



Company: ConocoPhillips
 Site: MCA Unit
 Well: 557
 Project: Lea County, New Mexico (NAD 27)
 Rig Name: Precision 194



ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
1875.00	0.00	0.00	1875.00	0.00	0.00	0.00	0.00	KOP, 2.00°/100' Build
2375.00	10.00	58.00	2372.47	23.06	36.91	36.56	43.52	Hold 10.00° Inc, 58.00° Azm
2755.00	10.00	58.00	2746.69	58.03	92.87	91.99	109.51	Begin 2.00°/100' Build & Turn
3834.17	27.83	101.33	3767.36	58.19	423.22	422.30	457.91	Hold 27.83° Inc, 101.33° Azm
4594.77	27.83	101.33	4440.00	-11.57	771.36	771.45	812.97	PBHL

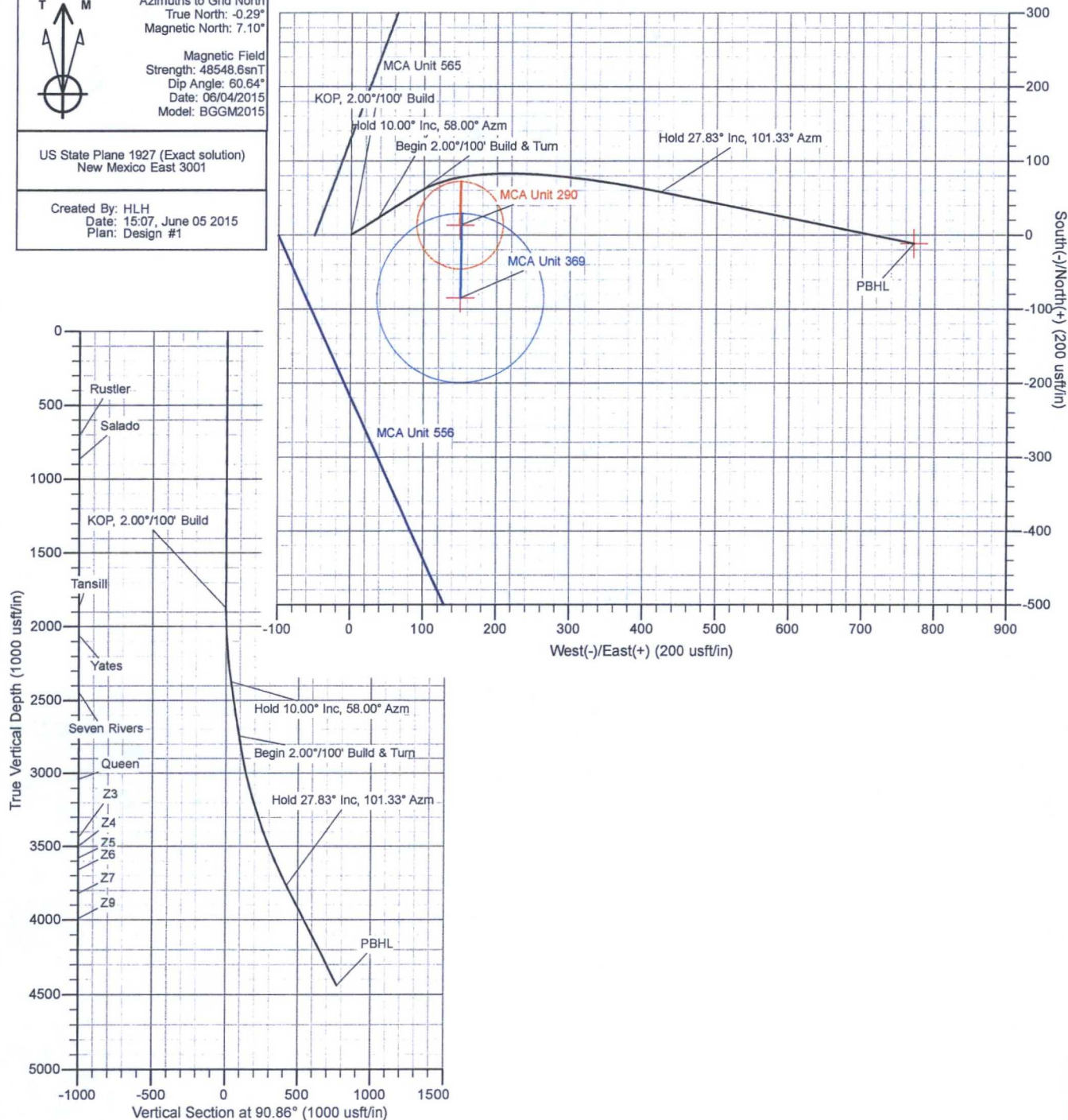


Azimuths to Grid North
 True North: -0.29°
 Magnetic North: 7.10°

Magnetic Field
 Strength: 48548.6snT
 Dip Angle: 60.64°
 Date: 06/04/2015
 Model: BGGM2015

US State Plane 1927 (Exact solution)
 New Mexico East 3001

Created By: HLH
 Date: 15:07, June 05 2015
 Plan: Design #1



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by MS Energy are at the sole risk and responsibility of the customer. MS Energy is not responsible for the accuracy of this schematic or the information contained herein.



ConocoPhillips

Lea County, New Mexico (NAD 27)

MCA Unit

557

Wellbore #1

Plan: Design #1

Standard Planning Report

05 June, 2015

