



Apache Corporation

Lea County, NM (NAD27 NME)
West Blinbry Drinkard Unit
#176

OH

Plan: Plan 1 03-15-16

Standard Planning Report

15 March, 2016

HOBBS OCD

MAY 09 2016

RECEIVED



MAY 12 2016



Phoenix Technology Services LP

Planning Report



Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #176
Company:	Apache Corporation	TVD Reference:	RKB @ 3492.00usft
Project:	Lea County, NM (NAD27 NME)	MD Reference:	RKB @ 3492.00usft
Site:	West Blinebry Drinkard Unit	North Reference:	Grid
Well:	#176	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 03-15-16		

Project: Lea County, NM (NAD27 NME)			
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:	West Blinebry Drinkard Unit
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Site Position:		Northing:	540,688.00 usft	Latitude:	32° 28' 52.21189 N
From:	Map	Easting:	855,919.70 usft	Longitude:	103° 10' 44.94293 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.62 °

Well	#176					
Well Position	+N/-S	2,082.00 usft	Northings:	542,770.00 usft	Latitude:	32° 29' 12.34519 N
	+E/-W	4,325.20 usft	Easting:	860,244.90 usft	Longitude:	103° 9' 54.19276 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,481.00 usft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/15/2016	7.00	60.58	48,481

Design:	Plan 1 03-15-16
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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	227.58

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	
1,450.00	0.00	0.00	1,450.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,517.97	1.36	227.58	1,517.96	-0.54	-0.60	2.00	2.00	0.00	227.58	
6,851.51	1.36	227.58	6,850.00	-85.90	-94.00	0.00	0.00	0.00	0.00	BHL - West Blinebr



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Site:	West Blinbry Drinkard Unit	North Reference:	Grid
Well:	#176	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 03-15-16		

