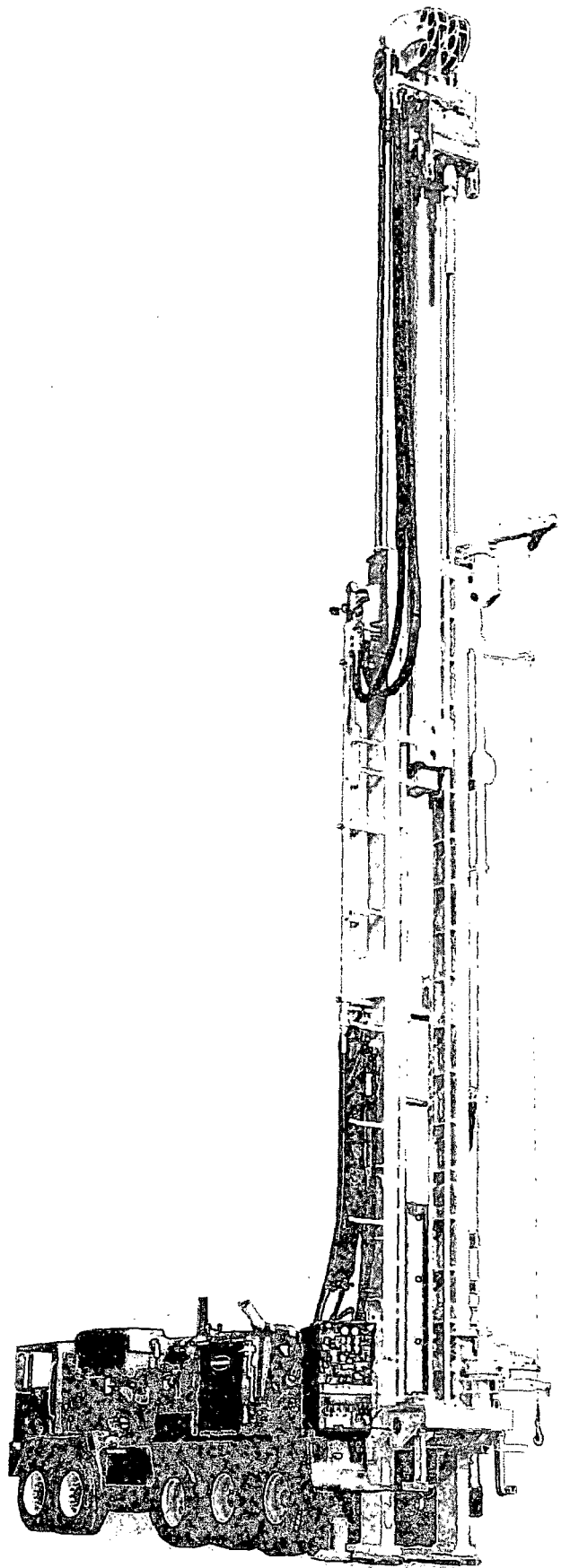
453.369-001

End of the


 Tech Rubber
 Industrial R.R.
 Quality Control Dept.
 (1)

Lot No.	Defects per 100									
	0	10	20	30	40	50	60	70	80	100
23										
24										
25										

Attachment #8



A D D

D

O

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Q

D D

D

A

T130XD ROTADRILL SPECIFICATIONS

Engine

Detroit Diesel DDC/MTU 12V-2000TA DDEC
760 bhp (567 kw) @ 1800 rpm

Standard Compressor

Variable volume two-stage, oil flooded
rotary screw
1350 cfm @ 350 psi (38.0 cu. m/min @ 24.1 bar),
up to 1150 cfm @ 500 psi (32.6 cu. m/min @
35.5 bar)

Cooling

Three core, side by side type
130°F (54.4°C) ambient design temp.