Database:	EDM 5000.1 Conroe DB	Local Co-ordinate Reference:	Well 557
Company:	ConocoPhillips	TVD Reference:	WELL @ 3950.00usft (Precision 194)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	WELL @ 3950.00usft (Precision 194)
Site:	MCA Unit	North Reference:	Grid
Well:	557	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, New Mexico (NAD 27)		
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		

Well	557					
Well Position	+N/-S	658,509.70 usft	Northing:	658,509.70 usft	Latitude:	32° 48' 32.998 N
	+E/-W	665,990.45 usft	Easting:	665,990.45 usft	Longitude:	103° 47' 35.074 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,936.00 usft

Wellbore	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	06/04/15	7.40	60.64	48,549

Design	Design #1				
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Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	90.86	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,875.00	0.00	0.00	1,875.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,375.00	10.00	58.00	2,372.47	23.06	36.91	2.00	2.00	0.00	58.00	
2,755.00	10.00	58.00	2,746.69	58.03	92.87	0.00	0.00	0.00	0.00	
3,834.17	27.83	101.33	3,767.36	58.19	423.22	2.00	1.65	4.02	60.55	
4,594.77	27.83	101.33	4,440.00	-11.57	771.36	0.00	0.00	0.00	0.00	0.00 PBHL - MCA Unit 5