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
1,450.00	0.00	0.00	1,450.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100° Build									
1,500.00	1.00	227.58	1,500.00	-0.29	-0.32	0.44	2.00	2.00	0.00
1,517.97	1.36	227.58	1,517.96	-0.54	-0.60	0.81	2.00	2.00	0.00
Hold 1.36° Inc., 227.58° Azm									
1,600.00	1.36	227.58	1,599.97	-1.86	-2.03	2.75	0.00	0.00	0.00
1,700.00	1.36	227.58	1,699.94	-3.46	-3.78	5.12	0.00	0.00	0.00
1,800.00	1.36	227.58	1,799.91	-5.06	-5.53	7.50	0.00	0.00	0.00
1,900.00	1.36	227.58	1,899.89	-6.66	-7.29	9.87	0.00	0.00	0.00
2,000.00	1.36	227.58	1,999.86	-8.26	-9.04	12.24	0.00	0.00	0.00
2,100.00	1.36	227.58	2,099.83	-9.86	-10.79	14.61	0.00	0.00	0.00
2,200.00	1.36	227.58	2,199.80	-11.46	-12.54	16.99	0.00	0.00	0.00
2,300.00	1.36	227.58	2,299.77	-13.06	-14.29	19.36	0.00	0.00	0.00
2,400.00	1.36	227.58	2,399.75	-14.66	-16.04	21.73	0.00	0.00	0.00
2,500.00	1.36	227.58	2,499.72	-16.26	-17.79	24.10	0.00	0.00	0.00
2,600.00	1.36	227.58	2,599.69	-17.86	-19.54	26.48	0.00	0.00	0.00
2,700.00	1.36	227.58	2,699.66	-19.46	-21.30	28.85	0.00	0.00	0.00
2,800.00	1.36	227.58	2,799.63	-21.06	-23.05	31.22	0.00	0.00	0.00
2,900.00	1.36	227.58	2,899.60	-22.66	-24.80	33.59	0.00	0.00	0.00
3,000.00	1.36	227.58	2,999.58	-24.26	-26.55	35.97	0.00	0.00	0.00
3,100.00	1.36	227.58	3,099.55	-25.86	-28.30	38.34	0.00	0.00	0.00
3,200.00	1.36	227.58	3,199.52	-27.46	-30.05	40.71	0.00	0.00	0.00
3,300.00	1.36	227.58	3,299.49	-29.06	-31.80	43.08	0.00	0.00	0.00
3,400.00	1.36	227.58	3,399.46	-30.66	-33.55	45.45	0.00	0.00	0.00
3,500.00	1.36	227.58	3,499.44	-32.26	-35.31	47.83	0.00	0.00	0.00
3,600.00	1.36	227.58	3,599.41	-33.86	-37.06	50.20	0.00	0.00	0.00
3,700.00	1.36	227.58	3,699.38	-35.46	-38.81	52.57	0.00	0.00	0.00
3,800.00	1.36	227.58	3,799.35	-37.06	-40.56	54.94	0.00	0.00	0.00