Dimensions

OA length, transport - 42' 9" (13 m)
OA width - 8' 6" (2.6 m)
OA height, transport - 13' 6" (4.1 m)
Weight std. rig - 92,000 lb (41,723 kg)

Carrier

CCC 8x4 Carrier
Cat C-13, 410 hp @ 2100 rpm engine
44,000 lb (19,955 kg) front axles
21,500 lb (9,750 kg) pusher axle
52,000 lb (23,587 kg) rear axles
117,500 lb (53,298 kg) GVWR

Top Head Rotation

Ductile iron, single reduction oil bath gearbox
with two disc valve type hydraulic motors.
Infinitely variable rotation speed.
3.5:1 Reduction Gear
3" diameter (76.2 mm) spindle thru hole
0-143 rpm, infinitely variable
106,600 in-lb (12,045 N·m) torque

Feed System

Top head is driven by hydraulic traverse
cylinders through special wire rope and large
diameter Nylatron sheaves. As top head is raised,
the inner mast section extends by a ratio of 1:2
until it reaches its fully extended position at 50'
of clear head travel.
42' 9" (13 m) OA height (retracted)
69' 9" (21.65 m) OA height (extended)
50' (15.24 m) top head travel
130,000 lb (59,090 kg) pullup
8 fpm (2.44 mpm) pullup speed-slow feed
125 fpm (38.1 mpm) pullup speed-rapid feed
32,000 lb (14,545 kg) pulldown capacity
26 fpm (7.92 mpm) pulldown speed-slow feed
270 fpm (82.3 mpm) pulldown speed-rapid feed
52' 10" (16.1 m) working clearance mast spindle
to table (sub removed)
48' 10" (14.9 m) working clearance mast sub to
table

Drill Pipe & Casing

30' x 4-1/2" OD x 2-7/8 IF breakout style drill pipe,
range III casing
28" (711 mm) max. diameter through slipbox

Mast

Telescoping construction permits long head travel
and working height, yet short OA length in
transport position.
32" (813 mm) cylinder operated slide
Free-standing mast
hydraulically operated adjustable mast feet
hydraulically retracted slip box
20" (508 mm) table opening w/o slips

Winch

Planetary with spring applied hydraulic
release brake
9,600 lb (4,354 kg) bare drum line pull
151 fpm (46 mpm) bare drum line speed

Hydraulic System

Open loop load sensing system
7 micron filtration
200 gallon (760 l) system capacity

Water Injection System

25 gpm (95 lpm) water pump
Electric foam pump

Outriggers

Front - (1) 5" bore x 41" stroke
(127 mm x 1.4 m)
Rear - (2) 5" bore x 41" stroke
(127 mm x 1.4 m)

Tool Lubricator

Positive displacement, air pump operated
piston type pump variable to 5.0 gph
(18.9 lph)

Lighting & Electrical System - 24 Volt

Mast - (4) 60 watt floodlights
Control Panel - (2) 60 watt gauge floodlights
Work - (3) 70 watt halogen

Accessories

Pipe handling sling, 60" breakout wrench,
and 50 hour maintenance kit.

Optional Equipment

Many modifications are available including:
Third driving axle
Reverse circulation package
Tilt-out top head
High capacity top head
Single pipe loading arm
Auxiliary winch controls
Auxiliary air supply

These specifications are based on theoretical calculations and industry standards. Performance will vary according to actual drilling conditions. Schramm, Inc. continuously improves its products and reserves the right to change specifications, design, prices and terms at any time without notification or obligation. These specifications do not extend any warranty, expressed or implied, nor do they or Schramm, Inc. make or imply any representation of the machine's merchantability or fitness for a particular purpose.



www.schramm-inc.com

SCHRAMM, INC.