Database:	EDM 5000.1 Conroe DB	Local Co-ordinate Reference:	Well 557
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Project:	Lea County, New Mexico (NAD 27)	MD Reference:	WELL @ 3950.00usft (Precision 194)
Site:	MCA Unit	North Reference:	Grid
Well:	557	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
708.00	0.00	0.00	708.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
865.00	0.00	0.00	865.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
1,875.00	0.00	0.00	1,875.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 2.00°/100' Build - Tansill									
1,900.00	0.50	58.00	1,900.00	0.06	0.09	0.09	2.00	2.00	0.00
2,000.00	2.50	58.00	1,999.96	1.44	2.31	2.29	2.00	2.00	0.00
2,055.12	3.60	58.00	2,055.00	3.00	4.80	4.75	2.00	2.00	0.00
Yates									
2,100.00	4.50	58.00	2,099.77	4.68	7.49	7.42	2.00	2.00	0.00
2,200.00	6.50	58.00	2,199.30	9.76	15.62	15.47	2.00	2.00	0.00
2,300.00	8.50	58.00	2,298.44	16.68	26.69	26.43	2.00	2.00	0.00
2,375.00	10.00	58.00	2,372.47	23.06	36.91	36.56	2.00	2.00	0.00
Hold 10.00° Inc, 58.00° Azm									
2,400.00	10.00	58.00	2,397.09	25.36	40.59	40.21	0.00	0.00	0.00
2,443.58	10.00	58.00	2,440.00	29.37	47.01	46.56	0.00	0.00	0.00
Seven Rivers									
2,500.00	10.00	58.00	2,495.57	34.57	55.32	54.79	0.00	0.00	0.00
2,600.00	10.00	58.00	2,594.05	43.77	70.04	69.38	0.00	0.00	0.00
2,700.00	10.00	58.00	2,692.53	52.97	84.77	83.97	0.00	0.00	0.00
2,755.00	10.00	58.00	2,746.69	58.03	92.87	91.99	0.00	0.00	0.00
Begin 2.00°/100' Build & Turn									
2,800.00	10.47	62.32	2,790.98	62.00	99.80	98.86	2.00	1.05	9.59
2,900.00	11.70	70.55	2,889.12	69.60	117.41	116.35	2.00	1.23	8.23
3,000.00	13.11	77.14	2,986.78	75.50	138.03	136.89	2.00	1.42	6.59
3,054.74	13.95	80.16	3,040.00	78.01	150.59	149.40	2.00	1.53	5.53
Queen									
3,100.00	14.67	82.41	3,083.86	79.70	161.64	160.43	2.00	1.58	4.96
3,200.00	16.31	86.66	3,180.23	82.19	188.22	186.96	2.00	1.65	4.26
3,300.00	18.03	90.14	3,275.77	82.97	217.71	216.44	2.00	1.72	3.48
3,400.00	19.80	93.03	3,370.37	82.04	250.10	248.84	2.00	1.77	2.89
3,474.32	21.14	94.87	3,440.00	80.23	276.03	274.79	2.00	1.80	2.48
Z3									

Database:	EDM 5000.1 Conroe DB	Local Co-ordinate Reference:	Well 557
Company:	ConocoPhillips	TVD Reference:	WELL @ 3950.00usft (Precision 194)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	WELL @ 3950.00usft (Precision 194)
Site:	MCA Unit	North Reference:	Grid
Well:	557	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,500.00	21.60	95.45	3,463.91	79.39	285.35	284.12	2.00	1.82	2.28
3,538.91	22.32	96.30	3,500.00	77.90	299.82	298.62	2.00	1.83	2.16
Z4									
3,600.00	23.44	97.52	3,556.28	75.04	323.40	322.23	2.00	1.84	2.00
3,625.90	23.92	98.00	3,580.00	73.63	333.70	332.56	2.00	1.85	1.87
Z5									
3,700.00	25.30	99.30	3,647.36	68.98	364.21	363.13	2.00	1.86	1.75
3,713.99	25.56	99.53	3,660.00	68.00	370.14	369.08	2.00	1.87	1.64
Z6									
3,800.00	27.18	100.85	3,737.05	61.23	407.74	406.77	2.00	1.88	1.53
3,834.17	27.83	101.33	3,767.36	58.19	423.22	422.30	2.00	1.89	1.42
Hold 27.83° Inc, 101.33° Azm									
3,893.69	27.83	101.33	3,820.00	52.73	450.47	449.62	0.00	0.00	0.00
Z7									
3,900.00	27.83	101.33	3,825.58	52.16	453.35	452.52	0.00	0.00	0.00
4,000.00	27.83	101.33	3,914.02	42.98	499.13	498.42	0.00	0.00	0.00
4,085.92	27.83	101.33	3,990.00	35.10	538.45	537.87	0.00	0.00	0.00
Z9									
4,100.00	27.83	101.33	4,002.45	33.81	544.90	544.33	0.00	0.00	0.00
4,200.00	27.83	101.33	4,090.89	24.64	590.67	590.23	0.00	0.00	0.00
4,300.00	27.83	101.33	4,179.32	15.47	636.44	636.14	0.00	0.00	0.00
4,400.00	27.83	101.33	4,267.76	6.29	682.21	682.04	0.00	0.00	0.00
4,500.00	27.83	101.33	4,356.19	-2.88	727.98	727.94	0.00	0.00	0.00
4,594.77	27.83	101.33	4,440.00	-11.57	771.36	771.45	0.00	0.00	0.00
PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
369	0.00	0.01	0.00	-85.12	149.83	658,424.58	666,140.28	32° 48' 32.148 N	103° 47' 33.324 W
- hit/miss target									
- Shape									
- plan misses target center by 172.32usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 114.21)									
290	0.00	0.01	0.00	13.11	149.32	658,522.81	666,139.77	32° 48' 33.120 N	103° 47' 33.324 W
- plan misses target center by 149.89usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 59.19)									
PBHL - MCA Unit 557	0.00	0.01	4,440.00	-11.57	771.36	658,498.13	666,761.81	32° 48' 32.844 N	103° 47' 26.037 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
4,594.77	4,440.00	5 1/2"	5-1/2	6	

