

Form 3160-3  
(March 2012)

Operator Copy

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

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SHL: E009200000 BHL: NMLC068281B	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A	
2. Name of Operator ConocoPhillips Company		7. If Unit or CA Agreement, Name and No.	
3a. Address P.O. Box 51810 Midland, TX 79710		8. Lease Name and Well No. Golden Spur 36 COM W1 2H	
3b. Phone No. (include area code) (432)688-6938		9. API Well No. 30-015- <b>43375</b>	
4. Location of Well (Specify location clearly and in accordance with any State requirements.) At surface 315' PNL & 570' FEL, 36-26S-31E At proposed prod. zone 50' PNL & 1040' FEL, 25-26S-31E		10. Field and Pool, or Exploratory	
14. Distance in miles and direction from nearest town or post office* 46.1 miles SW of Jal, NM		11. Sec., T. R. M. or Blk. and Survey or Area Lot 1, 36-26S-31E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) SHL: 315' BHL: 50'		12. County or Parish Eddy	
16. No. of acres in lease E009200000: 262.96 acres NMLC068282B: 900.8 acres		13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL: 33' (Golden Spur 36 COM W1 1H)		17. Spacing Unit dedicated to this well 225.32	
21. Elevations (Show whether DE, KDB, RT, GL, etc.) 3145.9' GL		19. Proposed Depth MD: 18,834' TVD: 11,605'	
22. Approximate date work will start* 12/01/2015		20. BLM/BIA Bond No. on file BS0085	
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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (If the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature <i>Ashley Bergen</i>	Name (Printed/Typed) Ashley Bergen	Date 6/29/15
Title Regulatory Specialist		
Approved by (Signature) <i>Forfield</i>	Name (Printed/Typed) FORFIELD	Date 9/3/15
Title FIELD MANAGER		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those lands in the subject lease which would entitle the applicant to conduct operations thereon.

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 within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

"As Drilled" C102 submitted with completion packet should provide footages from the section lines of the producing area

Received via Email  
9/16/2015

Carlsbad Controlled Water Basin

Accepted for record  
JPD NAGCO 9/23/15

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-015- <sup>1</sup> API Number	43375	9801E <sup>2</sup> Pool Code	WC-015 G08 S263125P; Wolf Camp <sup>3</sup> Pool Name
<sup>4</sup> Property Code	315259	<sup>5</sup> Property Name GOLDEN SPUR 36 COM W1	
<sup>7</sup> GRID No.	217817	<sup>8</sup> Operator Name ConocoPhillips Company	<sup>6</sup> Well Number 2H <sup>9</sup> Elevation 3145.9

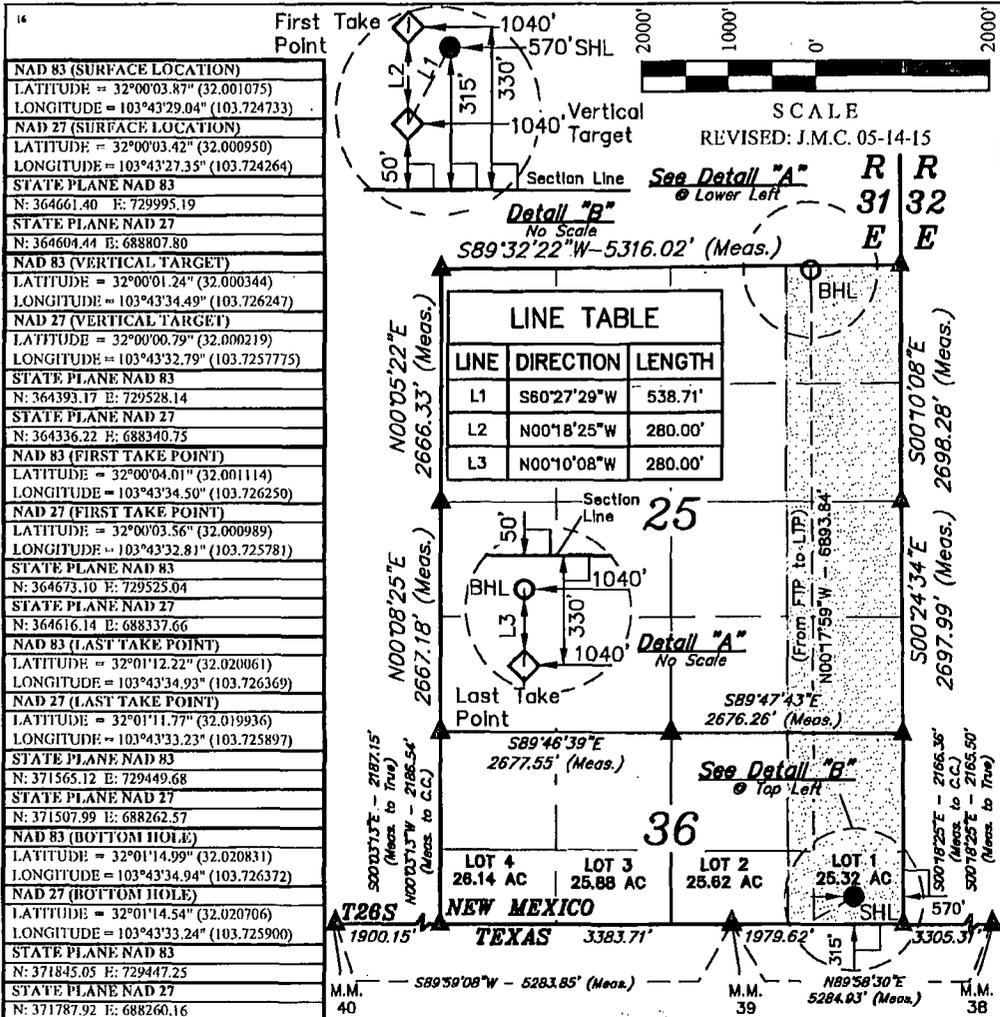
<sup>10</sup>Surface Location

UI, or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 1	36	26S	31E		315'	SOUTH	570	EAST	EDDY

<sup>11</sup>Bottom Hole Location If Different From Surface

UI, or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	25	26S	31E		50	NORTH	1040	EAST	EDDY
<sup>12</sup> Dedicated Acres	<sup>13</sup> Lot or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.				
225.32			C						

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



**<sup>17</sup>OPERATOR CERTIFICATION**  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Ashley Bergen 6/29/15  
Signature Date

Ashley Bergen  
Printed Name  
ashley.bergen@cop.com  
E-mail Address

**<sup>18</sup>SURVEYOR CERTIFICATION**  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

November 10, 2014  
Date of Survey  
Signature and Seal of Professional Surveyor:

PROFESSIONAL SURVEYOR  
NEW MEXICO  
12446  
Nelson J. Marshall  
MARR-15

Certificate Number:

**ConocoPhillips, Golden Spur 36 COM W1 2H**

**1. Geologic Formations**

TVD of target	11,605	Pilot hole depth	N/A
MD at TD:	18,834	Deepest expected fresh water:	300

**Basin**

<b>Formation</b>	<b>Depth (TVD) from KB</b>	<b>Water/Mineral Bearing/ Target Zone?</b>	<b>Hazards*</b>
Quaternary Fill	Surface	Water	
Base of Fresh Water	300	Water	
Rustler	920	Water	
Top of Salt / Salado	1,355	Salt	
Castile	2,300	Salt	
Delaware Top / Base Salt	4,165	Oil/Gas	Loss of Circulation
Ford Shale	4,235	Oil/Gas	
Cherry Canyon	5,110	Oil/Gas	Loss of Circulation
Brushy Canyon	6,485	Oil/Gas	Loss of Circulation
Bone Springs	9,150	Oil/Gas	Loss of Circulation
Bone Springs 3 <sup>rd</sup> Carb	10,220	Oil/Gas	
WolfCamp	11,330	Oil/Gas	
WolfCamp 1	11,530	Target Zone	

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

## ConocoPhillips, Golden Spur 36 COM W1 2H

### 2. Casing Program – Option Not to Run 9-5/8”

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Dry Tension
	From	To							
17.50”	0	990	13.375”	54.5	J55	BTC	2.36	5.70	15.8
12.25” x 9.875”	0	4,165 x 11,879	7.625”	29.7	P110	BTC	**1.7 COP Collapse Design S.F.	1.46	2.72
6.75”	0	18,834 (11605 TVD)	5.0”	18	P110	TXPBTC	1.59	1.65	2.78
BLM Minimum Safety Factor							1.125	1.00	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

#### 9-5/8” Contingency Option

ConocoPhillips Company respectfully requests the option to not run 9-5/8” 40# L-80 BTC Casing and spare it as a contingency if the next hole section failed to support the hydrostatic column of the previous mud weight. The intent for the casing and cementing program:

- Drill the 12-1/4” to the Base of the Salt and 9-7/8” hole from Base of Salt to Wolfcamp 1 with the same density mud (OBM or Saturated Brine).
- Case and cement the well with 13-3/8” surface, 7-5/8” intermediate and 5” production casing (3-strings).
- Isolate the Salt & Delaware utilizing Annulus Casing Packer and Stage Tool if necessary.
- Bring cement from 7-5/8” casing shoe to surface.
- Provided that if the hole can no longer support the hydrostatic column of the previous mud weight, a contingency plan to run the 9-5/8” casing for cementing with severe losses if necessary.

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
12.25”	0	4,165	9.625”	40.0	L80	BTC	2.53	1.36	5.50
8.75”	0	11,879	7.625”	29.7	P110	TenW523	**1.7 COP Collapse Design S.F.	1.46	2.72

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM’s minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50’ above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	Y
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500’ into previous casing?	Y

**ConocoPhillips, Golden Spur 36 COM W1 2H**

Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

**3. Cementing Program**

Casing	# Skts	Wt. lb/gal	Yld ft/sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	300	13.7	1.63	8.50	7	Lead: Class C + 1.5% Bentonite + 1.0% CaCl <sub>2</sub> + 0.2% Anti-Foam + 0.2% Dispersant.
	400	14.8	1.33	6.34	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Dispersant.
Contingency Inter. 1	2000	11.5	2.74	15.25	15	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 5lb/sk LCM + 0.25% Dispersant + 0.25% Retarder.
	350	13.5	1.35	6.34	5	Tail: Class C + 0.2% Anti-Foam + 0.25% Retarder + 0.5% Extender.
	DV/ECP Tool: NO 9-5/8" Casing will be set aside as contingency string for cementing with severe losses if necessary.					
Inter. 2	900	11.5	2.57	14.21	7	Lead: Class C + 10.0 lb/sk Extender + 0.25% Anti-Foam + 0.5% Retarder + 0.3% Fluid Loss + 1% Dispersant + 5 lbs/sk LCM + 4% Expanding Agent.
	140	13.5	1.49	6.76	7	Tail: Class C + 0.9% Gas Control + 9.0% Extender + 0.4% Dispersant + 0.5% Retarder + 0.2% Anti-Foam + 0.25 lb/sk Lost Circ Control + 5 lbs/sk LCM + 3.0% Expanding Agent
	DV/ECP Tool ~4,500' (OPTIONAL)					
	400	11.5	2.57	15.25	15	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 5lb/sk LCM + 0.25% Dispersant + 0.25% Retarder.
Prod. 2	800	16.4	1.10	4.28	5	Tail: Class H + 1.800 gal/sk Gas Control Agent + 0.025 gal/sk Dispersant + 0.080 gal/sk Retarder + 0.030 gal/sk Anti-Foam.
	DV/ECP Tool NO'					

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

**ConocoPhillips, Golden Spur 36 COM W1 2H**

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. <ul style="list-style-type: none"> <li>• Provide description here</li> </ul> <p>See attached schematic.</p>

**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	990	Spud Mud	8.6-9.3	32-36	N/C
990	4,165	Brine or OBM	8.9-10.5	28-40	≤5
4,165	11,879	Brine or OBM	8.9-10.5	28-40	≤5
11,879	18,834	Oil Base Mud	12.0-14.0	30-40	≤5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---------------------------------------------------------	-----------------------------

**6. Logging and Testing Procedures**

Logging, Coring and Testing.	
X	GR from 200' above KOP to TD (GR as part of the BHA while drilling). Not log in the lateral.
X	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain
X	Dry samples taken 30' from intermediate 1 casing point to TD. GC Tracers KOP to TD.

