



HOBBS OCD

MAY 09 2016

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Apache Corporation

**Lea County, NM (NAD27 NME)
West Blinebry Drinkard Unit
#244**

OH

Plan: Plan 1 03-15-16

Standard Planning Report

15 March, 2016



MAY 12 2016

Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #244
Company:	Apache Corporation	TVD Reference:	RKB @ 3517.00usft
Project:	Lea County, NM (NAD27 NME)	MD Reference:	RKB @ 3517.00usft
Site:	West Blinebry Drinkard Unit	North Reference:	Grid
Well:	#244	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	#244
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Well Position	+N/-S	3,568.50 usft	Northing:	544,256.50 usft	Latitude:	32° 29' 27.25464 N
	+E/-W	2,455.10 usft	Easting:	858,374.80 usft	Longitude:	103° 10' 15.83294 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,506.00 usft

Wellbore	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/15/2016	7.02	60.58	48,476

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	295.46

Plan Sections	
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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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,629.65	2.59	295.46	1,629.60	1.26	-2.65	2.00	2.00	0.00	295.46	
6,855.39	2.59	295.46	6,850.00	102.90	-216.10	0.00	0.00	0.00	0.00	BHL - West Blinebr

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Site:	West Blinbry Drinkard Unit	North Reference:	Grid
Well:	#244	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
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
1,600.00	2.00	295.46	1,599.98	0.75	-1.58	1.75	2.00	2.00	0.00
1,629.65	2.59	295.46	1,629.60	1.26	-2.65	2.93	2.00	2.00	0.00
Hold 2.59° Inc, 295.46° Azm									
1,700.00	2.59	295.46	1,699.88	2.63	-5.52	6.12	0.00	0.00	0.00
1,800.00	2.59	295.46	1,799.78	4.57	-9.61	10.64	0.00	0.00	0.00
1,900.00	2.59	295.46	1,899.68	6.52	-13.69	15.16	0.00	0.00	0.00
2,000.00	2.59	295.46	1,999.58	8.46	-17.78	19.69	0.00	0.00	0.00
2,100.00	2.59	295.46	2,099.47	10.41	-21.86	24.21	0.00	0.00	0.00
2,200.00	2.59	295.46	2,199.37	12.35	-25.94	28.74	0.00	0.00	0.00
2,300.00	2.59	295.46	2,299.27	14.30	-30.03	33.26	0.00	0.00	0.00
2,400.00	2.59	295.46	2,399.17	16.24	-34.11	37.78	0.00	0.00	0.00
2,500.00	2.59	295.46	2,499.06	18.19	-38.20	42.31	0.00	0.00	0.00
2,600.00	2.59	295.46	2,598.96	20.13	-42.28	46.83	0.00	0.00	0.00
2,700.00	2.59	295.46	2,698.86	22.08	-46.37	51.36	0.00	0.00	0.00