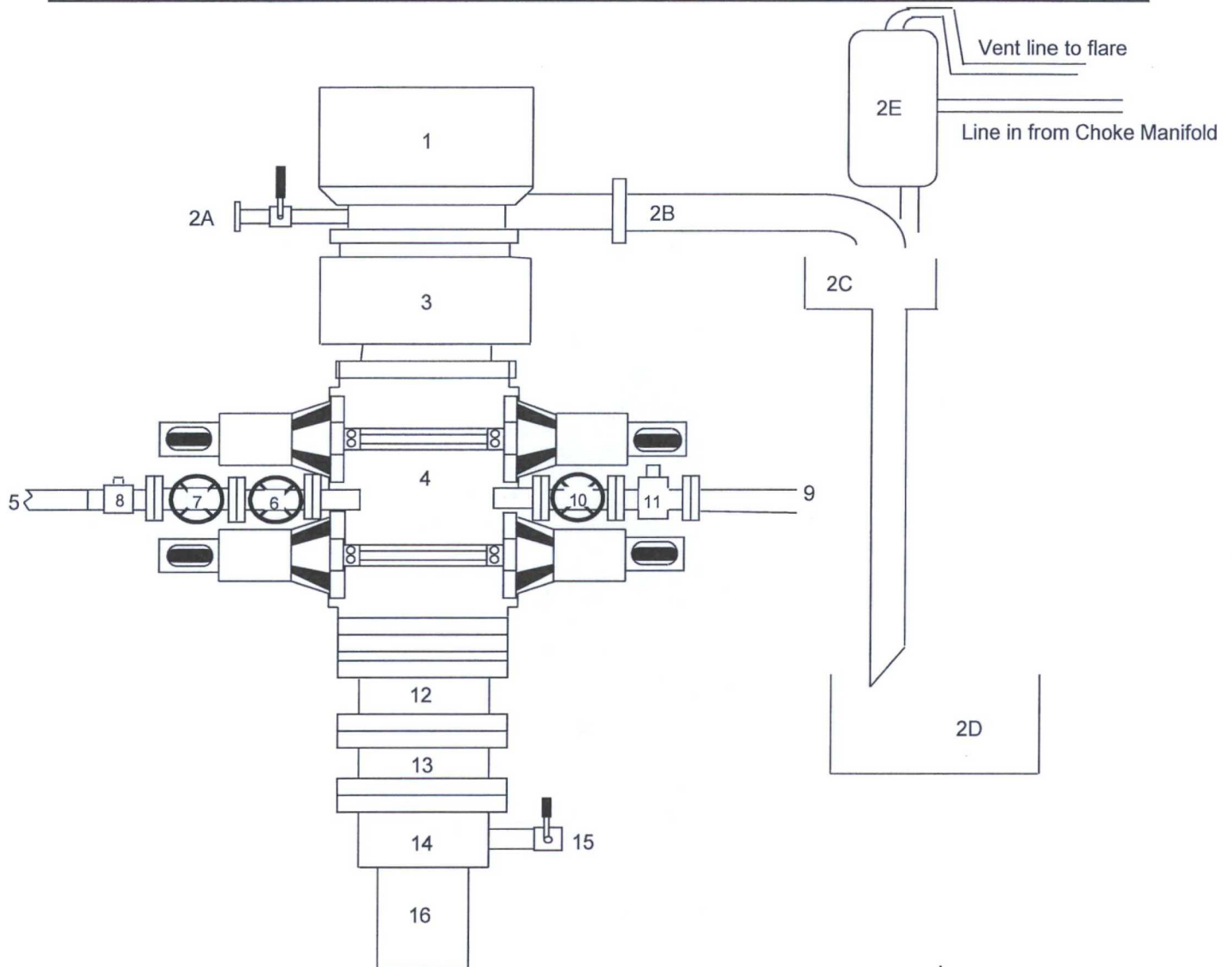
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Project:	Lea County, New Mexico (NAD 27)	MD Reference:	WELL @ 3950.00usft (Precision 194)
Site:	MCA Unit	North Reference:	Grid
Well:	557	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
708.00	708.00	Rustler		0.00	90.86	
865.00	865.00	Salado		0.00	90.86	
1,875.00	1,875.00	Tansill		0.00	90.86	
2,055.12	2,055.00	Yates		0.00	90.86	
2,443.58	2,440.00	Seven Rivers		0.00	90.86	
3,054.74	3,040.00	Queen		0.00	90.86	
3,474.32	3,440.00	Z3		0.00	90.86	
3,538.91	3,500.00	Z4		0.00	90.86	
3,625.90	3,580.00	Z5		0.00	90.86	
3,713.99	3,660.00	Z6		0.00	90.86	
3,893.69	3,820.00	Z7		0.00	90.86	
4,085.92	3,990.00	Z9		0.00	90.86	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,875.00	1,875.00	0.00	0.00	KOP, 2.00°/100' Build
2,375.00	2,372.47	23.06	36.91	Hold 10.00° Inc, 58.00° Azm
2,755.00	2,746.69	58.03	92.87	Begin 2.00°/100' Build & Turn
3,834.17	3,767.36	58.19	423.22	Hold 27.83° Inc, 101.33° Azm
4,594.77	4,440.00	-11.57	771.36	PBHL