Additional logs planned	Interval
Resistivity	
Density	
CBL	
X Mud log	
PEX	

## ConocoPhillips, Golden Spur 36 COM W1 2H

### 7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	~6,600 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Use of 20 ppb – 25 ppb Wellbore Strengthening material (Walnut Fine) in 8.9 ppg to 10.5 ppg OBM or Saturated Brine with Axiom 3-deck shakers for recycling to increase the formation breakdown pressure above what would have with clear saturated 10 ppg brine.

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

X	H <sub>2</sub> S is present
X	H <sub>2</sub> S Plan attached

### 8. Other facets of operation

Is this a walking operation? If yes, describe. Yes, please see below.

Will be pre-setting casing? If yes, describe. Yes, please see below.

**Spudder Rig and Skid Operations:** Depending on rig availability, ConocoPhillips may pre-set the surface casing. 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 Orders). 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.

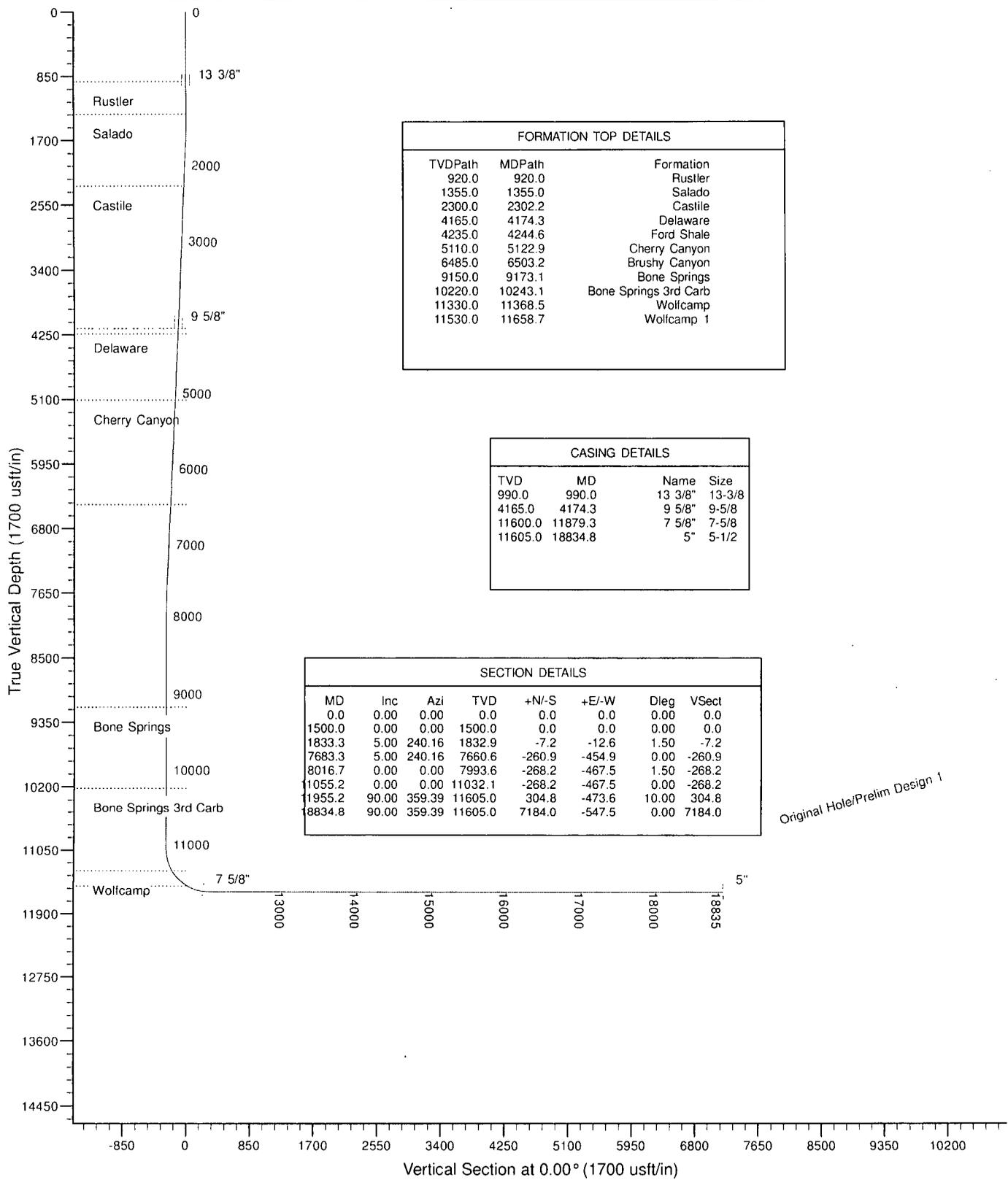
## ConocoPhillips, Golden Spur 36 COM W1 2H

### Attachments:

- Attachment#1: Directional Plan.
- Attachment#2: Casing & Cement Wellbore Schematic.
- Attachment#3: Wellhead Schematics
- Attachment #4: Choke & BOPE Schematics.
- Attachment #5: Special (Premium) Connections
- Attachment #6: Flex Hose Documentation.
- Attachment #7: Spudder Rig Layout



Plan: Prelim Design 1 (Golden Spur 36 COM W1 2H/Original Hole)  
 WELL @ 3171.0usft (Original Well Elev)  
 US State Plane 1927 (Exact solution)  
 NAD 1927 (NADCON CONUS)  
 Clarke 1866  
 New Mexico East 3001



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
920.0	920.0	Rustler
1355.0	1355.0	Salado
2300.0	2302.2	Castile
4165.0	4174.3	Delaware
4235.0	4244.6	Ford Shale
5110.0	5122.9	Cherry Canyon
6485.0	6503.2	Brushy Canyon
9150.0	9173.1	Bone Springs
10220.0	10243.1	Bone Springs 3rd Carb
11330.0	11368.5	Wolfcamp
11530.0	11658.7	Wolfcamp 1

CASING DETAILS				
TVD	MD	Name	Size	
990.0	990.0	13 3/8"	13-3/8	
4165.0	4174.3	9 5/8"	9-5/8	
11600.0	11879.3	7 5/8"	7-5/8	
11605.0	18834.8	5"	5-1/2	

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.0	
1833.3	5.00	240.16	1832.9	-7.2	-12.6	1.50	-7.2	
7683.3	5.00	240.16	7660.6	-260.9	-454.9	0.00	-260.9	
8016.7	0.00	0.00	7993.6	-268.2	-467.5	1.50	-268.2	
11055.2	0.00	0.00	11032.1	-268.2	-467.5	0.00	-268.2	
11955.2	90.00	359.39	11605.0	304.8	-473.6	10.00	304.8	
18834.8	90.00	359.39	11605.0	7184.0	-547.5	0.00	7184.0	

Original Hole/Prelim Design 1



# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim Design 1		

<b>Project</b>	Permian Delaware Hz New Mexico, Mexico		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b>	GOLDEN SPUR 36 COM W1 2H - PS, Section 36 and 25		
<b>Site Position:</b>	<b>Northing:</b>	364,604.44 usft	<b>Latitude:</b> 32° 0' 3.417 N
<b>From:</b> Map	<b>Easting:</b>	688,807.80 usft	<b>Longitude:</b> 103° 43' 27.351 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b> 13-3/16"	<b>Grid Convergence:</b> 0.32 °

<b>Well</b>	Golden Spur 36 COM W1 2H, Exploration - Horizontal		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 364,604.44 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 688,807.80 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
			<b>Latitude:</b> 32° 0' 3.417 N
			<b>Longitude:</b> 103° 43' 27.351 W
			<b>Ground Level:</b> 3,146.0 usft

<b>Wellbore</b>	Original Hole
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	5/13/2015	7.34	59.85	48,019

<b>Design</b>	Prelim Design 1
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<b>Audit Notes:</b>				
<b>Version:</b>	1	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b> 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.00

<b>Plan Sections</b>										
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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,833.3	5.00	240.16	1,832.9	-7.2	-12.6	1.50	1.50	0.00	240.16	GS_36_W1_2H_VT
7,683.3	5.00	240.16	7,660.6	-260.9	-454.9	0.00	0.00	0.00	0.00	
8,016.7	0.00	0.00	7,993.6	-268.2	-467.5	1.50	-1.50	0.00	180.00	
11,055.2	0.00	0.00	11,032.1	-268.2	-467.5	0.00	0.00	0.00	0.00	
11,955.2	90.00	359.39	11,605.0	304.8	-473.6	10.00	10.00	-0.07	359.39	
18,834.8	90.00	359.39	11,605.0	7,184.0	-547.5	0.00	0.00	0.00	0.00	GS_36_W1_2H_BHL

# ConocoPhillips Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Rustier</b>									
990.0	0.00	0.00	990.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>13 3/8"</b>									
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,355.0	0.00	0.00	1,355.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Salado</b>									
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	1.50	240.16	1,600.0	-0.7	-1.1	-0.7	1.50	1.50	0.00
1,700.0	3.00	240.16	1,699.9	-2.6	-4.5	-2.6	1.50	1.50	0.00
1,800.0	4.50	240.16	1,799.7	-5.9	-10.2	-5.9	1.50	1.50	0.00
1,833.3	5.00	240.16	1,832.9	-7.2	-12.6	-7.2	1.50	1.50	0.00
1,900.0	5.00	240.16	1,899.3	-10.1	-17.6	-10.1	0.00	0.00	0.00
2,000.0	5.00	240.16	1,998.9	-14.5	-25.2	-14.5	0.00	0.00	0.00
2,100.0	5.00	240.16	2,098.6	-18.8	-32.8	-18.8	0.00	0.00	0.00
2,200.0	5.00	240.16	2,198.2	-23.1	-40.3	-23.1	0.00	0.00	0.00
2,300.0	5.00	240.16	2,297.8	-27.5	-47.9	-27.5	0.00	0.00	0.00
2,302.2	5.00	240.16	2,300.0	-27.6	-48.1	-27.6	0.00	0.00	0.00
<b>Castile</b>									
2,400.0	5.00	240.16	2,397.4	-31.8	-55.4	-31.8	0.00	0.00	0.00
2,500.0	5.00	240.16	2,497.0	-36.1	-63.0	-36.1	0.00	0.00	0.00
2,600.0	5.00	240.16	2,596.7	-40.5	-70.6	-40.5	0.00	0.00	0.00
2,700.0	5.00	240.16	2,696.3	-44.8	-78.1	-44.8	0.00	0.00	0.00
2,800.0	5.00	240.16	2,795.9	-49.2	-85.7	-49.2	0.00	0.00	0.00
2,900.0	5.00	240.16	2,895.5	-53.5	-93.2	-53.5	0.00	0.00	0.00
3,000.0	5.00	240.16	2,995.1	-57.8	-100.8	-57.8	0.00	0.00	0.00
3,100.0	5.00	240.16	3,094.8	-62.2	-108.4	-62.2	0.00	0.00	0.00
3,200.0	5.00	240.16	3,194.4	-66.5	-115.9	-66.5	0.00	0.00	0.00
3,300.0	5.00	240.16	3,294.0	-70.8	-123.5	-70.8	0.00	0.00	0.00
3,400.0	5.00	240.16	3,393.6	-75.2	-131.0	-75.2	0.00	0.00	0.00
3,500.0	5.00	240.16	3,493.2	-79.5	-138.6	-79.5	0.00	0.00	0.00
3,600.0	5.00	240.16	3,592.9	-83.8	-146.2	-83.8	0.00	0.00	0.00
3,700.0	5.00	240.16	3,692.5	-88.2	-153.7	-88.2	0.00	0.00	0.00
3,800.0	5.00	240.16	3,792.1	-92.5	-161.3	-92.5	0.00	0.00	0.00
3,900.0	5.00	240.16	3,891.7	-96.9	-168.9	-96.9	0.00	0.00	0.00
4,000.0	5.00	240.16	3,991.3	-101.2	-176.4	-101.2	0.00	0.00	0.00
4,100.0	5.00	240.16	4,091.0	-105.5	-184.0	-105.5	0.00	0.00	0.00
4,174.3	5.00	240.16	4,165.0	-108.8	-189.6	-108.8	0.00	0.00	0.00