3,900.00	1.36	227.58	3,899.32	-38.67	-42.31	57.32	0.00	0.00	0.00
4,000.00	1.36	227.58	3,999.30	-40.27	-44.06	59.69	0.00	0.00	0.00
4,100.00	1.36	227.58	4,099.27	-41.87	-45.81	62.06	0.00	0.00	0.00
4,200.00	1.36	227.58	4,199.24	-43.47	-47.56	64.43	0.00	0.00	0.00
4,300.00	1.36	227.58	4,299.21	-45.07	-49.32	66.81	0.00	0.00	0.00
4,400.00	1.36	227.58	4,399.18	-46.67	-51.07	69.18	0.00	0.00	0.00
4,500.00	1.36	227.58	4,499.15	-48.27	-52.82	71.55	0.00	0.00	0.00
4,600.00	1.36	227.58	4,599.13	-49.87	-54.57	73.92	0.00	0.00	0.00
4,700.00	1.36	227.58	4,699.10	-51.47	-56.32	76.30	0.00	0.00	0.00
4,800.00	1.36	227.58	4,799.07	-53.07	-58.07	78.67	0.00	0.00	0.00
4,900.00	1.36	227.58	4,899.04	-54.67	-59.82	81.04	0.00	0.00	0.00
5,000.00	1.36	227.58	4,999.01	-56.27	-61.58	83.41	0.00	0.00	0.00
5,100.00	1.36	227.58	5,098.99	-57.87	-63.33	85.79	0.00	0.00	0.00
5,200.00	1.36	227.58	5,198.96	-59.47	-65.08	88.16	0.00	0.00	0.00
5,300.00	1.36	227.58	5,298.93	-61.07	-66.83	90.53	0.00	0.00	0.00
5,400.00	1.36	227.58	5,398.90	-62.67	-68.58	92.90	0.00	0.00	0.00
5,500.00	1.36	227.58	5,498.87	-64.27	-70.33	95.27	0.00	0.00	0.00
5,600.00	1.36	227.58	5,598.84	-65.87	-72.08	97.65	0.00	0.00	0.00
5,700.00	1.36	227.58	5,698.82	-67.47	-73.83	100.02	0.00	0.00	0.00
5,800.00	1.36	227.58	5,798.79	-69.07	-75.59	102.39	0.00	0.00	0.00
5,900.00	1.36	227.58	5,898.76	-70.67	-77.34	104.76	0.00	0.00	0.00
6,000.00	1.36	227.58	5,998.73	-72.27	-79.09	107.14	0.00	0.00	0.00
6,100.00	1.36	227.58	6,098.70	-73.87	-80.84	109.51	0.00	0.00	0.00
6,200.00	1.36	227.58	6,198.68	-75.47	-82.59	111.88	0.00	0.00	0.00
6,300.00	1.36	227.58	6,298.65	-77.07	-84.34	114.25	0.00	0.00	0.00



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Site:	West Blinebry Drinkard Unit	North Reference:	Grid
Well:	#176	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 03-15-16		