2,800.00	2.59	295.46	2,798.76	24.02	-50.45	55.88	0.00	0.00	0.00
2,900.00	2.59	295.46	2,898.66	25.97	-54.54	60.40	0.00	0.00	0.00
3,000.00	2.59	295.46	2,998.55	27.91	-58.62	64.93	0.00	0.00	0.00
3,100.00	2.59	295.46	3,098.45	29.86	-62.71	69.45	0.00	0.00	0.00
3,200.00	2.59	295.46	3,198.35	31.80	-66.79	73.98	0.00	0.00	0.00
3,300.00	2.59	295.46	3,298.25	33.75	-70.88	78.50	0.00	0.00	0.00
3,400.00	2.59	295.46	3,398.14	35.69	-74.96	83.02	0.00	0.00	0.00
3,500.00	2.59	295.46	3,498.04	37.64	-79.04	87.55	0.00	0.00	0.00
3,600.00	2.59	295.46	3,597.94	39.58	-83.13	92.07	0.00	0.00	0.00
3,700.00	2.59	295.46	3,697.84	41.53	-87.21	96.60	0.00	0.00	0.00
3,800.00	2.59	295.46	3,797.73	43.47	-91.30	101.12	0.00	0.00	0.00
3,900.00	2.59	295.46	3,897.63	45.42	-95.38	105.64	0.00	0.00	0.00
4,000.00	2.59	295.46	3,997.53	47.36	-99.47	110.17	0.00	0.00	0.00
4,100.00	2.59	295.46	4,097.43	49.31	-103.55	114.69	0.00	0.00	0.00
4,200.00	2.59	295.46	4,197.32	51.25	-107.64	119.22	0.00	0.00	0.00
4,300.00	2.59	295.46	4,297.22	53.20	-111.72	123.74	0.00	0.00	0.00
4,400.00	2.59	295.46	4,397.12	55.14	-115.81	128.27	0.00	0.00	0.00
4,500.00	2.59	295.46	4,497.02	57.09	-119.89	132.79	0.00	0.00	0.00
4,600.00	2.59	295.46	4,596.91	59.03	-123.98	137.31	0.00	0.00	0.00
4,700.00	2.59	295.46	4,696.81	60.98	-128.06	141.84	0.00	0.00	0.00
4,800.00	2.59	295.46	4,796.71	62.92	-132.14	146.36	0.00	0.00	0.00
4,900.00	2.59	295.46	4,896.61	64.87	-136.23	150.89	0.00	0.00	0.00
5,000.00	2.59	295.46	4,996.51	66.81	-140.31	155.41	0.00	0.00	0.00
5,100.00	2.59	295.46	5,096.40	68.76	-144.40	159.93	0.00	0.00	0.00
5,200.00	2.59	295.46	5,196.30	70.70	-148.48	164.46	0.00	0.00	0.00
5,300.00	2.59	295.46	5,296.20	72.65	-152.57	168.98	0.00	0.00	0.00
5,400.00	2.59	295.46	5,396.10	74.59	-156.65	173.51	0.00	0.00	0.00
5,500.00	2.59	295.46	5,495.99	76.54	-160.74	178.03	0.00	0.00	0.00
5,600.00	2.59	295.46	5,595.89	78.48	-164.82	182.55	0.00	0.00	0.00
5,700.00	2.59	295.46	5,695.79	80.43	-168.91	187.08	0.00	0.00	0.00
5,800.00	2.59	295.46	5,795.69	82.37	-172.99	191.60	0.00	0.00	0.00
5,900.00	2.59	295.46	5,895.58	84.32	-177.08	196.13	0.00	0.00	0.00
6,000.00	2.59	295.46	5,995.48	86.26	-181.16	200.65	0.00	0.00	0.00
6,100.00	2.59	295.46	6,095.38	88.21	-185.25	205.17	0.00	0.00	0.00
6,200.00	2.59	295.46	6,195.28	90.15	-189.33	209.70	0.00	0.00	0.00
6,300.00	2.59	295.46	6,295.17	92.10	-193.41	214.22	0.00	0.00	0.00
6,400.00	2.59	295.46	6,395.07	94.04	-197.50	218.75	0.00	0.00	0.00