Delaware - 9 5/8"

# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim 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)	
4,200.0	5.00	240.16	4,190.6	-109.9	-191.5	-109.9	0.00	0.00	0.00	
4,244.6	5.00	240.16	4,235.0	-111.8	-194.9	-111.8	0.00	0.00	0.00	
<b>Ford Shale</b>										
4,300.0	5.00	240.16	4,290.2	-114.2	-199.1	-114.2	0.00	0.00	0.00	
4,400.0	5.00	240.16	4,389.8	-118.5	-206.7	-118.5	0.00	0.00	0.00	
4,500.0	5.00	240.16	4,489.4	-122.9	-214.2	-122.9	0.00	0.00	0.00	
4,600.0	5.00	240.16	4,589.0	-127.2	-221.8	-127.2	0.00	0.00	0.00	
4,700.0	5.00	240.16	4,688.7	-131.5	-229.3	-131.5	0.00	0.00	0.00	
4,800.0	5.00	240.16	4,788.3	-135.9	-236.9	-135.9	0.00	0.00	0.00	
4,900.0	5.00	240.16	4,887.9	-140.2	-244.5	-140.2	0.00	0.00	0.00	
5,000.0	5.00	240.16	4,987.5	-144.6	-252.0	-144.6	0.00	0.00	0.00	
5,100.0	5.00	240.16	5,087.1	-148.9	-259.6	-148.9	0.00	0.00	0.00	
5,122.9	5.00	240.16	5,110.0	-149.9	-261.3	-149.9	0.00	0.00	0.00	
<b>Cherry Canyon</b>										
5,200.0	5.00	240.16	5,186.8	-153.2	-267.1	-153.2	0.00	0.00	0.00	
5,300.0	5.00	240.16	5,286.4	-157.6	-274.7	-157.6	0.00	0.00	0.00	
5,400.0	5.00	240.16	5,386.0	-161.9	-282.3	-161.9	0.00	0.00	0.00	
5,500.0	5.00	240.16	5,485.6	-166.2	-289.8	-166.2	0.00	0.00	0.00	
5,600.0	5.00	240.16	5,585.2	-170.6	-297.4	-170.6	0.00	0.00	0.00	
5,700.0	5.00	240.16	5,684.9	-174.9	-304.9	-174.9	0.00	0.00	0.00	
5,800.0	5.00	240.16	5,784.5	-179.3	-312.5	-179.3	0.00	0.00	0.00	
5,900.0	5.00	240.16	5,884.1	-183.6	-320.1	-183.6	0.00	0.00	0.00	
6,000.0	5.00	240.16	5,983.7	-187.9	-327.6	-187.9	0.00	0.00	0.00	
6,100.0	5.00	240.16	6,083.3	-192.3	-335.2	-192.3	0.00	0.00	0.00	
6,200.0	5.00	240.16	6,183.0	-196.6	-342.7	-196.6	0.00	0.00	0.00	
6,300.0	5.00	240.16	6,282.6	-200.9	-350.3	-200.9	0.00	0.00	0.00	
6,400.0	5.00	240.16	6,382.2	-205.3	-357.9	-205.3	0.00	0.00	0.00	
6,500.0	5.00	240.16	6,481.8	-209.6	-365.4	-209.6	0.00	0.00	0.00	
6,503.2	5.00	240.16	6,485.0	-209.7	-365.7	-209.7	0.00	0.00	0.00	
<b>Brushy Canyon</b>										
6,600.0	5.00	240.16	6,581.4	-213.9	-373.0	-213.9	0.00	0.00	0.00	
6,700.0	5.00	240.16	6,681.1	-218.3	-380.5	-218.3	0.00	0.00	0.00	
6,800.0	5.00	240.16	6,780.7	-222.6	-388.1	-222.6	0.00	0.00	0.00	
6,900.0	5.00	240.16	6,880.3	-227.0	-395.7	-227.0	0.00	0.00	0.00	
7,000.0	5.00	240.16	6,979.9	-231.3	-403.2	-231.3	0.00	0.00	0.00	
7,100.0	5.00	240.16	7,079.5	-235.6	-410.8	-235.6	0.00	0.00	0.00	
7,200.0	5.00	240.16	7,179.2	-240.0	-418.3	-240.0	0.00	0.00	0.00	
7,300.0	5.00	240.16	7,278.8	-244.3	-425.9	-244.3	0.00	0.00	0.00	
7,400.0	5.00	240.16	7,378.4	-248.6	-433.5	-248.6	0.00	0.00	0.00	
7,500.0	5.00	240.16	7,478.0	-253.0	-441.0	-253.0	0.00	0.00	0.00	
7,600.0	5.00	240.16	7,577.6	-257.3	-448.6	-257.3	0.00	0.00	0.00	
7,683.3	5.00	240.16	7,660.6	-260.9	-454.9	-260.9	0.00	0.00	0.00	
7,700.0	4.75	240.16	7,677.3	-261.6	-456.1	-261.6	1.50	-1.50	0.00	
7,800.0	3.25	240.16	7,777.0	-265.1	-462.2	-265.1	1.50	-1.50	0.00	
7,900.0	1.75	240.16	7,876.9	-267.3	-465.9	-267.3	1.50	-1.50	0.00	
8,000.0	0.25	240.16	7,976.9	-268.1	-467.5	-268.1	1.50	-1.50	0.00	
8,016.7	0.00	0.00	7,993.6	-268.2	-467.5	-268.2	1.50	-1.50	0.00	
8,100.0	0.00	0.00	8,076.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,176.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,276.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,376.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,476.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,576.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	

# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid.
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim 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)	
8,700.0	0.00	0.00	8,676.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,776.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,876.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,976.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,076.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,173.1	0.00	0.00	9,150.0	-268.2	-467.5	-268.2	0.00	0.00	0.00	
<b>Bone Springs</b>										
9,200.0	0.00	0.00	9,176.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,276.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,376.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,476.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,576.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,676.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,776.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,876.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,976.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,076.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,176.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,243.1	0.00	0.00	10,220.0	-268.2	-467.5	-268.2	0.00	0.00	0.00	
<b>Bone Springs 3rd Carb</b>										
10,300.0	0.00	0.00	10,276.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,376.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,500.0	0.00	0.00	10,476.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,600.0	0.00	0.00	10,576.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,700.0	0.00	0.00	10,676.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,800.0	0.00	0.00	10,776.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,900.0	0.00	0.00	10,876.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
11,000.0	0.00	0.00	10,976.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
11,055.2	0.00	0.00	11,032.1	-268.2	-467.5	-268.2	0.00	0.00	0.00	
11,100.0	4.48	359.39	11,076.8	-266.4	-467.5	-266.4	10.00	10.00	0.00	
11,200.0	14.48	359.39	11,175.4	-249.9	-467.7	-249.9	10.00	10.00	0.00	
11,300.0	24.48	359.39	11,269.5	-216.6	-468.0	-216.6	10.00	10.00	0.00	
11,368.5	31.33	359.39	11,330.0	-184.6	-468.4	-184.6	10.00	10.00	0.00	
<b>Wolfcamp</b>										
11,400.0	34.48	359.39	11,356.4	-167.5	-468.6	-167.5	10.00	10.00	0.00	
11,500.0	44.48	359.39	11,433.5	-104.0	-469.2	-104.0	10.00	10.00	0.00	
11,600.0	54.48	359.39	11,498.4	-28.1	-470.1	-28.1	10.00	10.00	0.00	
11,658.7	60.35	359.39	11,530.0	21.3	-470.6	21.3	10.00	10.00	0.00	
<b>Wolfcamp 1</b>										
11,700.0	64.48	359.39	11,549.1	58.0	-471.0	58.0	10.00	10.00	0.00	
11,800.0	74.48	359.39	11,584.1	151.5	-472.0	151.5	10.00	10.00	0.00	
11,879.3	82.41	359.39	11,600.0	229.1	-472.8	229.1	10.00	10.00	0.00	
<b>7 5/8"</b>										
11,900.0	84.48	359.39	11,602.4	249.7	-473.0	249.7	10.00	10.00	0.00	
11,955.2	90.00	359.39	11,605.0	304.8	-473.6	304.8	10.00	10.00	0.00	
12,000.0	90.00	359.39	11,605.0	349.6	-474.1	349.6	0.00	0.00	0.00	
12,100.0	90.00	359.39	11,605.0	449.6	-475.2	449.6	0.00	0.00	0.00	
12,200.0	90.00	359.39	11,605.0	549.6	-476.3	549.6	0.00	0.00	0.00	
12,300.0	90.00	359.39	11,605.0	649.6	-477.3	649.6	0.00	0.00	0.00	
12,400.0	90.00	359.39	11,605.0	749.6	-478.4	749.6	0.00	0.00	0.00	
12,500.0	90.00	359.39	11,605.0	849.6	-479.5	849.6	0.00	0.00	0.00	
12,600.0	90.00	359.39	11,605.0	949.6	-480.6	949.6	0.00	0.00	0.00	
12,700.0	90.00	359.39	11,605.0	1,049.6	-481.6	1,049.6	0.00	0.00	0.00	

# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN-SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid:
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim 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)
12,800.0	90.00	359.39	11,605.0	1,149.6	-482.7	1,149.6	0.00	0.00	0.00
12,900.0	90.00	359.39	11,605.0	1,249.5	-483.8	1,249.5	0.00	0.00	0.00
13,000.0	90.00	359.39	11,605.0	1,349.5	-484.8	1,349.5	0.00	0.00	0.00
13,100.0	90.00	359.39	11,605.0	1,449.5	-485.9	1,449.5	0.00	0.00	0.00
13,200.0	90.00	359.39	11,605.0	1,549.5	-487.0	1,549.5	0.00	0.00	0.00
13,300.0	90.00	359.39	11,605.0	1,649.5	-488.1	1,649.5	0.00	0.00	0.00
13,400.0	90.00	359.39	11,605.0	1,749.5	-489.1	1,749.5	0.00	0.00	0.00
13,500.0	90.00	359.39	11,605.0	1,849.5	-490.2	1,849.5	0.00	0.00	0.00
13,600.0	90.00	359.39	11,605.0	1,949.5	-491.3	1,949.5	0.00	0.00	0.00
13,700.0	90.00	359.39	11,605.0	2,049.5	-492.4	2,049.5	0.00	0.00	0.00
13,800.0	90.00	359.39	11,605.0	2,149.5	-493.4	2,149.5	0.00	0.00	0.00
13,900.0	90.00	359.39	11,605.0	2,249.5	-494.5	2,249.5	0.00	0.00	0.00
14,000.0	90.00	359.39	11,605.0	2,349.5	-495.6	2,349.5	0.00	0.00	0.00
14,100.0	90.00	359.39	11,605.0	2,449.5	-496.7	2,449.5	0.00	0.00	0.00
14,200.0	90.00	359.39	11,605.0	2,549.5	-497.7	2,549.5	0.00	0.00	0.00
14,300.0	90.00	359.39	11,605.0	2,649.5	-498.8	2,649.5	0.00	0.00	0.00
14,400.0	90.00	359.39	11,605.0	2,749.5	-499.9	2,749.5	0.00	0.00	0.00
14,500.0	90.00	359.39	11,605.0	2,849.5	-500.9	2,849.5	0.00	0.00	0.00
14,600.0	90.00	359.39	11,605.0	2,949.4	-502.0	2,949.4	0.00	0.00	0.00
14,700.0	90.00	359.39	11,605.0	3,049.4	-503.1	3,049.4	0.00	0.00	0.00
14,800.0	90.00	359.39	11,605.0	3,149.4	-504.2	3,149.4	0.00	0.00	0.00
14,900.0	90.00	359.39	11,605.0	3,249.4	-505.2	3,249.4	0.00	0.00	0.00
15,000.0	90.00	359.39	11,605.0	3,349.4	-506.3	3,349.4	0.00	0.00	0.00
15,100.0	90.00	359.39	11,605.0	3,449.4	-507.4	3,449.4	0.00	0.00	0.00
15,200.0	90.00	359.39	11,605.0	3,549.4	-508.5	3,549.4	0.00	0.00	0.00
15,300.0	90.00	359.39	11,605.0	3,649.4	-509.5	3,649.4	0.00	0.00	0.00
15,400.0	90.00	359.39	11,605.0	3,749.4	-510.6	3,749.4	0.00	0.00	0.00
15,500.0	90.00	359.39	11,605.0	3,849.4	-511.7	3,849.4	0.00	0.00	0.00
15,600.0	90.00	359.39	11,605.0	3,949.4	-512.8	3,949.4	0.00	0.00	0.00
15,700.0	90.00	359.39	11,605.0	4,049.4	-513.8	4,049.4	0.00	0.00	0.00
15,800.0	90.00	359.39	11,605.0	4,149.4	-514.9	4,149.4	0.00	0.00	0.00
15,900.0	90.00	359.39	11,605.0	4,249.4	-516.0	4,249.4	0.00	0.00	0.00
16,000.0	90.00	359.39	11,605.0	4,349.4	-517.0	4,349.4	0.00	0.00	0.00
16,100.0	90.00	359.39	11,605.0	4,449.4	-518.1	4,449.4	0.00	0.00	0.00
16,200.0	90.00	359.39	11,605.0	4,549.4	-519.2	4,549.4	0.00	0.00	0.00
16,300.0	90.00	359.39	11,605.0	4,649.4	-520.3	4,649.4	0.00	0.00	0.00
16,400.0	90.00	359.39	11,605.0	4,749.3	-521.3	4,749.3	0.00	0.00	0.00
16,500.0	90.00	359.39	11,605.0	4,849.3	-522.4	4,849.3	0.00	0.00	0.00
16,600.0	90.00	359.39	11,605.0	4,949.3	-523.5	4,949.3	0.00	0.00	0.00
16,700.0	90.00	359.39	11,605.0	5,049.3	-524.6	5,049.3	0.00	0.00	0.00
16,800.0	90.00	359.39	11,605.0	5,149.3	-525.6	5,149.3	0.00	0.00	0.00
16,900.0	90.00	359.39	11,605.0	5,249.3	-526.7	5,249.3	0.00	0.00	0.00
17,000.0	90.00	359.39	11,605.0	5,349.3	-527.8	5,349.3	0.00	0.00	0.00
17,100.0	90.00	359.39	11,605.0	5,449.3	-528.8	5,449.3	0.00	0.00	0.00
17,200.0	90.00	359.39	11,605.0	5,549.3	-529.9	5,549.3	0.00	0.00	0.00
17,300.0	90.00	359.39	11,605.0	5,649.3	-531.0	5,649.3	0.00	0.00	0.00
17,400.0	90.00	359.39	11,605.0	5,749.3	-532.1	5,749.3	0.00	0.00	0.00
17,500.0	90.00	359.39	11,605.0	5,849.3	-533.1	5,849.3	0.00	0.00	0.00
17,600.0	90.00	359.39	11,605.0	5,949.3	-534.2	5,949.3	0.00	0.00	0.00
17,700.0	90.00	359.39	11,605.0	6,049.3	-535.3	6,049.3	0.00	0.00	0.00
17,800.0	90.00	359.39	11,605.0	6,149.3	-536.4	6,149.3	0.00	0.00	0.00
17,900.0	90.00	359.39	11,605.0	6,249.3	-537.4	6,249.3	0.00	0.00	0.00
18,000.0	90.00	359.39	11,605.0	6,349.3	-538.5	6,349.3	0.00	0.00	0.00
18,100.0	90.00	359.39	11,605.0	6,449.2	-539.6	6,449.2	0.00	0.00	0.00

# ConocoPhillips Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim 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)	
18,200.0	90.00	359.39	11,605.0	6,549.2	-540.7	6,549.2	0.00	0.00	0.00	
18,300.0	90.00	359.39	11,605.0	6,649.2	-541.7	6,649.2	0.00	0.00	0.00	
18,400.0	90.00	359.39	11,605.0	6,749.2	-542.8	6,749.2	0.00	0.00	0.00	
18,500.0	90.00	359.39	11,605.0	6,849.2	-543.9	6,849.2	0.00	0.00	0.00	
18,600.0	90.00	359.39	11,605.0	6,949.2	-544.9	6,949.2	0.00	0.00	0.00	
18,700.0	90.00	359.39	11,605.0	7,049.2	-546.0	7,049.2	0.00	0.00	0.00	
18,800.0	90.00	359.39	11,605.0	7,149.2	-547.1	7,149.2	0.00	0.00	0.00	
18,834.8	90.00	359.39	11,605.0	7,184.0	-547.5	7,184.0	0.00	0.00	0.00	
5"										

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
GS_36_W1_2H_VT - hit/miss target - Shape	0.00	0.00	20.0	-268.2	-467.6	364,336.21	688,340.19	32° 0' 0.788 N	103° 43' 32.799 W
- plan misses target center by 539.1usft at 20.0usft MD (20.0 TVD, 0.0 N, 0.0 E)									
- Point									
GS_36_W1_2H_BHL - plan hits target center - Point	0.00	0.00	11,605.0	7,184.0	-547.5	371,788.47	688,260.33	32° 1' 14.542 N	103° 43' 33.240 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
990.0	990.0	13 3/8"	13-3/8	17-1/2	
4,174.3	4,165.0	9 5/8"	9-5/8	12-1/4	
11,879.3	11,600.0	7 5/8"	7-5/8	8-3/4	
18,834.8	11,605.0	5"	5-1/2	6-3/4	

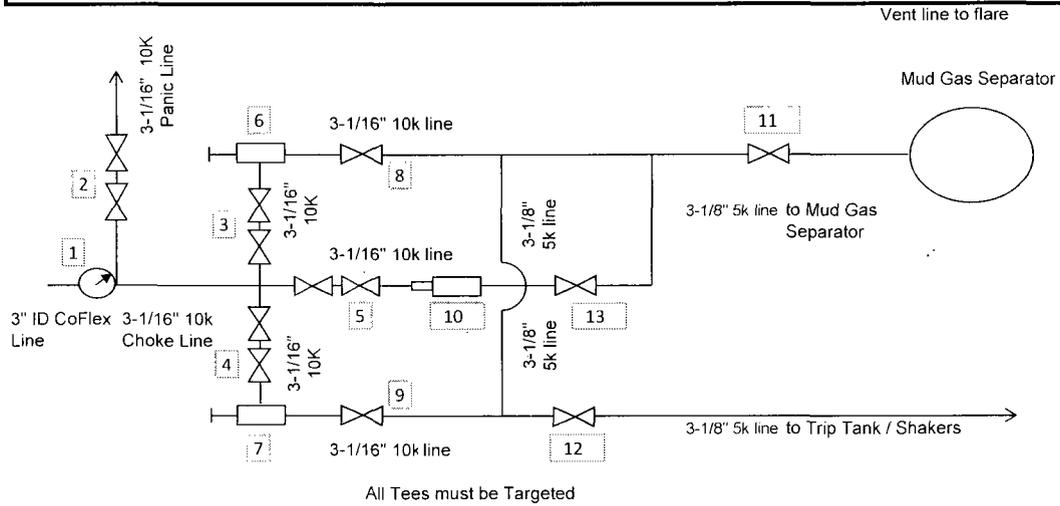
Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
9,173.1	9,150.0	Bone Springs				
5,122.9	5,110.0	Cherry Canyon				
11,658.7	11,530.0	Wolfcamp 1				
920.0	920.0	Rustler				
1,355.0	1,355.0	Salado				
4,174.3	4,165.0	Delaware				
10,243.1	10,220.0	Bone Springs 3rd Carb				
4,244.6	4,235.0	Ford Shale				
6,503.2	6,485.0	Brushy Canyon				
2,302.2	2,300.0	Castile				
11,368.5	11,330.0	Wolfcamp				

ConocoPhillips  
Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim Design 1		

# Attachment #2

**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

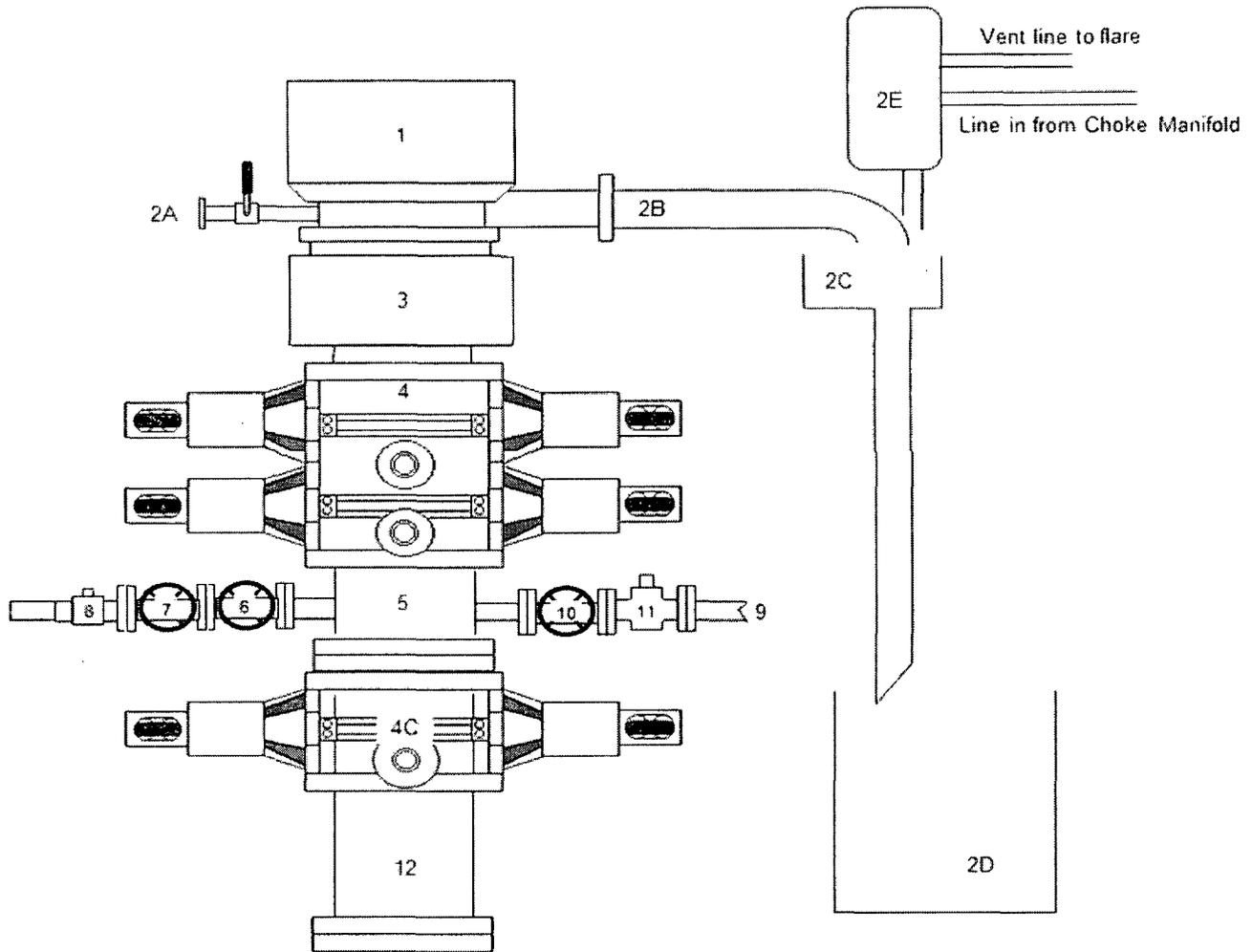
The 10M Choke Manifold & Valves will be tested to rated working pressure.