800 E. Virginia Avenue
West Chester, PA 19380 USA
Phone: 610-696-2500

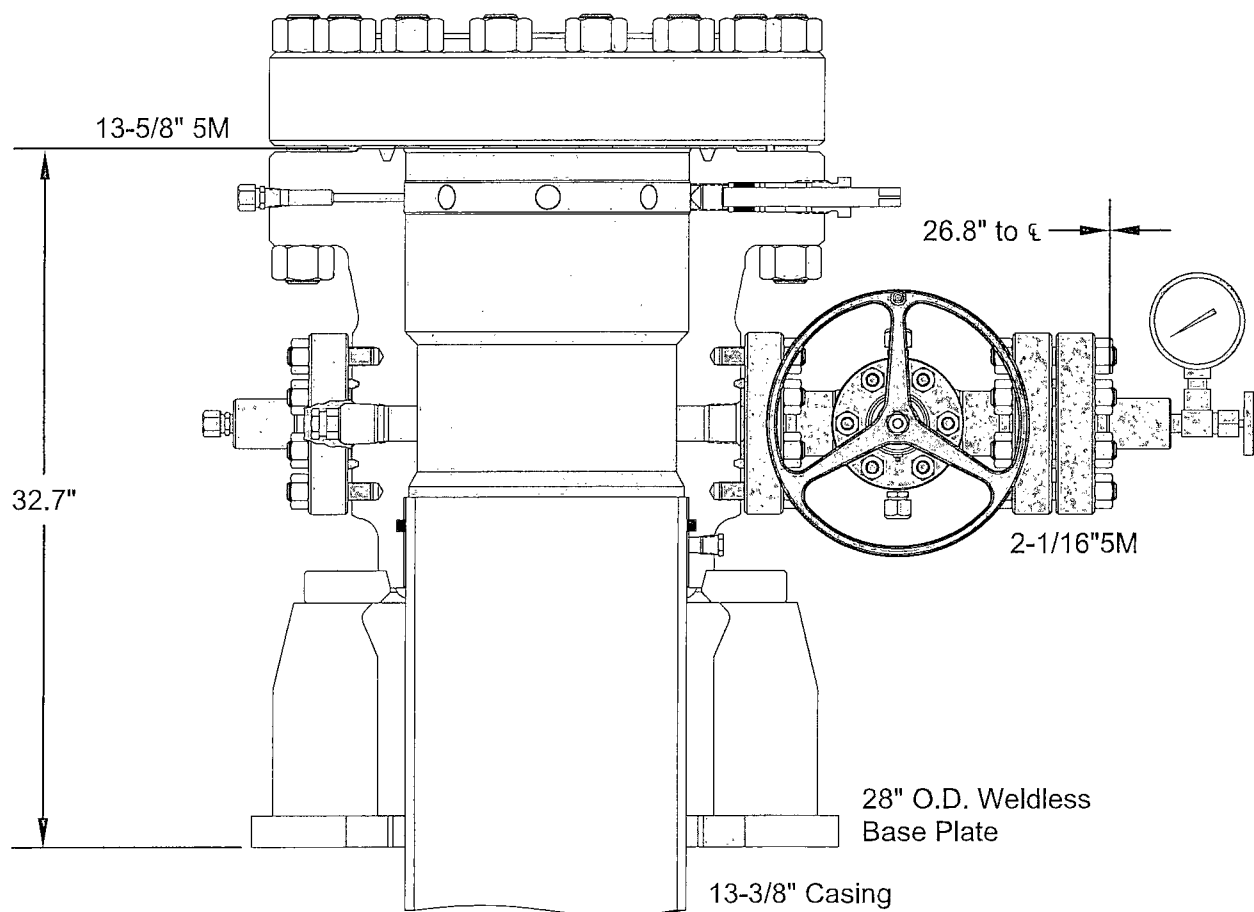
Fax: 610-696-6950

E-mail: schramm@schramm-inc.com



GE Oil & Gas

Attachment #9



ALL DIMENSIONS ARE APPROXIMATE

This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.

CONOCOPHILLIPS
SPUDDER RIG

HSG,WG,SH2-LWR,13-5/8 5M X 13-3/8 SOW,W/2 2-1/16 5M FP
BASEPLATE,WELDLESS,28 OD
FLANGE,BLIND, 13-5/8 5M

DRAWN	VJK	19AUG14
APPRV	KN	16AUG14
FOR REFERENCE ONLY		
DRAWING NO.		PE00624

SKID / BATCH DRILLING OPERATIONS – “DUAL PAD”