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)
6,400.00	1.36	227.58	6,398.62	-78.67	-86.09	116.63	0.00	0.00	0.00
6,500.00	1.36	227.58	6,498.59	-80.27	-87.84	119.00	0.00	0.00	0.00
6,600.00	1.36	227.58	6,598.56	-81.87	-89.60	121.37	0.00	0.00	0.00
6,700.00	1.36	227.58	6,698.54	-83.48	-91.35	123.74	0.00	0.00	0.00
6,800.00	1.36	227.58	6,798.51	-85.08	-93.10	126.12	0.00	0.00	0.00
6,851.51	1.36	227.58	6,850.00	-85.90	-94.00	127.34	0.00	0.00	0.00

TD at 6851.51

Design Targets

Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
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BHL - West Blinebry L
- hit/miss target
- Shape
- Point

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,291.00	1,299.00	Rustler		0.00	
1,479.00	1,487.00	Salado		0.00	
2,477.28	2,485.00	Tansil		0.00	
2,617.32	2,625.00	Yates		0.00	
2,870.39	2,878.00	Seven Rivers		0.00	
3,430.54	3,438.00	Queen		0.00	
3,742.63	3,750.00	Grayburg		0.00	
4,097.73	4,105.00	San Andres		0.00	
5,170.03	5,177.00	Glorieta		0.00	
5,253.06	5,260.00	Paddock		0.00	
5,664.17	5,671.00	Blinbry		0.00	
6,159.31	6,166.00	Tubb		0.00	
6,469.40	6,476.00	Drinkard		0.00	
6,728.47	6,735.00	Abo		0.00	

Plan Annotations

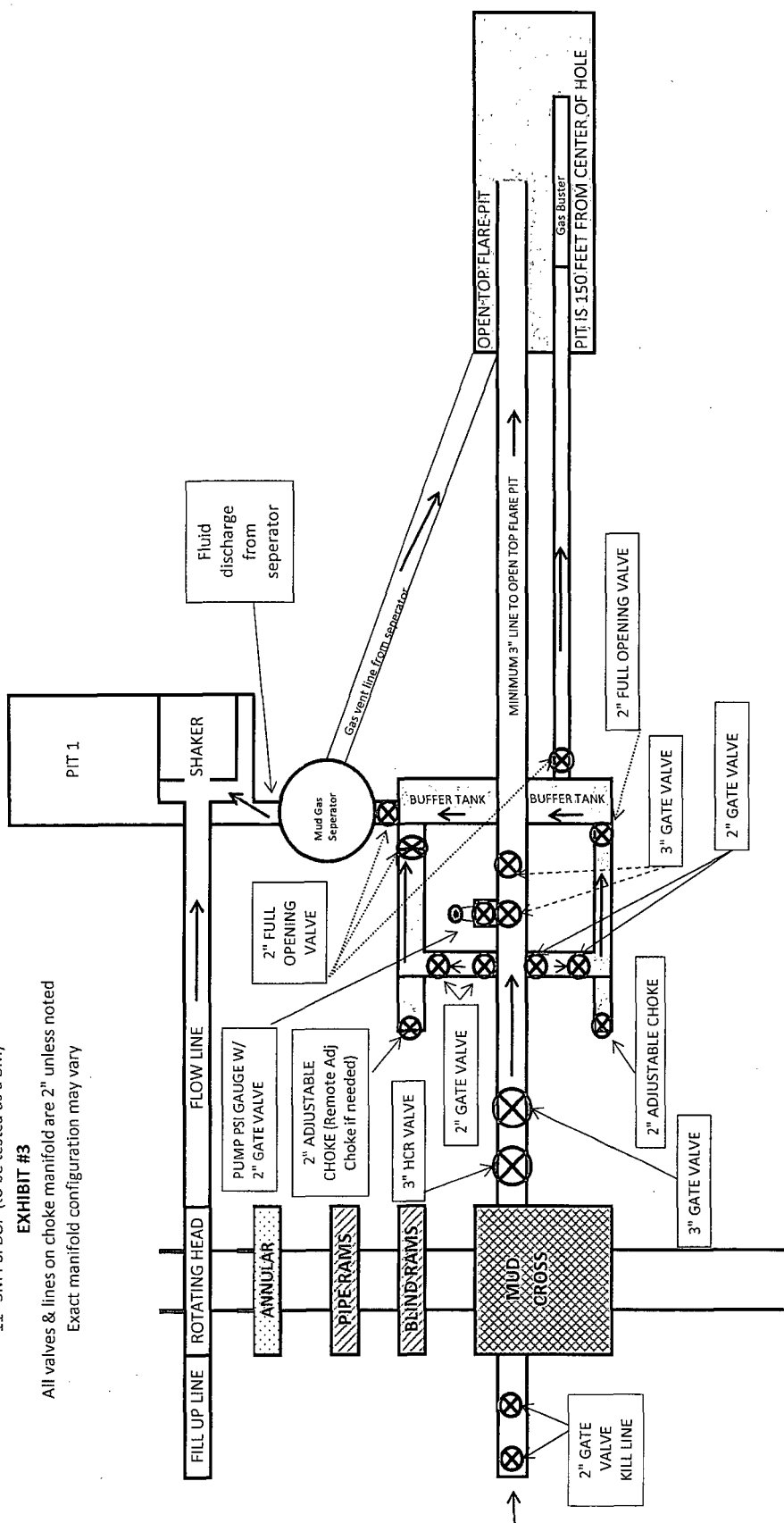
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
1,450.00	1,450.00	+N/-S (usft) 0.00 +E/-W (usft) 0.00	KOP, Begin 2.00°/100' Build
1,517.97	1,517.96	+N/-S (usft) -0.54 +E/-W (usft) -0.60	Hold 1.36° Inc, 227.58° Azm
6,851.51	6,850.00	+N/-S (usft) -85.90 +E/-W (usft) -94.00	TD at 6851.51

APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

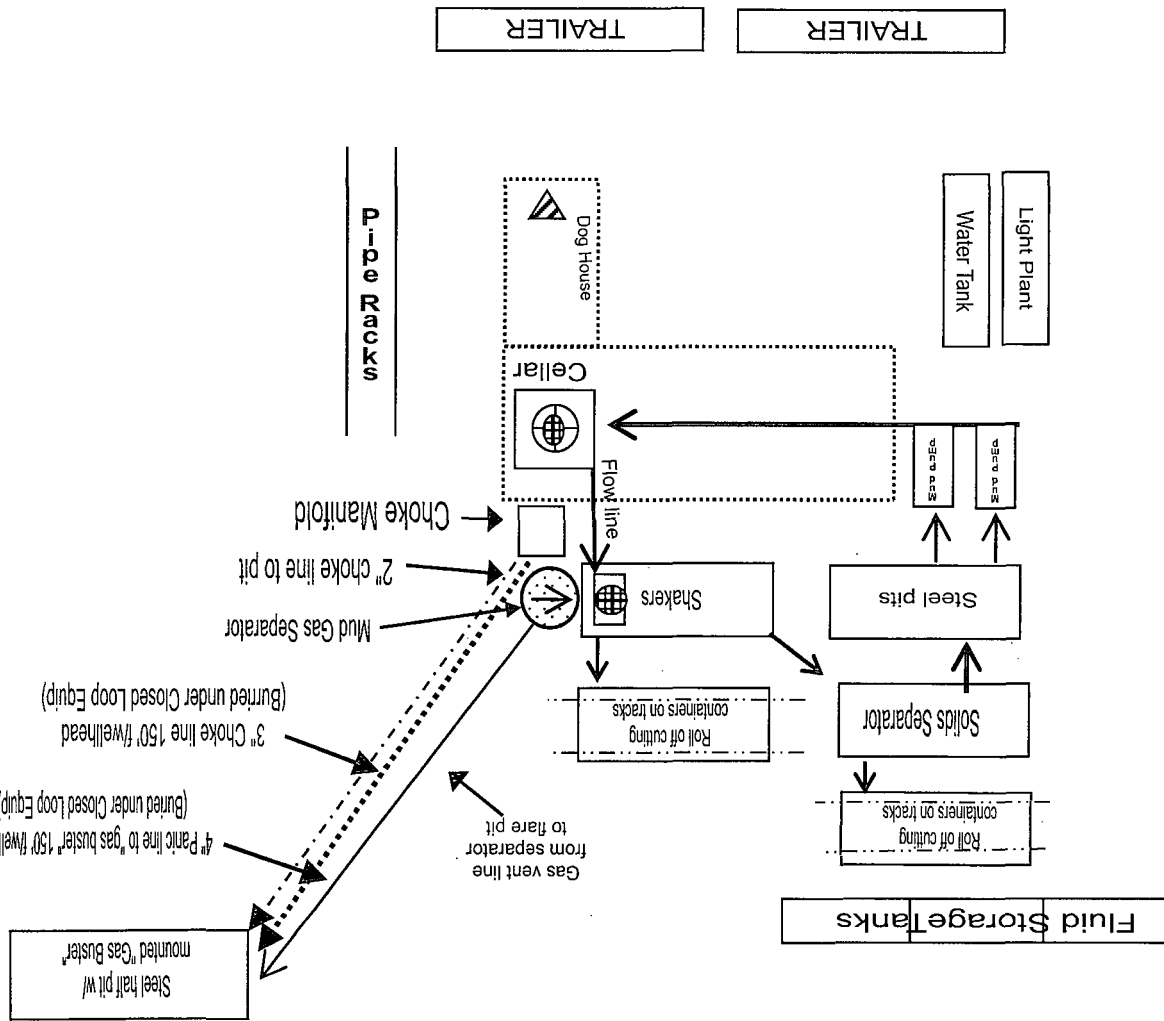
11" 3M PSI BOP (to be tested as a 3M)