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

# Attachment #2

## BLOWOUT PREVENTER ARRANGEMENT - H&P486

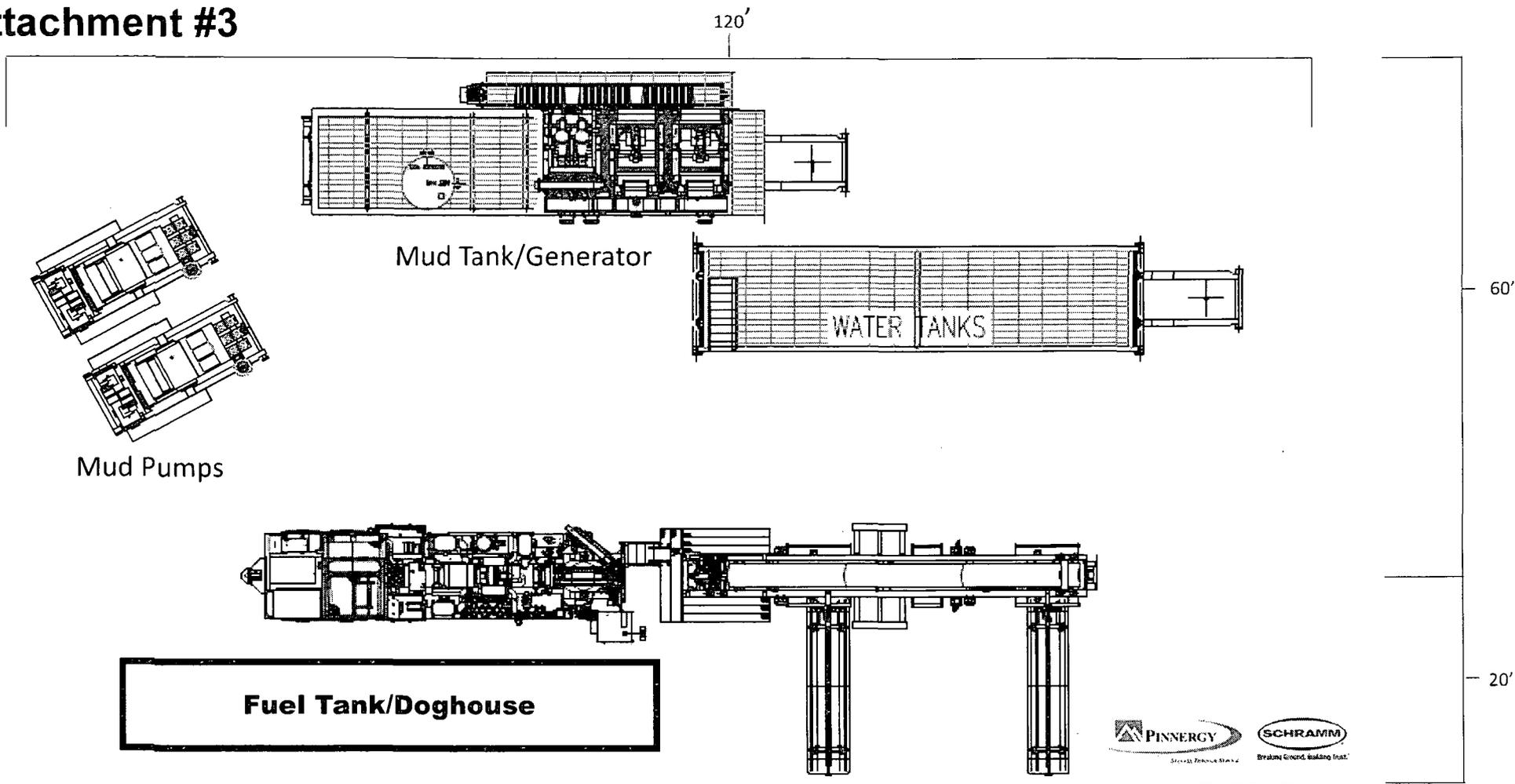
10M System per Onshore Oil and Gas Order No. 2 utilizing 10M Rated Equipment



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

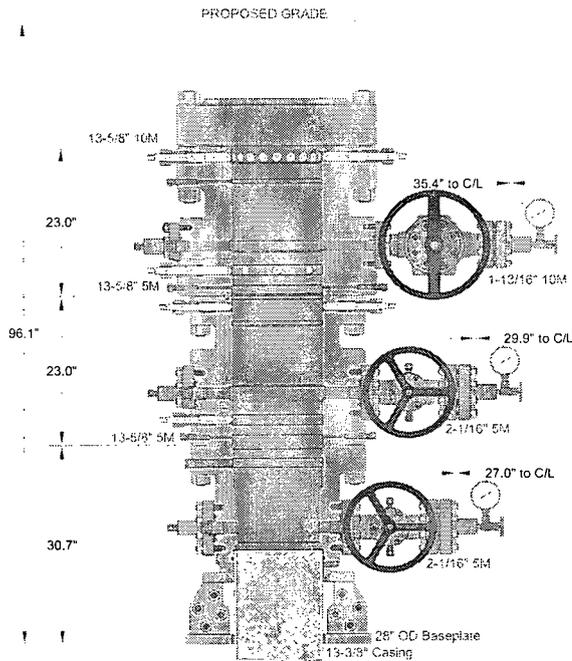
# Attachment #3



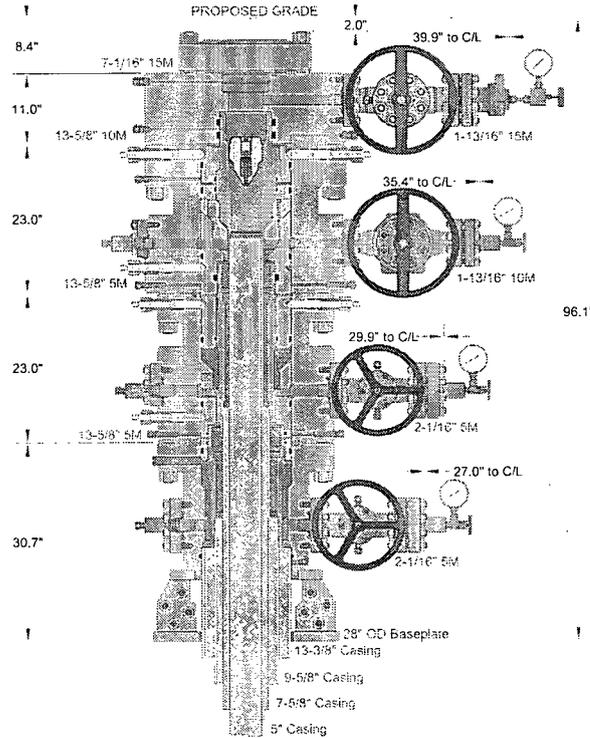
T130XD

## "Pinnergy #1" Spudder Rig Layout

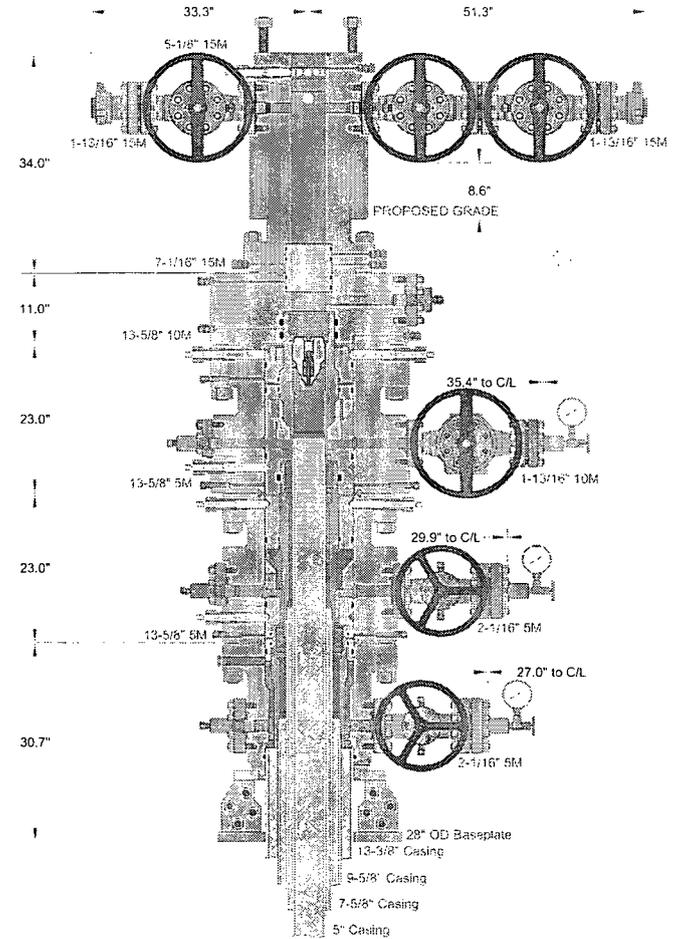
# Attachment #3



SPUD CONFIGURATION



DRILL & SKID CONFIGURATION



COMPLETION CONFIGURATION

## CACTUS WELLHEAD LLC

13-3/8" x 9-5/8" x 7-5/8" x 5" 5M MBS2 Wellhead System  
 With 13-5/8" 10M x 7-1/16" 15M DBLHPS DSPA And  
 7-1/16" 15M x 5-1/8" 15M CMT-FB-EN Tubing Head, 34" Tall

## CONOCOPHILLIPS 4 STRING CONFIGURATION

DRAWN	THH	23FEB15
APPRV		
DRAWING NO.		ODE0000491

INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PERMISSIBLE ONLY AS PROVIDED BY CONTRACT OR AS EXPRESSLY AUTHORIZED BY CACTUS WELLHEAD, LLC.

Attachment #5

January 28 2014



**Size:** 7.625 in.  
**Wall:** 0.375 in.  
**Weight:** 29.70 lbs/ft  
**Grade:** P110  
**Min. Wall Thickness:** 87.5 %

**Connection:** Wedge 523™  
**Casing/Tubing:** CAS

**PIPE BODY DATA**

GEOMETRY			
Nominal OD	7.625 in.	Nominal Weight	29.70 lbs/ft
Nominal ID	6.875 in.	Wall Thickness	0.375 in.
Plain End Weight	29.06 lbs/ft	Standard Drift Diameter	6.750 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	940 x 1000 lbs	Internal Yield	9470 psi
Collapse	5350 psi	SMYS	110000 psi

**WEDGE 523™ CONNECTION DATA**

GEOMETRY			
Connection OD	7.752 in.	Connection ID	6.800 in.
Critical Section Area	6.021 sq. in.	Threads per in.	3.29
		Make-Up Loss	4.420 in.
PERFORMANCE			
Tension Efficiency	70.5 %	Joint Yield Strength	663 x 1000 lbs
Compression Strength	768 x 1000 lbs	Compression Efficiency	81.7 %
External Pressure Capacity	5350 psi	Internal Pressure Capacity	9470 psi
		Bending	47 °/100 ft

**MAKE-UP TORQUES**

Minimum	9900 ft-lbs	Target	11900 ft-lbs	Maximum (±)	17300 ft-lbs
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**OPERATIONAL LIMIT TORQUES**

Operating Torque	52000 ft-lbs	Yield Torque	78000 ft-lbs
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**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.