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Site:	West Blinebry Drinkard Unit	North Reference:	Grid
Well:	#244	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)
6,500.00	2.59	295.46	6,494.97	95.99	-201.58	223.27	0.00	0.00	0.00
6,600.00	2.59	295.46	6,594.87	97.93	-205.67	227.79	0.00	0.00	0.00
6,700.00	2.59	295.46	6,694.76	99.88	-209.75	232.32	0.00	0.00	0.00
6,800.00	2.59	295.46	6,794.66	101.82	-213.84	236.84	0.00	0.00	0.00
6,855.39	2.59	295.46	6,850.00	102.90	-216.10	239.35	0.00	0.00	0.00
TD at 6855.39									

Design Targets:									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL - West Blinebry l	0.00	0.00	6,850.00	102.90	-216.10	544,359.40	858,158.70	32° 29' 28.29602 N	03° 10' 18.34246 W
- plan hits target center									
- Point									

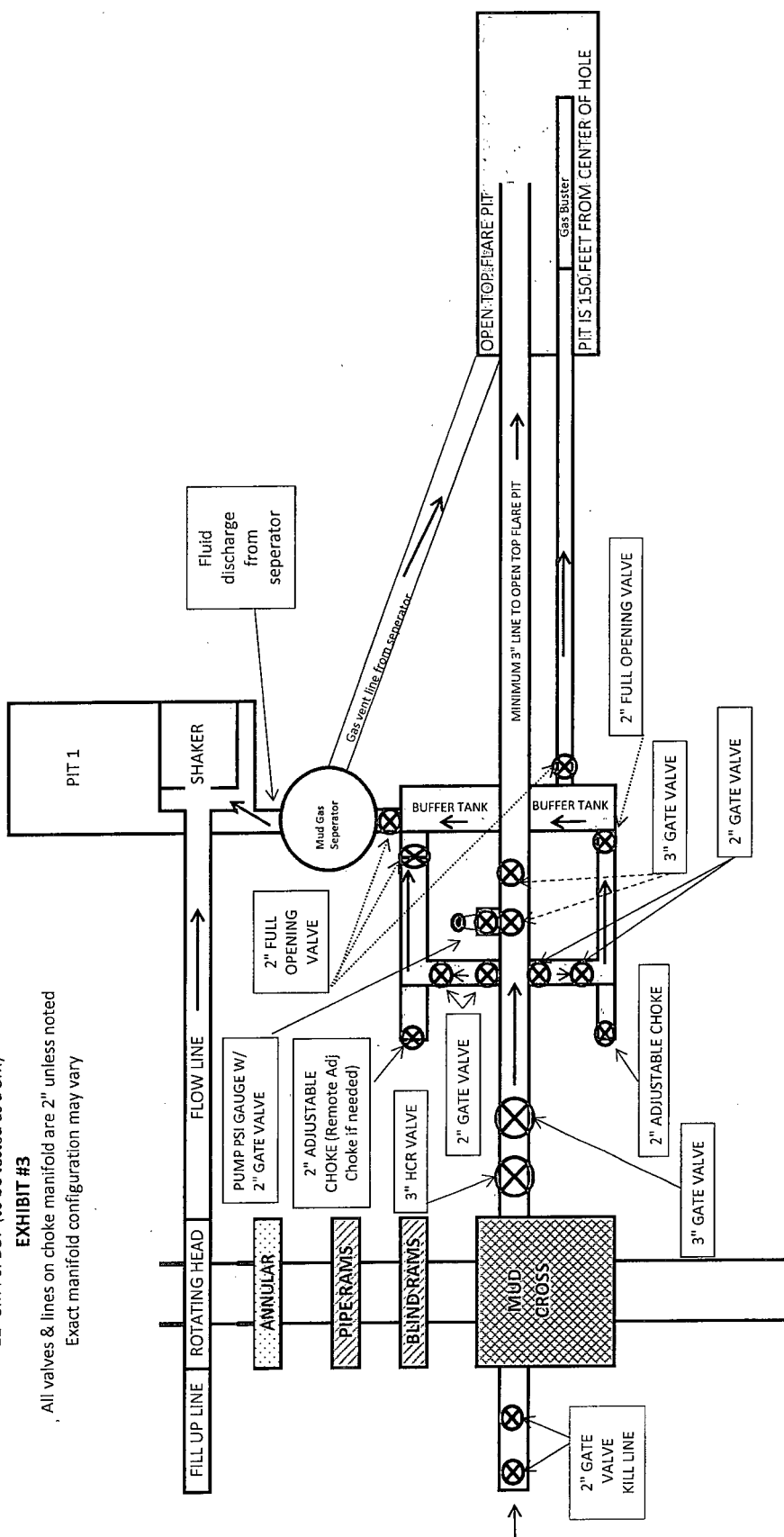
Formations:						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,369.00	1,344.00	Rustler		0.00		
1,518.00	1,493.00	Salado		0.00		
2,573.01	2,547.00	Tansil		0.00		
2,709.15	2,683.00	Yates		0.00		
2,928.37	2,902.00	Seven Rivers		0.00		
3,459.92	3,433.00	Queen		0.00		
3,818.29	3,791.00	Grayburg		0.00		
4,160.64	4,133.00	San Andres		0.00		
5,205.71	5,177.00	Glorieta		0.00		
5,275.78	5,247.00	Paddock		0.00		
5,693.20	5,664.00	Blinebry		0.00		
6,178.70	6,149.00	Tubb		0.00		
6,487.02	6,457.00	Drinkard		0.00		
6,746.28	6,716.00	Abo		0.00		

Plan Annotations:				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.00	1,500.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,629.65	1,629.60	1.26	-2.65	Hold 2.59° Inc, 295.46° Azm
6,855.39	6,850.00	102.90	-216.10	TD at 6855.39