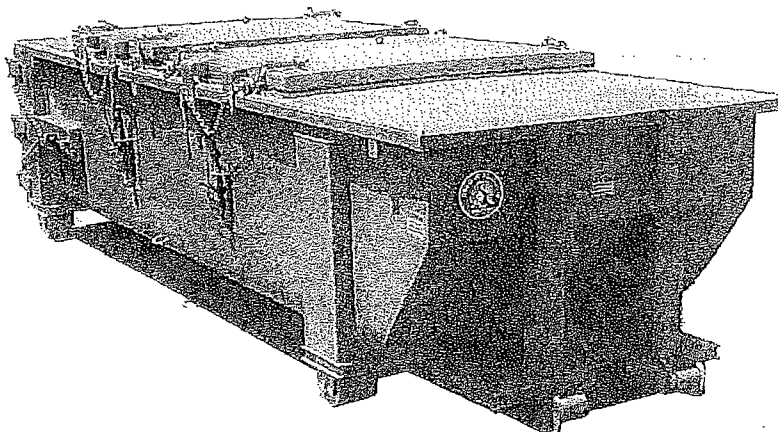
SKID / BATCH DRILLING OPERATION PLAN FOR “DUAL PAD”:

1. ALL SURFACE CASINGS PRE-SET (Pre-set with “Spudder Rig”).
 2. WELL 1 / WolfCamp 1. 9-5/8” CASING – WBM.
 3. WELL 2 / WolfCamp 1. 9-5/8” CASING – WBM.
 4. WELL 2 / WolfCamp 1. 7-5/8” CASING – WBM.
 5. WELL 1 / WolfCamp 1. 7-5/8” CASING – WBM.
 6. WELL 1 / WolfCamp 1. 5”x4-1/2” CASING – OBM.
 7. WELL 2 / WolfCamp 1. 5”x4-1/2” CASING – OBM.
 8. RIG RELEASE.
- “INTERMEDIATE 1” BATCH
- “INTERMEDIATE 2” BATCH
- “PRODUCTION” BATCH