BLOWOUT PREVENTER ARRANGEMENT

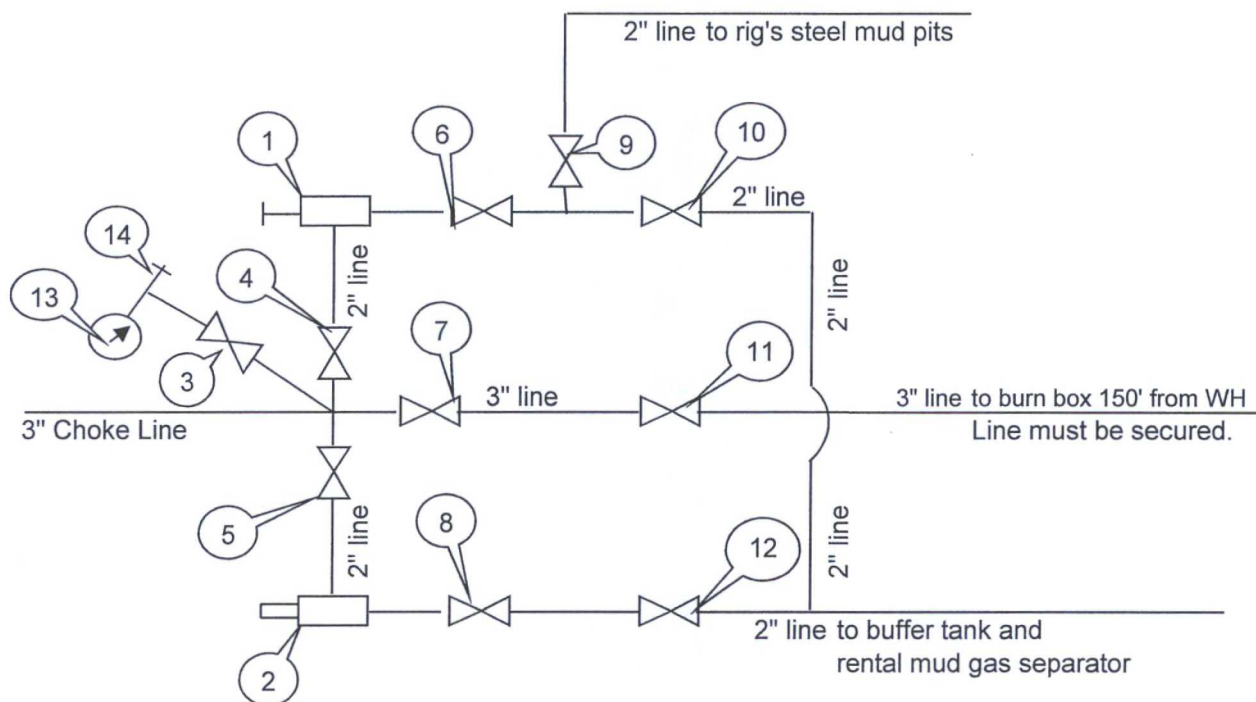
3M System per Onshore Oil and Gas Order No. 2 utilizing 3M and 5M Rated Equipment