EXHIBIT #3

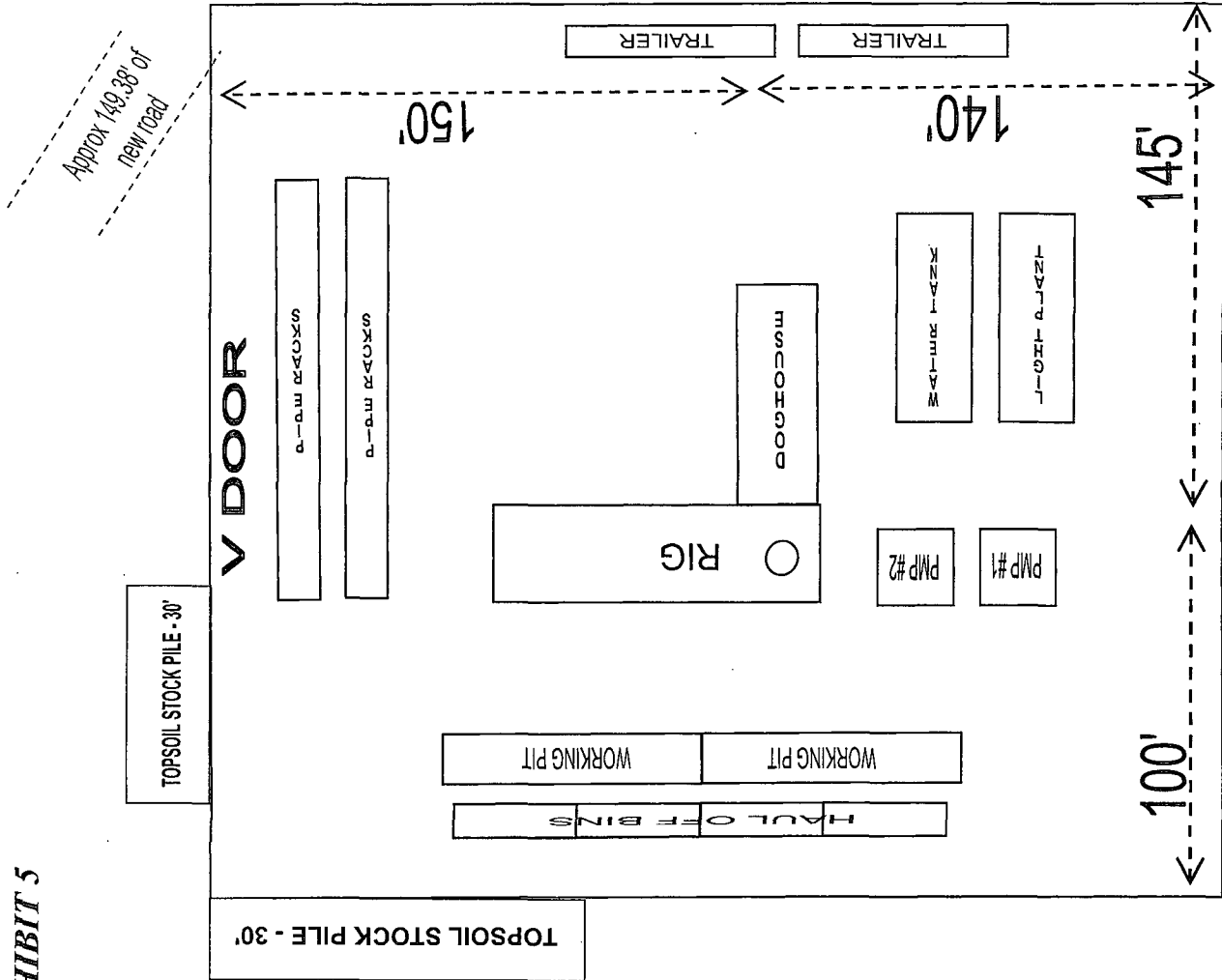
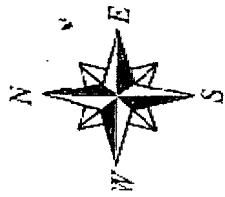
All valves & lines on choke manifold are 2" unless noted
Exact manifold configuration may vary