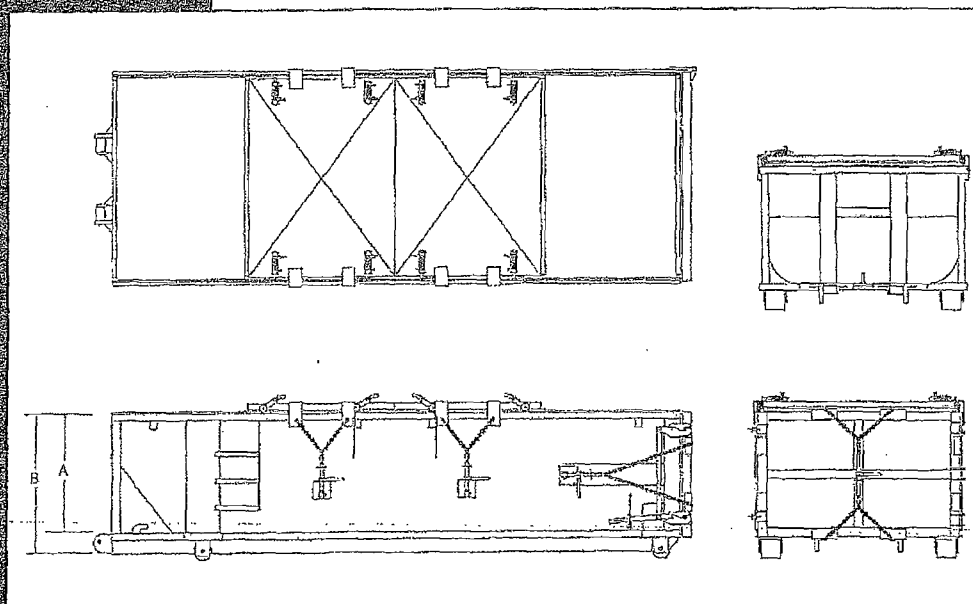
SPECIFICATIONS

Heavy Duty Split Metal Rolling Lid

FLOOR: 3/16" PL one piece
 CROSS MEMBER: 3 x 4.1 channel 16" on center
 WALLS: 3/16" PL solid welded with tubing top, inside liner hooks
 DOOR: 3/16" PL with tubing frame
 FRONT: 3/16" PL slant formed
 PICK UP: Standard cable with 2" x 6" x 1/4" rails, gusset at each crossmember
 WHEELS: 10 DIA x 9 long with rease fittings
 DOOR LATCH: 3 Independent ratchet binders with chains, vertical second latch
 GASKETS: Extruded rubber seal with metal retainers
 WELDS: All welds continuous except sub structure crossmembers
 FINISH: Coated inside and out with direct to metal, rust inhibiting acrylic enamel color coat
 HYDROTESTING: Full capacity static test
 DIMENSIONS: 22'-11" long (21'-8" inside), 99" wide (88" inside), see drawing for height
 OPTIONS: Steel grit blast and special paint, Ampliroll, Heil and Dino pickup
 ROOF: 3/16" PL roof panels with tubing and channel support frame
 LIDS: (2) 68" x 90" metal rolling lids spring loaded, self raising
 ROLLERS: 4" V-groove rollers with delrin bearings and grease fittings
 OPENING: (2) 60" x 82" openings with 8" divider centered on container
 LATCH: (2) independent ratchet binders with chains per lid
 GASKETS: Extruded rubber seal with metal retainers



CONT.	A	B
20 YD	41	53
25 YD	53	65
30 YD	65	77



Closed Loop System Design, Operating and Maintenance, and Closure Plan

ConocoPhillips Company
Well: BUCK 30 FEDERAL COM W1 6H
Location: Sec. 30, T26S, R32E
Date: 8/5/2014

ConocoPhillips proposes the following plan for design, operating and maintenance, and closure of our proposed closed loop system for the above named well:

1. We propose to use a closed loop system with steel pits, haul-off bins, and frac tanks for containing all cuttings, solids, mud, water, brine, and liquids. We will not dig a pit, nor will we use a drying pad, nor will we build an earth pit above ground level, nor will we dispose of or bury any waste on location.

All drilling waste and all drilling fluids (fresh water, brine, mud, cuttings, drill solids, cement returns, and any other liquid or solid that may be involved) will be contained on location in the rig's steel pits or in haul-off bins or in frac tanks as needed. The intent is as follows:

- We propose to use the rigs' steel pits for containing and maintaining the drilling fluids.
- We propose to remove cuttings and drilled solids from the mud by using solids control equipment and to contain such cuttings and drilled solids on location in haul-off bins.
- We propose that any excess water that may need to be stored on location will be stored in tanks.

The closed loop system components will be inspected daily by each tour and any needed repairs will be made immediately. Any leak in the system will be repaired immediately, and any spilled liquids and/or solids will be cleaned immediately, and the area where any such spill occurred will be remediated immediately.

2. Cuttings and solids will be removed from location in haul-off bins by an authorized contractor and disposed of at an authorized facility. For this well, we propose the following disposal facility:

R-360 Inc.
4507 West Carlsbad Hwy, Hobbs, NM 88240,
P.O. Box 388; Hobbs, New Mexico 88241
Toll Free Phone: 877.505.4274, Local Phone Number: 432.638.4076