October 21 2014



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

**Size:** 5.000 in.  
**Wall:** 0.362 in.  
**Weight:** 18.00 lbs/ft  
**Grade:** P110  
**Min. Wall Thickness:** 87.5 %

**PIPE BODY DATA**

GEOMETRY			
Nominal OD	<b>5.000 in.</b>	Nominal Weight	<b>18.00 lbs/ft</b>
Nominal ID	<b>4.276 in.</b>	Wall Thickness	<b>0.362 in.</b>
Plain End Weight	<b>17.95 lbs/ft</b>	Standard Drift Diameter	<b>4.151 in.</b>
		Special Drift Diameter	<b>N/A</b>

**PERFORMANCE**

Body Yield Strength	<b>580 x 1000 lbs</b>	Internal Yield	<b>13940 psi</b>	SMYS	<b>110000 psi</b>
Collapse	<b>13470 psi</b>				

**BLUE® CONNECTION DATA**

GEOMETRY					
Connection OD	<b>5.630 in.</b>	Coupling Length	<b>10.551 in.</b>	Connection ID	<b>4.264 in.</b>
Critical Section Area	<b>5.275 sq. in.</b>	Make-Up Loss	<b>4.579 in.</b>	Threads per in.	<b>5.00</b>

**PERFORMANCE**

Tension Efficiency	<b>100 %</b>	Joint Yield Strength	<b>580 x 1000 lbs</b>	Internal Pressure Capacity	<b>13940 psi</b>
Compression Efficiency	<b>100 %</b>	Compression Strength	<b>580 x 1000 lbs</b>	Bending	<b>101 °/100 ft</b>
External Pressure Capacity	<b>13470 psi</b>				

**MAKE-UP TORQUES**

Minimum	<b>6400 ft-lbs</b>	Target	<b>7110 ft-lbs</b>	Maximum	<b>7820 ft-lbs</b>
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**OPERATIONAL LIMIT TORQUES**

Operating Torque	<b>ASK</b>	Yield Torque	<b>17600 ft-lbs</b>
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**SHOULDER TORQUES**

Minimum	<b>1070 ft-lbs</b>	Maximum	<b>6040 ft-lbs</b>
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**BLANKING DIMENSIONS**

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Blanking Dimensions

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Datasheet is also valid for Special Bevel option when applicable.

**BLANKING DIMENSIONS**

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Blanking Dimensions

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Datasheet is also valid for Special Bevel option when applicable.

December 18 2014



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

**Size:** 5.000 in.  
**Wall:** 0.362 in.  
**Weight:** 18.00 lbs/ft  
**Grade:** P110  
**Min. Wall Thickness:** 87.5 %

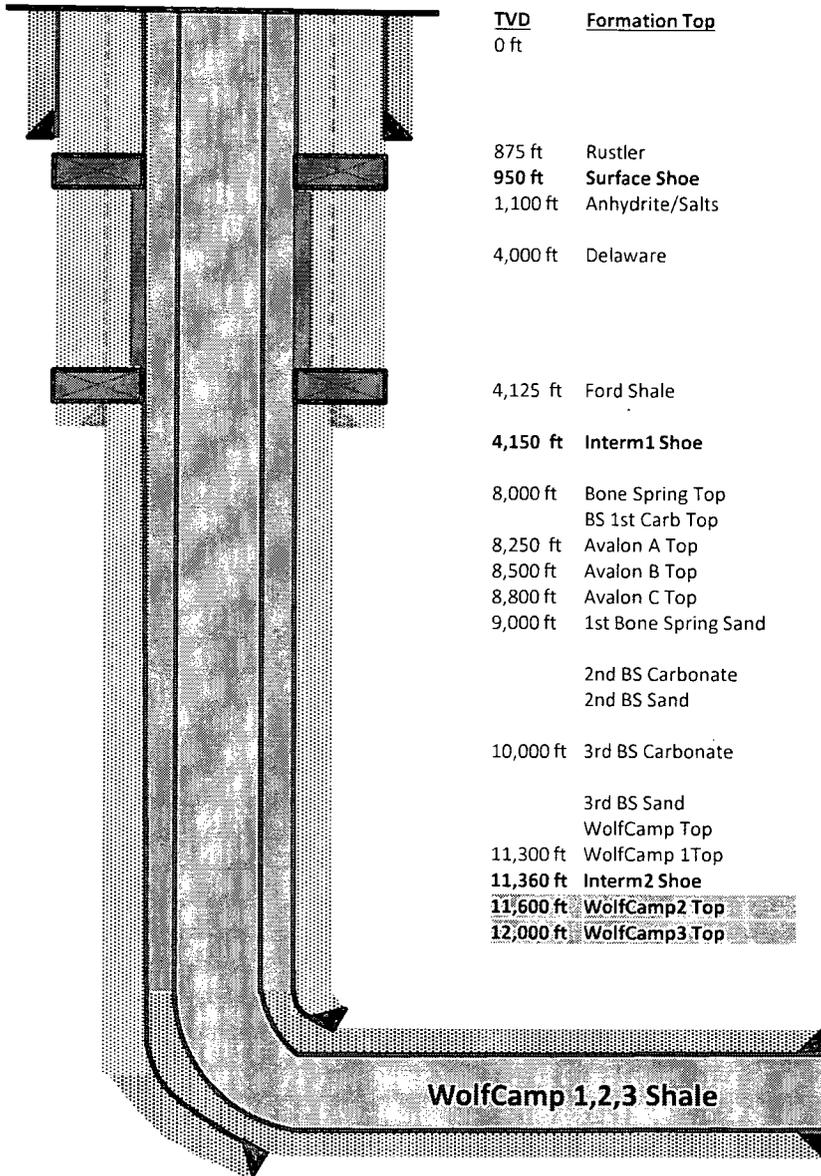
PIPE BODY DATA			
GEOMETRY			
Nominal OD	5.000 in.	Nominal Weight	18.00 lbs/ft
Nominal ID	4.276 in.	Wall Thickness	0.362 in.
Plain End Weight	17.95 lbs/ft	Standard Drift Diameter	4.151 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	580 x 1000 lbs	Internal Yield	13940 psi
Collapse	13470 psi	SMYS	110000 psi
TENARISXP™ BTC CONNECTION DATA			
GEOMETRY			
Connection OD	5.720 in.	Coupling Length	9.325 in.
Critical Section Area	5.275 sq. in.	Threads per in.	5.00
		Connection ID	4.264 in.
		Make-Up Loss	4.141 in.
PERFORMANCE			
Tension Efficiency	100 %	Joint Yield Strength	580 x 1000 lbs
Structural Compression Efficiency	100 %	Structural Compression Strength	580 x 1000 lbs
External Pressure Capacity	13470 psi	Internal Pressure Capacity <sup>(1)</sup>	13940 psi
		Structural Bending <sup>(2)</sup>	101 °/100 ft
ESTIMATED MAKE-UP TORQUES <sup>(3)</sup>			
Minimum	N/A ft-lbs	Target	N/A ft-lbs
		Maximum	N/A ft-lbs
OPERATIONAL LIMIT TORQUES			
Operating Torque	ASK	Yield Torque	N/A ft-lbs
BLANKING DIMENSIONS			

Blanking Dimensions

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- (1)** Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.
- (2)** Structural rating, pure bending to yield (i.e no other loads applied)
- (3)** Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at [licensees@oilfield.tenaris.com](mailto:licensees@oilfield.tenaris.com). Torque values may be further reviewed. For additional information, please contact us at [contact-tenarishydril@tenaris.com](mailto:contact-tenarishydril@tenaris.com)

# Attachment #2 – Option not to run 9-5/8” Csg



## ➤ Surface Section:

- Objective: Protect fresh water horizons.
- Drill 17-1/2” hole to +/- 950 ft. “Rustler”
- Mud weight: 8.6 – 9.1 ppg FW-Native Mud
- Set 13-3/8” 54.5# J-55 BTC casing.
- Cement to surface.

## ➤ Intermediate1 Section (Only for Contingency):

- Objective: Isolate the Salado Salt and Delaware Sand interval.
- Drill 12-1/4” hole to +/- 4,150 ft. “Ford Shale”
- Mud weight: 10.0 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 +/- 11,360 ft. 110’-120’ inside WC1 Top.
- Mud weight: 8.9 – 10.5 ppg Brine or OBM w/ 25 ppb WBS
- Set 7-5/8” 29.7# P-110 Tenaris W523 casing.
- Cement to surface.
- 2 or 3-Stage Contingency with 2ea. Packer/Stage Collars
- Bond Coat ~ 3000’ of Csg covering the Delaware Sands

## ➤ Production Section:

- Objective: Provide zonal isolation of production interval and provide medium for stimulation.
- Drill 6-3/4” hole to +/- 18,000ft – 20,000ft. “Production TD”
- Mud Weight: 13.5 – 15.2 ppg OBM.
- Set 5” 18# P-110 TenBlue/TXP casing.
- Cement lap 500 ft above previous shoe (near KOP).

# 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 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	PD5438 STOCK
Item No.	3
Hose Type	Flexible Hose
<b>Standard</b>	<b>API SPEC 16 C</b>
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



QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 184	
PURCHASER: ContiTech 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  <p style="text-align: center;">See attachment. ( 1 page )</p>					
↑ 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	
<b>NOT DESIGNED FOR WELL TESTING</b>				<b>API Spec 16 C</b>	
				<b>Temperature rate: "B"</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.				ContiTech Rubber Industrial Kft. Quality Control Dept. (1) <i>[Signature]</i>	

Continental ContiTech Kft.  
 Balmazújvárosi út, Szeged H-6720  
 P.O. Box 182 Szeged H-6720  
 Hungary

Phone: +36 (62) 560 207  
 Fax: +36 (62) 560 208  
 e-mail: info@contitech.com  
 Internet: www.contitech.com

The Court of Deceget County as  
 Registry Court  
 Deceget County Reg. No. 14/2009-02/0002  
 Eü. 057112. 9102. 0207/008

Bank data:  
 ContiTech Kft.  
 Budapest  
 H-1125 Budapest  
 H-1125 Budapest  
 H-1125 Budapest