Item	Description
1	Rotating Head (11")
2A	Fill up Line and Valve
2B	Flow Line (8")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (11", 3M)
4	Double Ram (11", 3M, equipped with Blind Rams and Pipe Rams)
5	Kill Line (2" flexible hose, 3000 psi WP)
6	Kill Line Valve, Inner (2-1/16", 3000 psi WP)
7	Kill Line Valve, Outer (2-1/16", 3000 psi WP)
8	Kill Line Check Valve (2-1/16", 3000 psi WP)
9	Straight Choke Line (3" 3000 psi WP)
10	Choke Line Valve, Inner (3-1/8", 3000 psi WP)
11	Choke Line Valve, Outer, (Hydraulically operated, 3-1/8", 3000 psi WP)
12	Spacer Spool (11" 3M x 3M)
13	Adapter Flange (11" 3M x 5M)
14	Casing Head (11" 5M)
15	Ball Valve and Threaded Nipple on Casing Head Outlet, (2", 5M)
16	Surface Casing

CHOKE MANIFOLD ARRANGEMENT

3M System per Onshore Oil and Gas Order No. 2 utilizing 3M and 5M Equipment



Item	Description
1	Manual Adjustable Choke, 2-1/16", 5M
2	Remote-Controlled Hydraulically-Operated Adjustable Choke, 2-1/16", 10M
3	Gate Valve, 2-1/16" 5M
4	Gate Valve, 2-1/16" 5M
5	Gate Valve, 2-1/16" 5M
6	Gate Valve, 2-1/16" 5M
7	Gate Valve, 3-1/8" 3M
8	Gate Valve, 2-1/16" 5M
9	Gate Valve, 2-1/16" 5M
10	Gate Valve, 2-1/16" 5M
11	Gate Valve, 3-1/8" 3M
12	Gate Valve, 2-1/16" 5M
13	Pressure Gauge
14	2" hammer union tie-in point for BOP Tester

We will test each valve to 3000 psi from the upstream side.

Submitted by:

Cord Denton

Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company

Date: 27-April-2015

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

ConocoPhillips Company
Well: MCA #557
Location: Section 29, T17S, R32E
Date: 6/24/2015

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, use a drying pad, build an earthen pit above ground level, nor 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 frac tanks as needed. The intent is as follows:

- We propose to use the rig's 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 during each tour and any necessary repairs will be made immediately. Any leak in the system will be repaired immediately, 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 the 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
Phone Number: 575.393.1079

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 NM1-006.