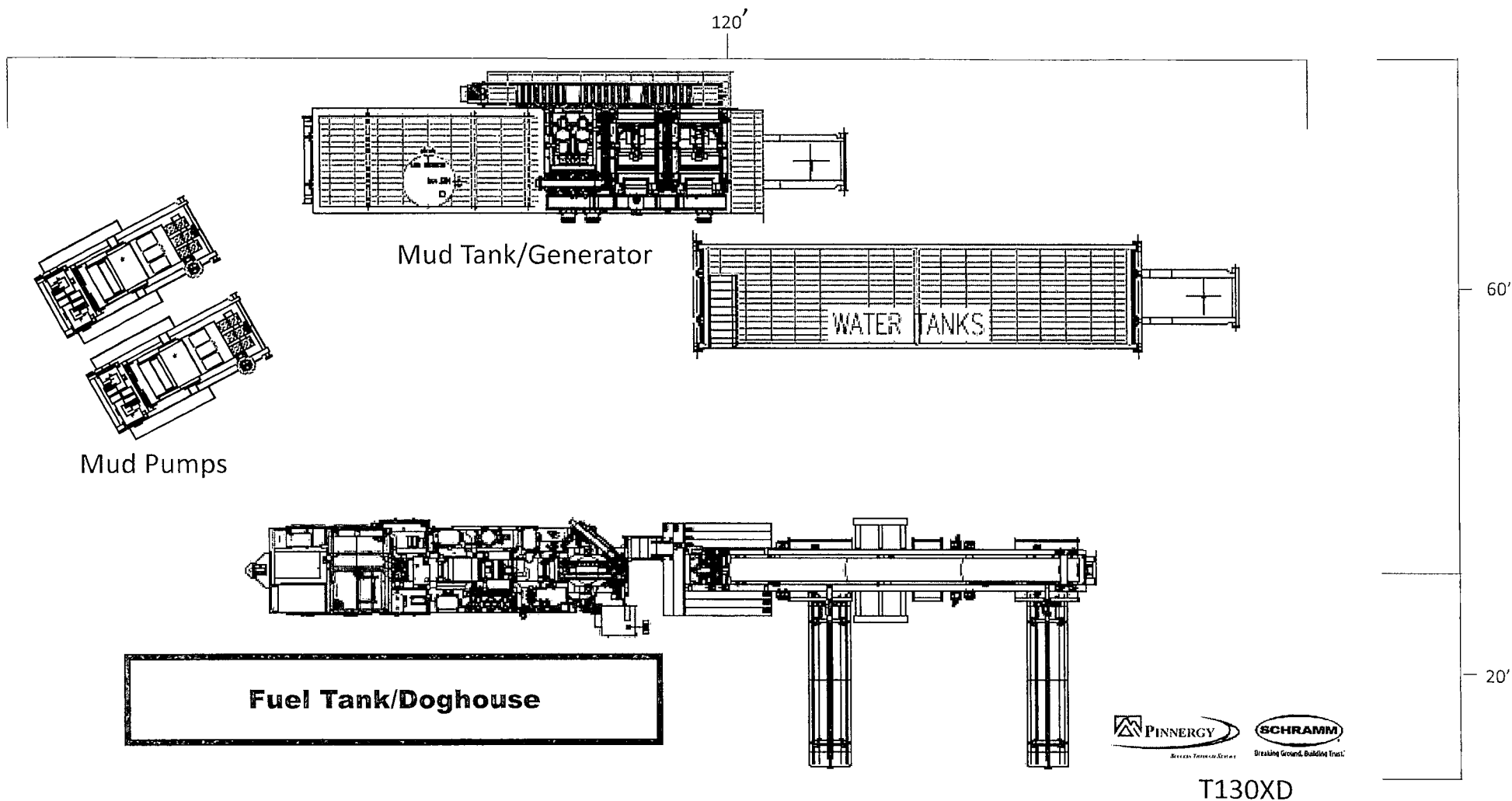
The physical address for the plant where the disposal facility is located is Highway 62/180 at mile marker 66 (33 miles East of Hobbs, NM and 32 miles West of Carlsbad, NM).

The Permit Number for R-360 is NM-01-0006.

A photograph showing the type of haul-off bins that will be used is attached.