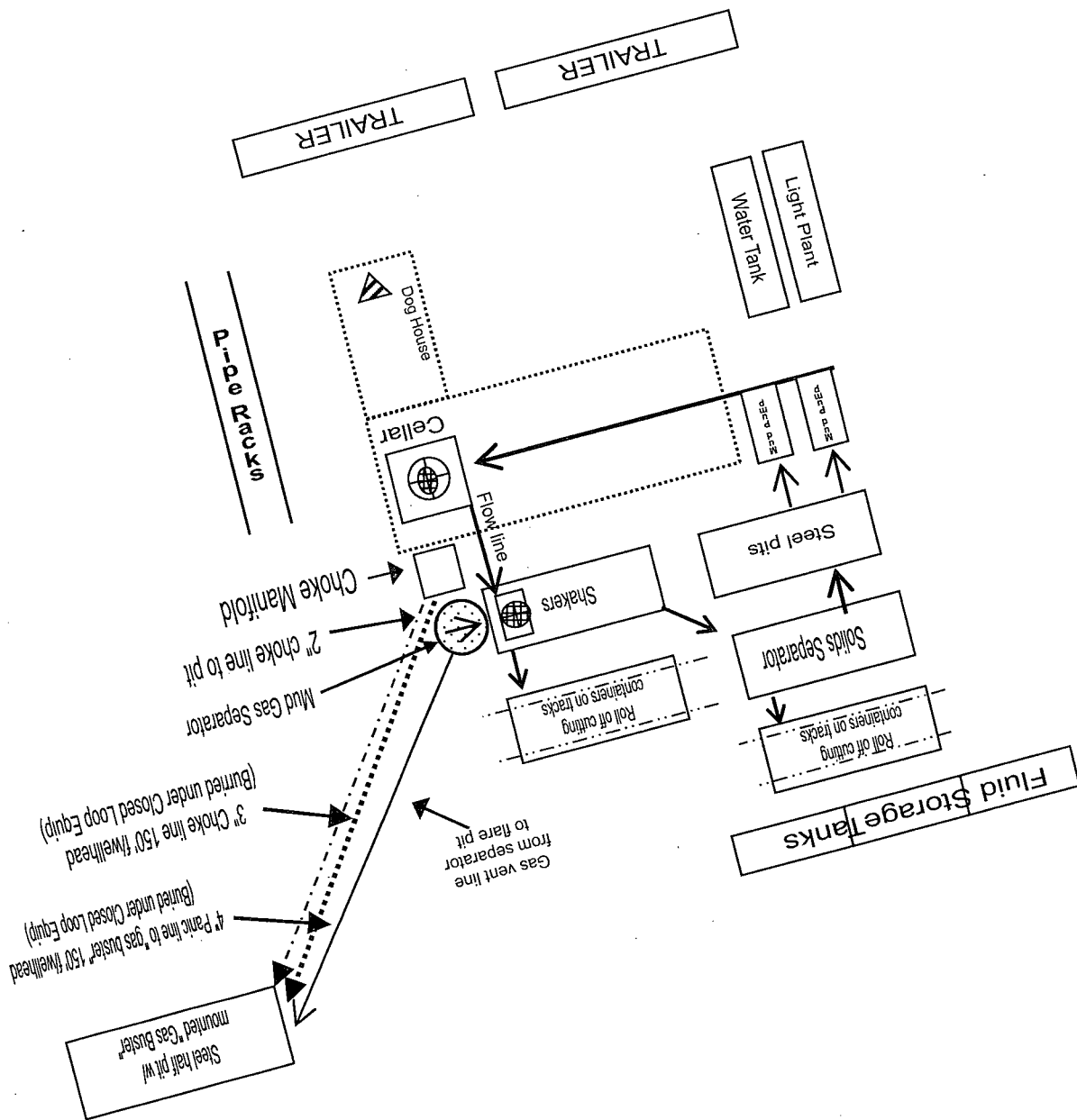
11" 3M PSI BOP (to be tested as a 3M)