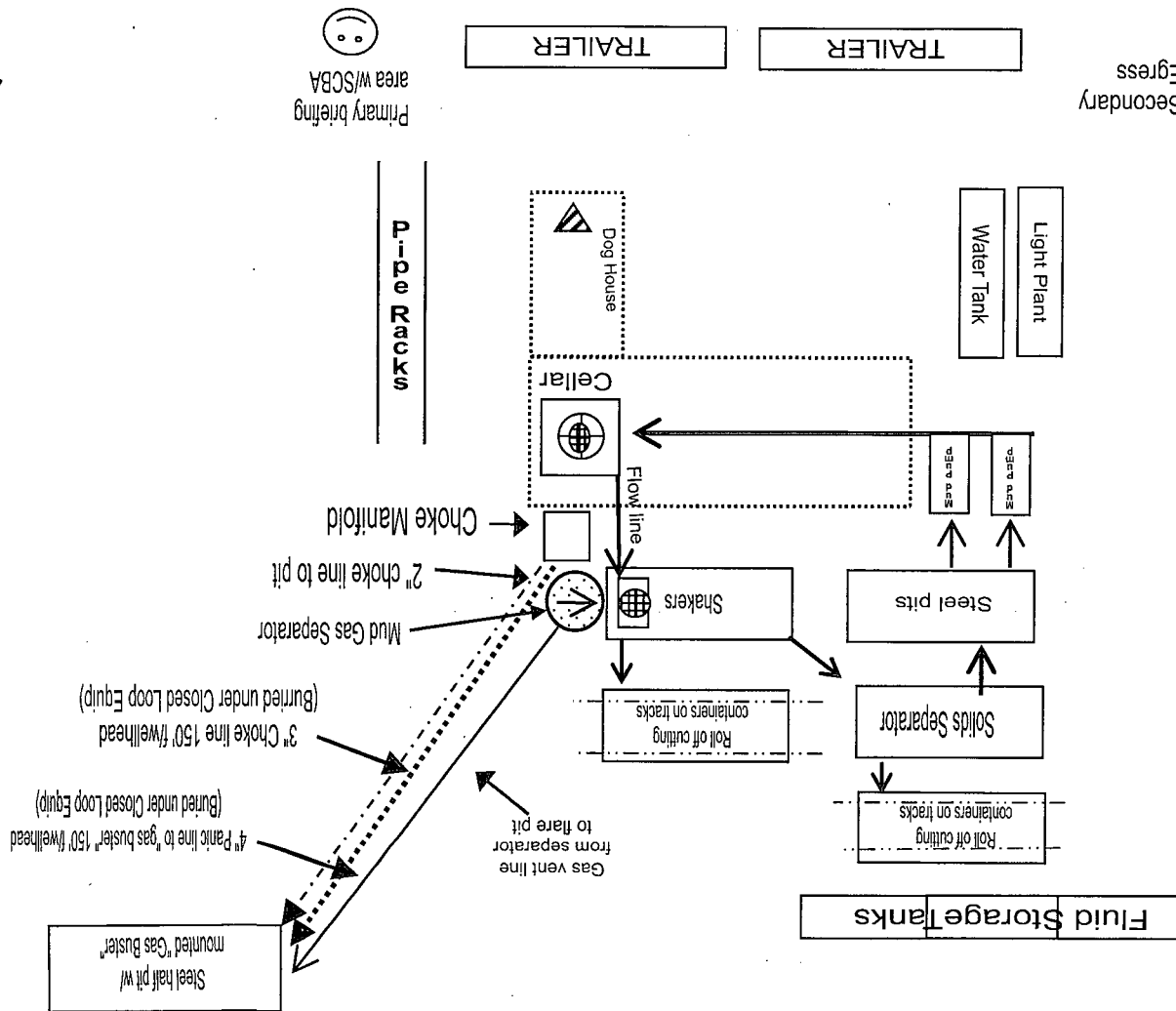
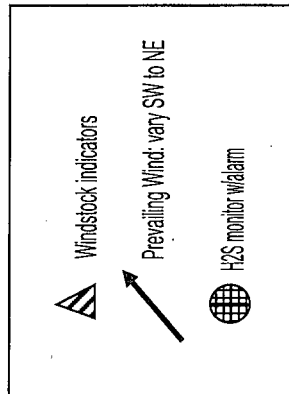


*** If H2S is encountered in quantities greater than 100ppm, Apache will shut in well & install a remote operated choke ***



RIG ORIENTATION & LAYOUT WEST BLINEBRY DRINKARD UNIT 176 EXHIBIT 5



Secondary
Egress

Primary briefing
area w/SCBA



TRAILER

TRAILER

Light Plant

Water tank

st

Fluid Storage Tanks

corpus separatum

entainers on tracks.

containers on tracks

 Shakers

File

Cellular

Dog House

Pipe Racks

Manitoba

...und das separates

Mud Gas Separator

3" Choke line 150' / wellhead
(Buried under Closed Loop Equip)

4" Panic line to "gas duster" 150' wellhead
(Buried under Closed Loop Equip)

mounted "Gas Buster"

Gas vent line
from separator
to flare pit

Windstock indicators

Prevailing Wind: vary SW to NE

Monitor w/alarm

~ 200' but no
more than 500'
from well location

Approx 149.38' of
new road