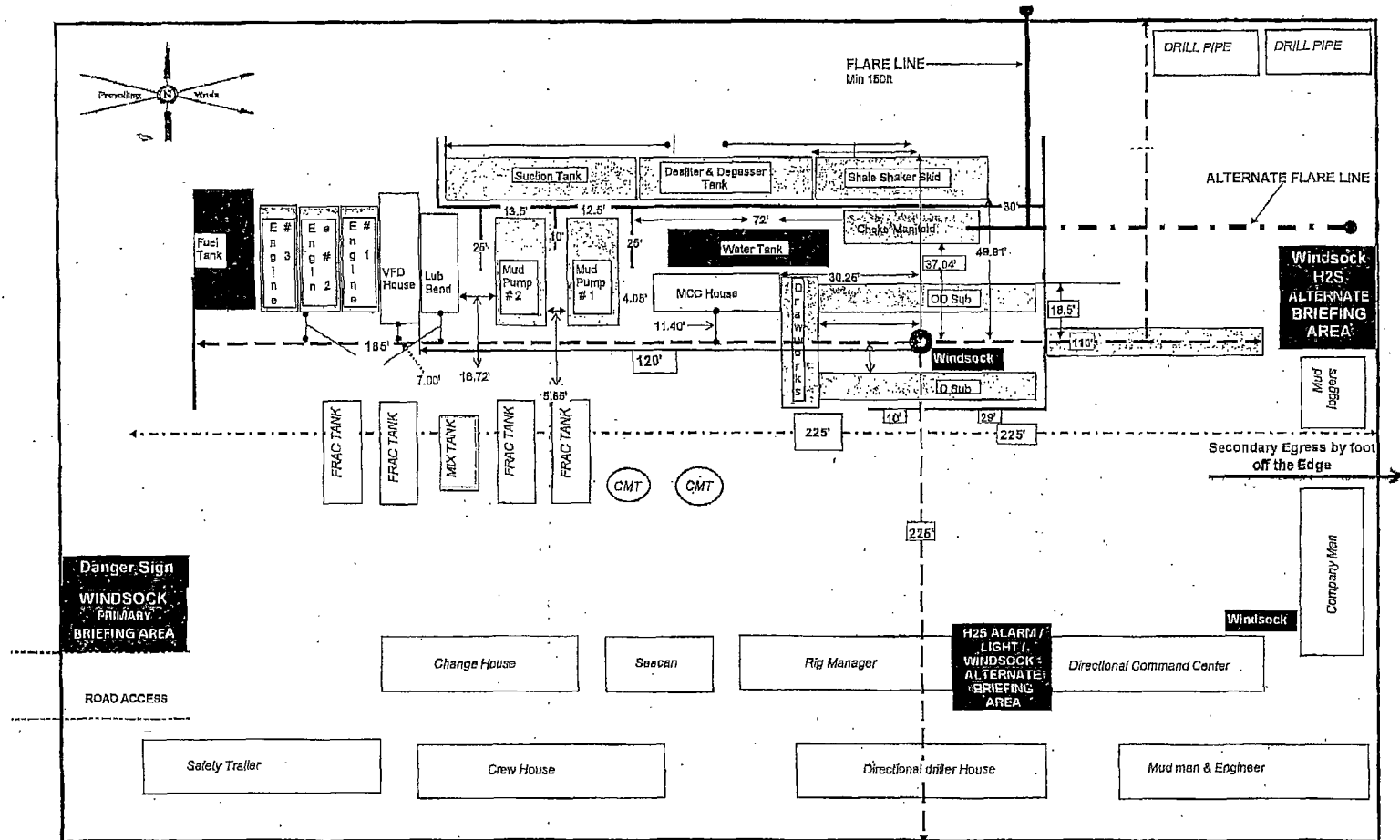
3. Mud will be transported by vacuum truck and disposed of at R-360 Inc. at the facility described above.
4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:
 - Nabors Well Services Company, 3221 NW County Rd; Hobbs, NM 88240, PO 5208 Hobbs, NM, 88241, Permit SWD 092. (Well Location: **Section 3, T19S R37E**)
 - Basic Energy Services, P.O. Box 1869; Eunice, NM 88231 Phone Number: 575.394.2545, Facility located at Hwy 18, Mile Marker 19; Eunice, NM.