EXHIBIT #3

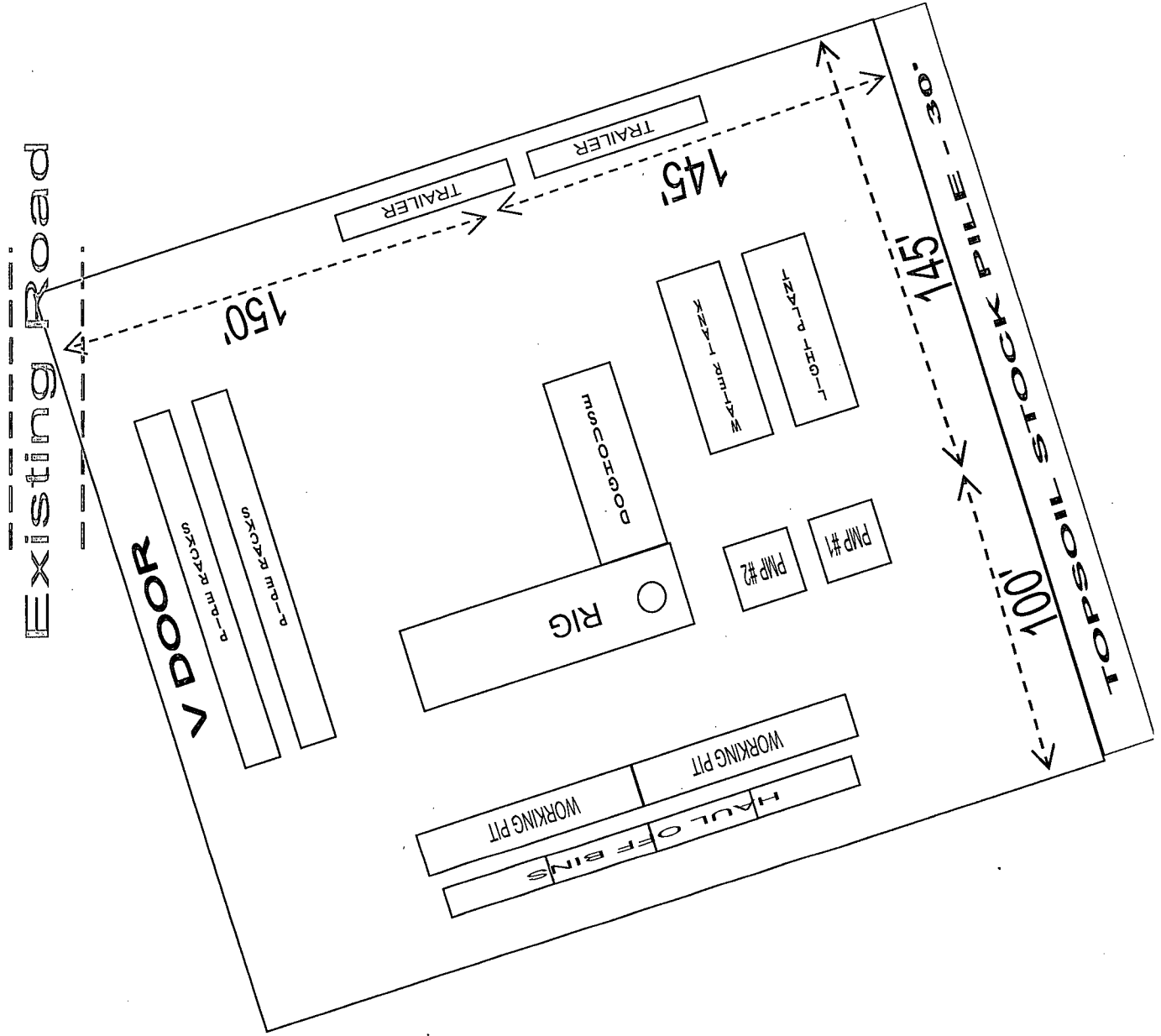
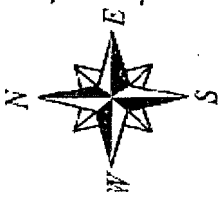
All valves & lines on choke manifold are 2" unless noted
Exact manifold configuration may vary



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

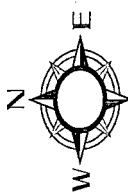


RIG ORIENTATION & LAYOUT
WEST BLINEBRY DRINKARD UNIT 244
EXHIBIT 5

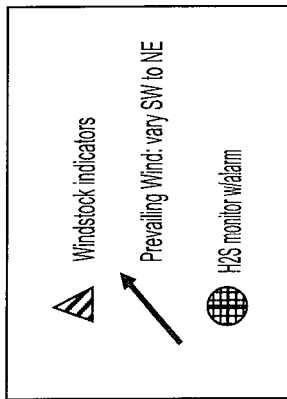




Drilling Location
H2S Safety Equipment Diagram
Exhibit 3A



West Blinbry Drinkard Unit 244



H2S Warning Sign
~ 200' but no
more than 500'
from well location

Existing Road