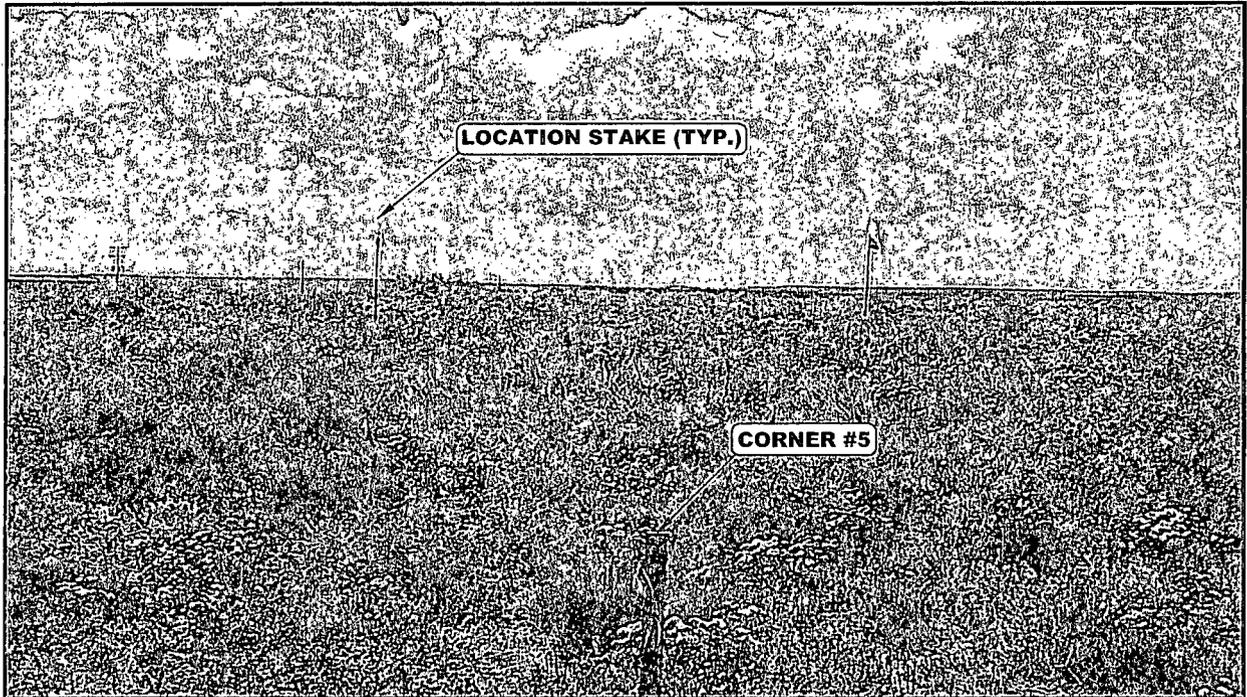


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKES

CAMERA ANGLE: WESTERLY

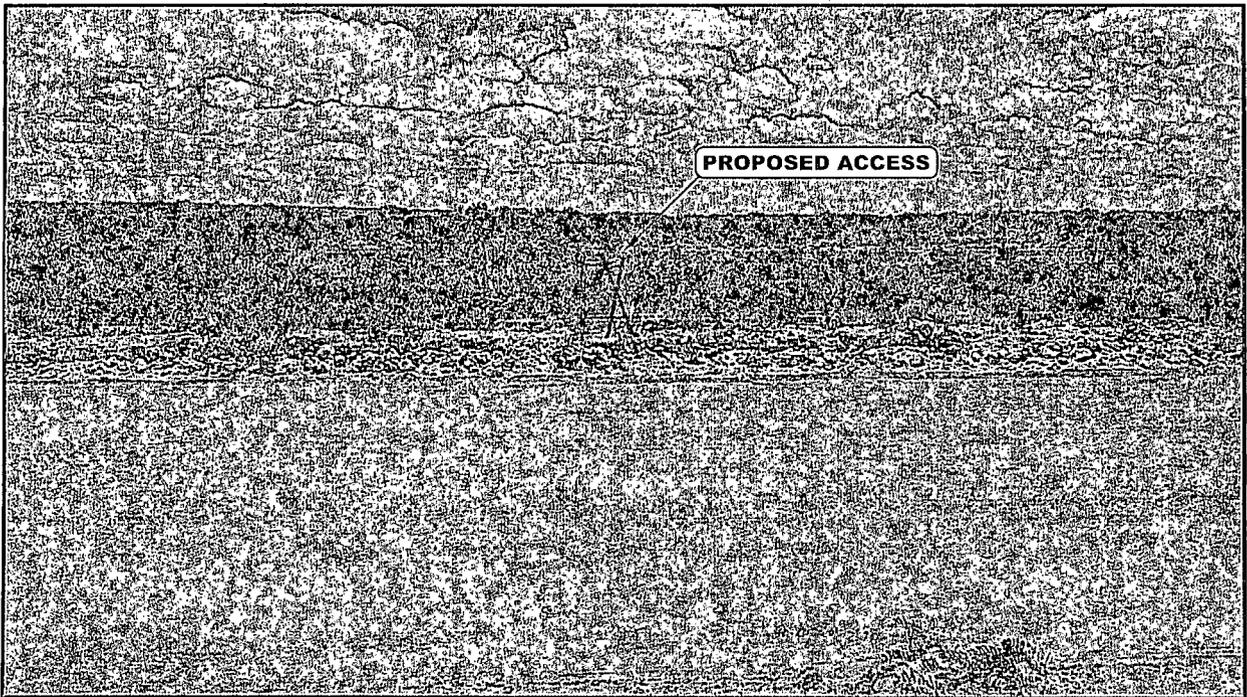


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHERLY

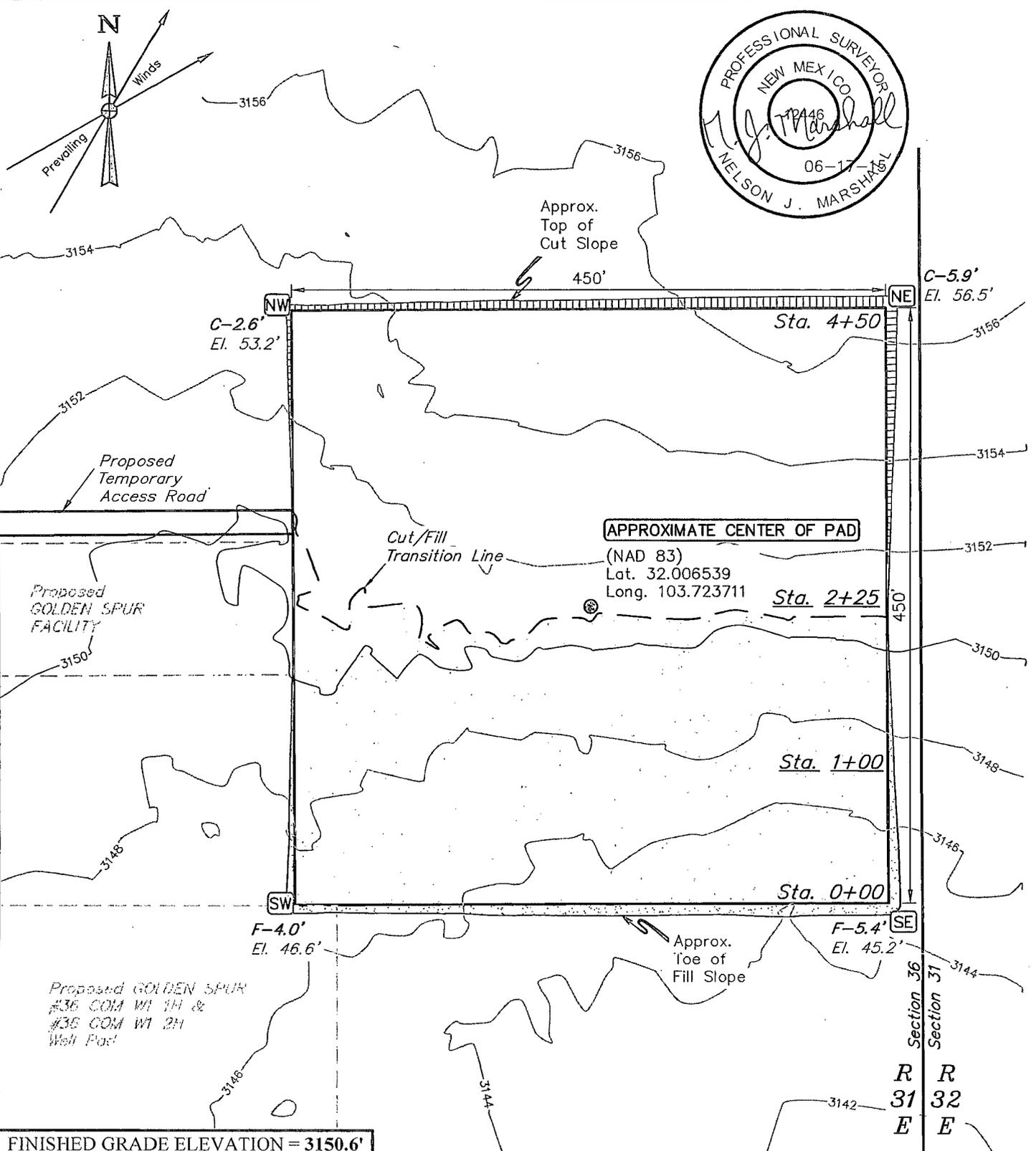
**ConocoPhillips Company**

**GOLDEN SPUR 36 COM W1 1H & W1 2H  
 LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: C.B.	DATE DRAWN: 12-2-2014
TAKEN BY: J.V.	REVISED: 05-12-15 R.C.
<b>LOCATION PHOTOS</b>	<b>PHOTO</b>



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



NOTES:  
 • Contours shown at 2' intervals.

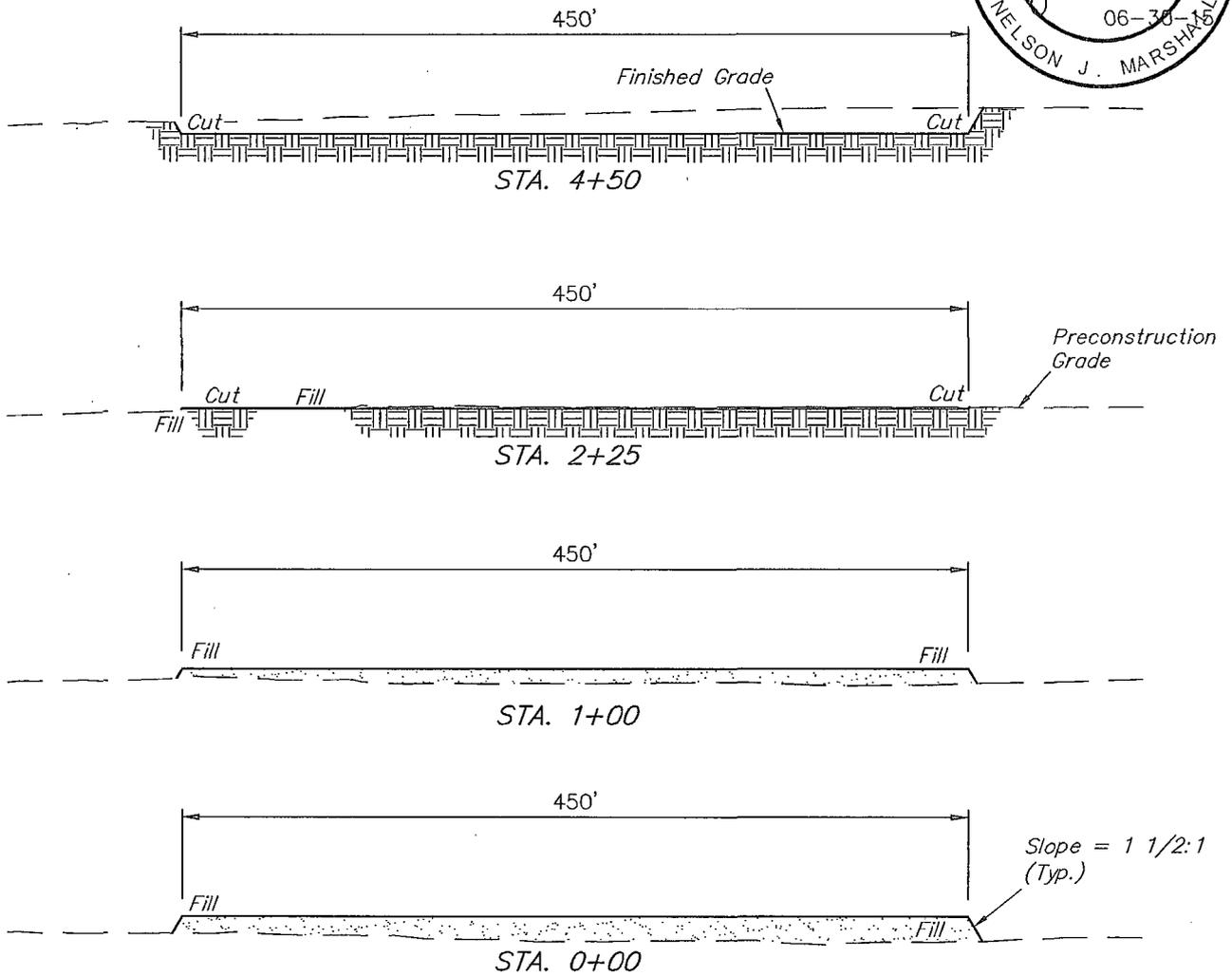
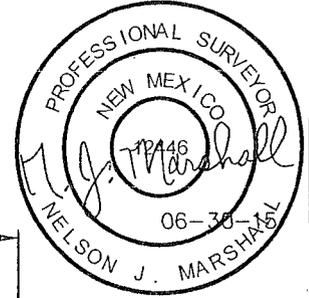
**ConocoPhillips Company**  
**RED HILLS CENTRAL FACILITY WEST B**  
**LOT 1,**  
**SECTION 36, T26S, R31E, N.M.P.M.**  
**EDDY COUNTY, NEW MEXICO**