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

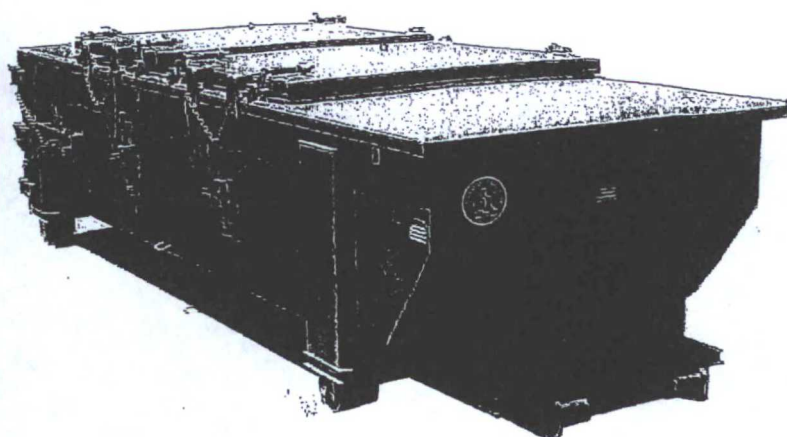
3. Mud will be transported by vacuum truck and disposed of at R-360 Inc. at the facility described above.
4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:
 - Nabors Well Services Company, 3221 NW County Rd, Hobbs, NM 88240; P.O. Box 5208 Hobbs, NM, 88241, Phone Number: 575.392.2577; Permit SWD 092.
 - Basic Energy Services, 2404 W Texas Ave, Eunice, NM 88231; P.O. Box 1869, Eunice, NM 88231 Phone Number: 575.394.2545, Facility located at Hwy 18, Mile Marker 19; Eunice, NM.
 - C & C Transport, LLC, P.O. Box 1352, Hobbs, NM 88241 Phone Number: 575.393.0422
 - Sundance Services, Inc., P.O. Box 1737 Eunice, NM 88231 Phone Number: 575.394.2511

Cord Denton
Drilling Engineer, ConocoPhillips Company
Phone: (281) 206-5406
Cell: (832) 754-7363