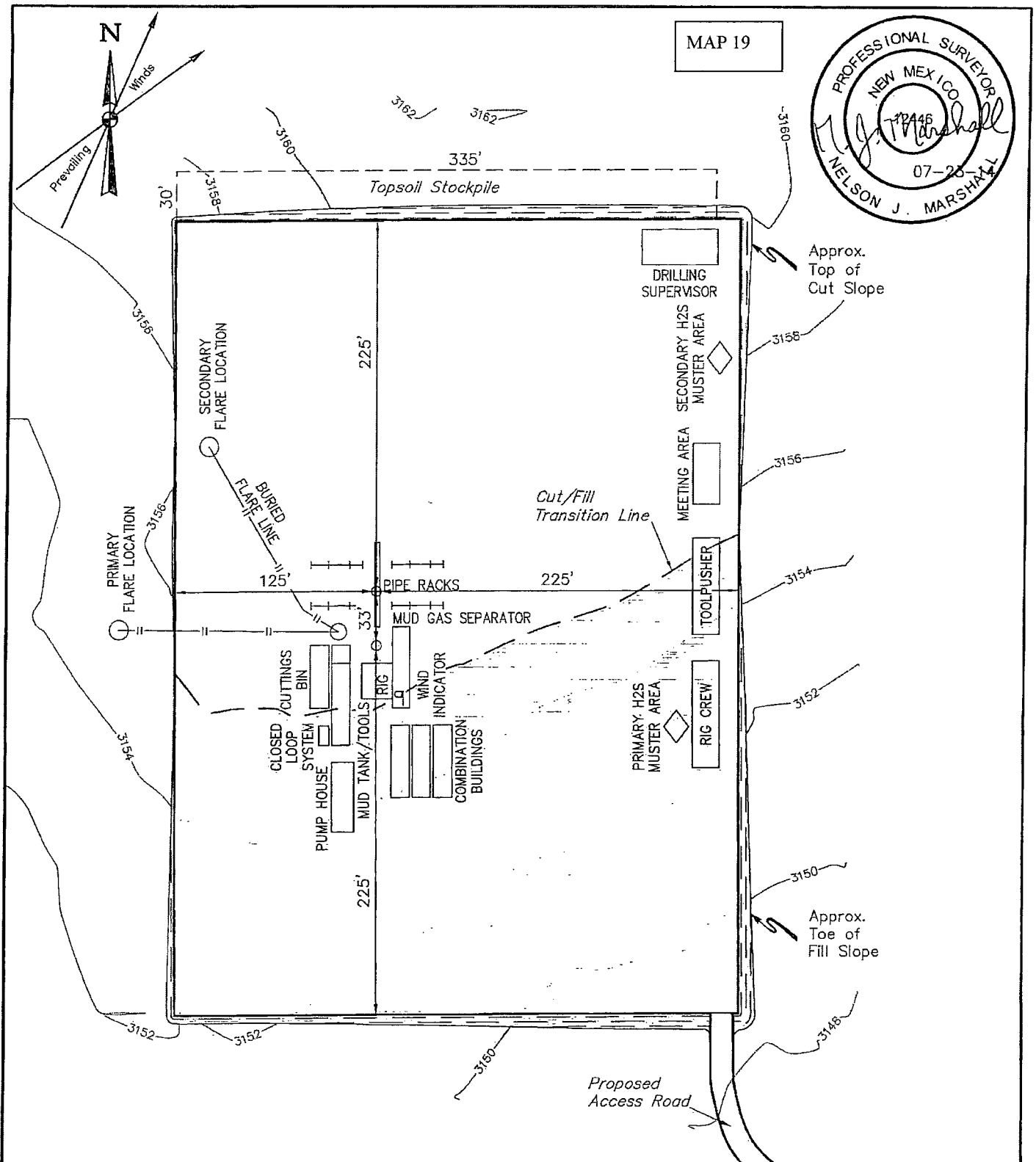
Roger Ramos
Staff Drilling Engineer
Office: 281-206-5334
Cell: 832-566-0804



“Pinnergy #1” Spudder Rig Layout

H&P FLEX 3 RIG LAYOUT





NOTES:

- Flare pit is to be located a min. of 160' from the wellhead.
- Contours shown at 2' intervals.

ConocoPhillips Company

BUCK 30 FEDERAL COM
W1 05H & 06H
SECTION 30, T26S, R32E, N.M.P.M.
NE 1/4 NW 1/4



UELS, LLC
 Corporate Office * 85 South 200 East
 Vernal, UT 84078 * (435) 789-1017

DRAWN BY: J.T.	DATE DRAWN: 06-30-14
SCALE: 1" = 80'	REVISED: 07-23-14 J.T.
TYPICAL RIG LAYOUT	FIGURE #3



H₂S Contingency Plan

H₂S Contingency Plan Holders:

Attached is an H₂S Contingency Plan for COPC Permian Drilling working in the West Texas and Southeastern New Mexico areas operated by ConocoPhillips Company.

If you have any questions regarding this plan, please call Tom Samarraipa at ConocoPhillips Company, 432.368.1263.

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