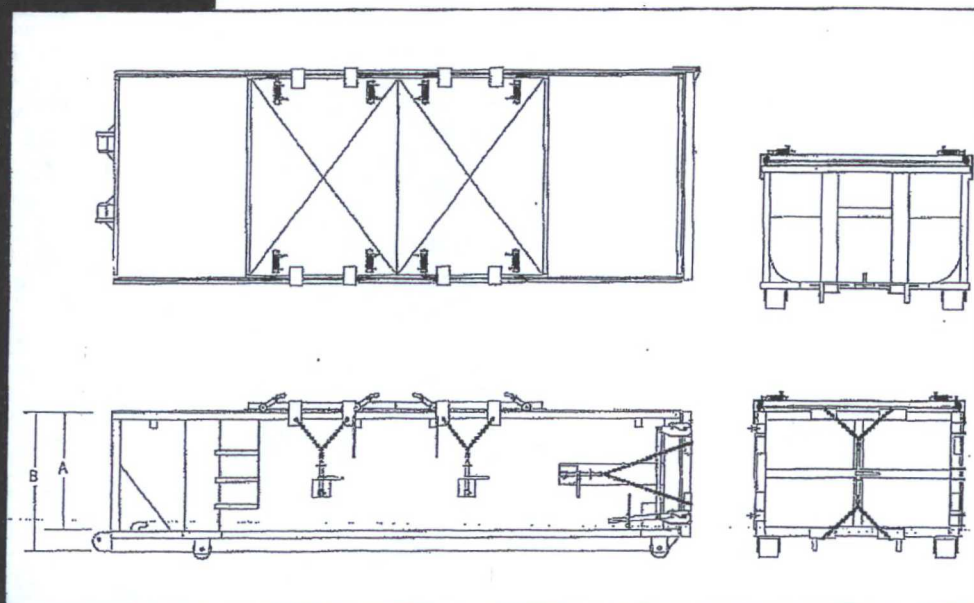
SPECIFICATIONS

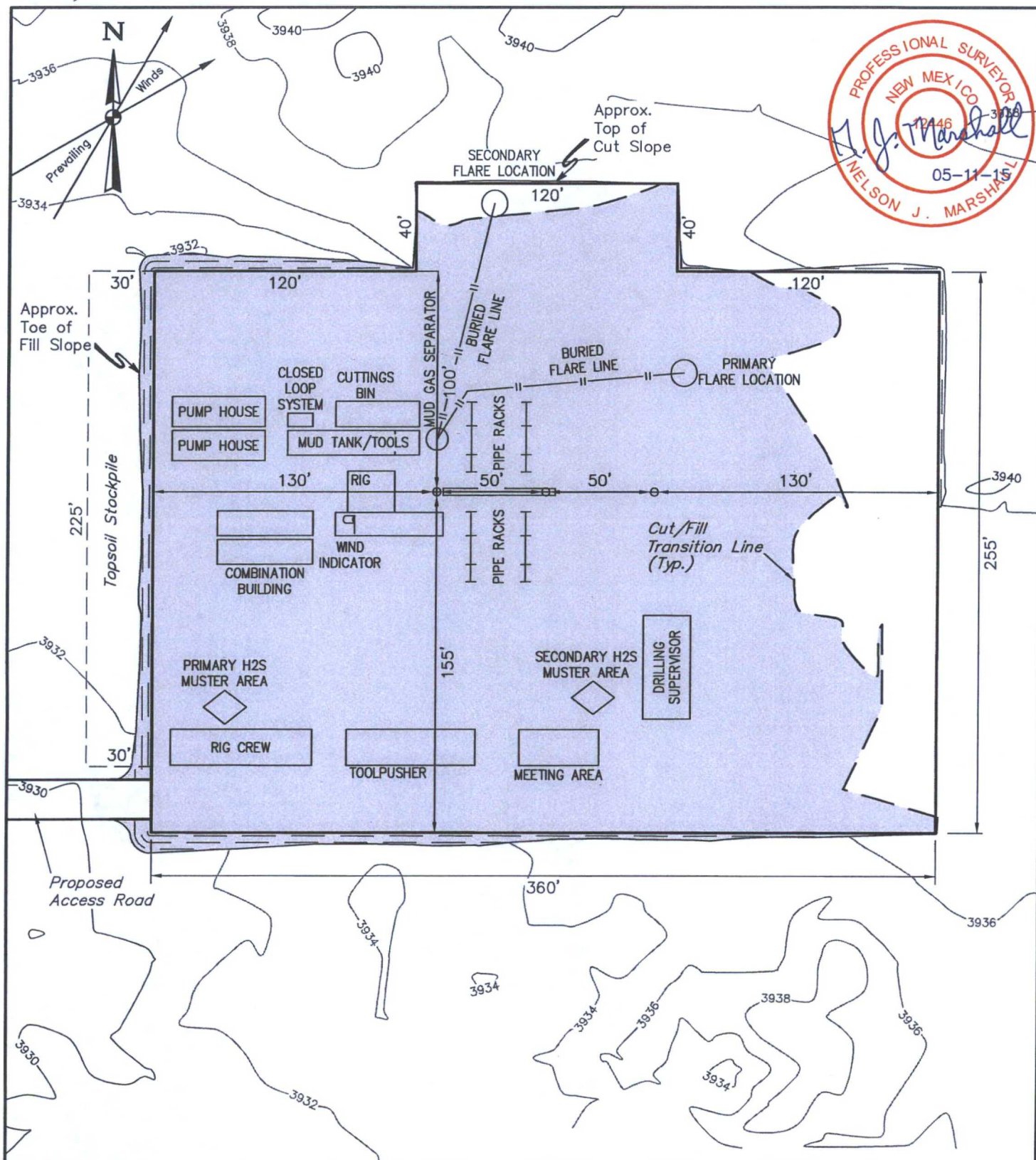
Heavy Duty Split Metal Rolling Lid

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





NOTES:

- Contours shown at 2' intervals.
- May have different number of pump houses and combination buildings.

ConocoPhillips Company

MCA UNIT 556, 565 & 557
SECTION 29, T17S, R32E, N.M.P.M.
NW 1/4 NW 1/4
LEA COUNTY, NEW MEXICO

DRAWN BY: B.D.H.

DATE DRAWN: 04-30-15

SCALE: 1" = 60'

REVISED: 00-00-00

TYPICAL RIG LAYOUT

FIGURE #3



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