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

DRAWN BY: H.W.	DATE DRAWN: 06-08-15
SCALE: 1" = 100'	REVISED: 00-00-00
<b>LOCATION LAYOUT</b>	<b>FIGURE #1</b>

1" = 40'  
 X-Section Scale  
 1" = 100'



APPROXIMATE EARTHWORK QUANTITIES	
NO TOPSOIL STRIPPING	0 Cu. Yds.
REMAINING LOCATION	10,730 Cu. Yds.
<b>TOTAL CUT</b>	<b>10,730 Cu. Yds.</b>
<b>FILL</b>	<b>11,090 Cu. Yds.</b>
DEFICIT MATERIAL	<360> Cu. Yds.
TOPSOIL	0 Cu. Yds.
<b>DEFFICIT UNBALANCE</b> (After Interim Rehabilitation)	<b>&lt;360&gt; Cu. Yds.</b>

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
TANK BATTERY SITE DISTURBANCE	NA	±4.879
TEMPORARY ACCESS ROAD R-O-W DISTURBANCE	±460.05'	±0.317
PIPELINE R-O-W DISTURBANCE	±1,811.31'	±1.463
POWER LINE R-O-W DISTURBANCE	±474.06'	±0.326
<b>TOTAL SURFACE USE AREA</b>		<b>±6.985</b>

**NOTES:**

- Fill quantity includes 5% for compaction.
- Deficit material to be obtained from approved borrow area.

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
 LOT 1,  
 SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

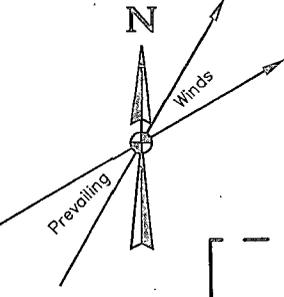


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DRAWN BY: H.W.      DATE DRAWN: 06-08-15

SCALE: AS SHOWN      REVISED: 06-30-15 B.D.H.

**TYPICAL CROSS SECTIONS    FIGURE #2**



Proposed  
Temporary  
Access Road

Proposed  
GOLDEN SPUR  
FACILITY

APPROXIMATE CENTER OF PAD



650' x 650' Archaeological  
Survey Boundary

Proposed GOLDEN SPUR  
#36 COM WI 1H &  
#36 COM WI 2H  
Well Pad

Section 36  
Section 31

R R  
31 32  
E E

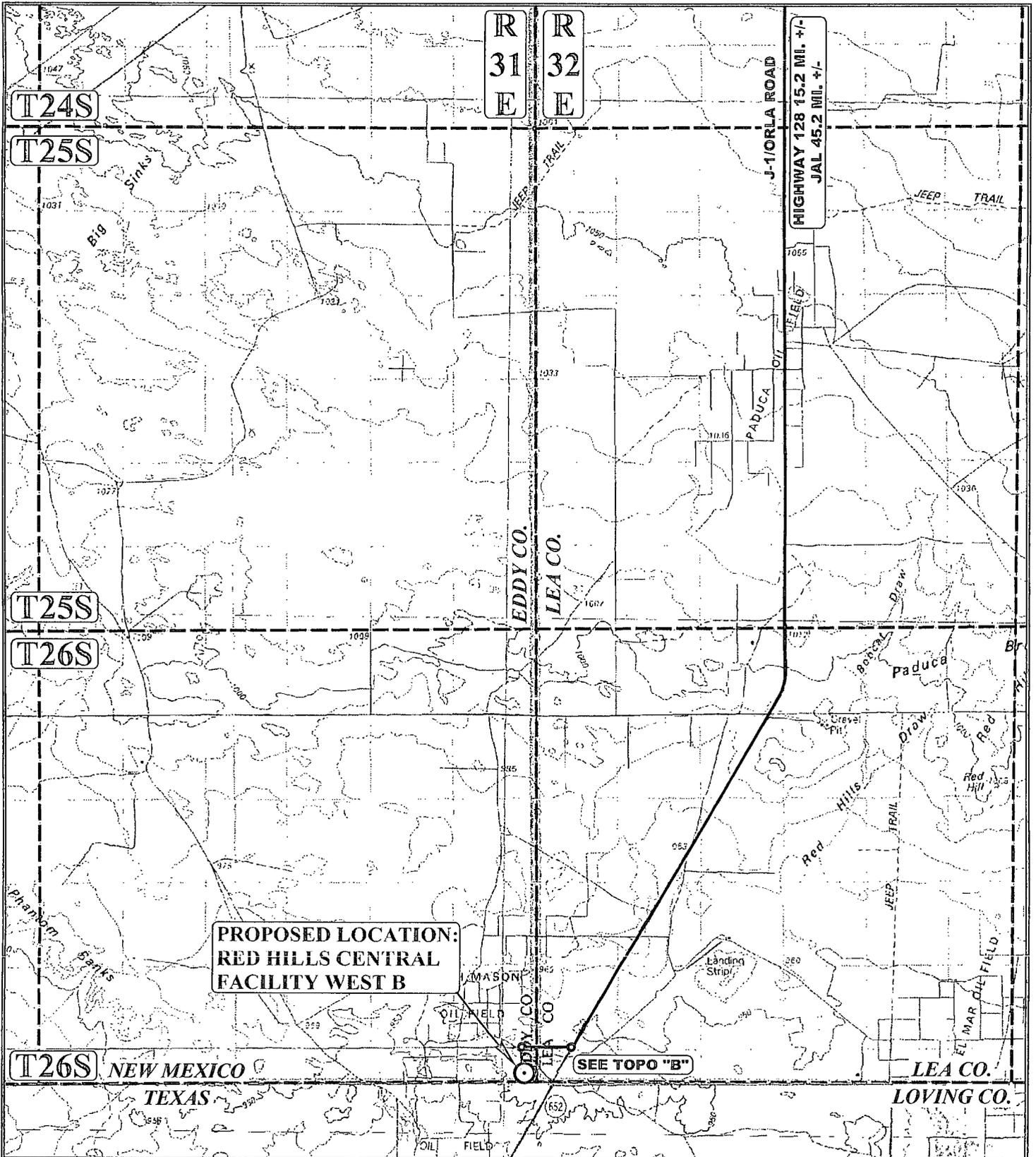
NOTES:

**ConocoPhillips Company**  
**RED HILLS CENTRAL FACILITY WEST B**  
**LOT 1,**  
**SECTION 36, T26S, R31E, N.M.P.M.**  
**EDDY COUNTY, NEW MEXICO**



**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
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DRAWN BY: H.W.	DATE DRAWN: 06-08-15
SCALE: 1" = 100'	REVISED: 00-00-00
<b>ARCHAEOLOGICAL SURVEY BOUNDARY</b>	
<b>FIGURE #5</b>	



**PROPOSED LOCATION:  
RED HILLS CENTRAL  
FACILITY WEST B**

SEE TOPO "B"

**LEGEND:**

○ PROPOSED LOCATION

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**

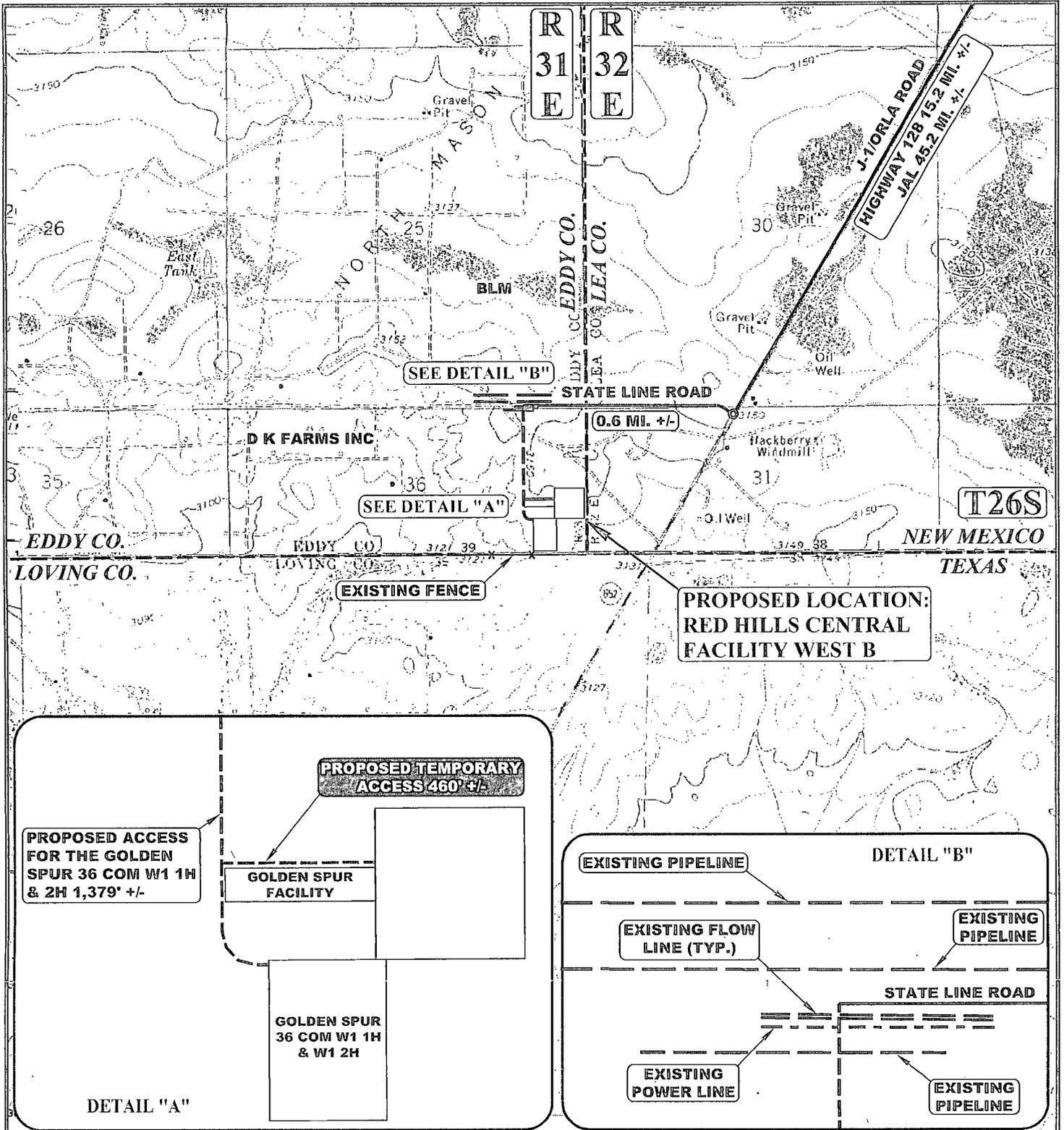
DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1:100,000	REVISED: 00-00-00

**ACCESS ROAD MAP TOPO A**



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





NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**

- EXISTING ROAD
- - - PROPOSED ROAD
- \* \* \* EXISTING FENCE
- - - EXISTING POWER LINE
- - - EXISTING PIPELINE

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**



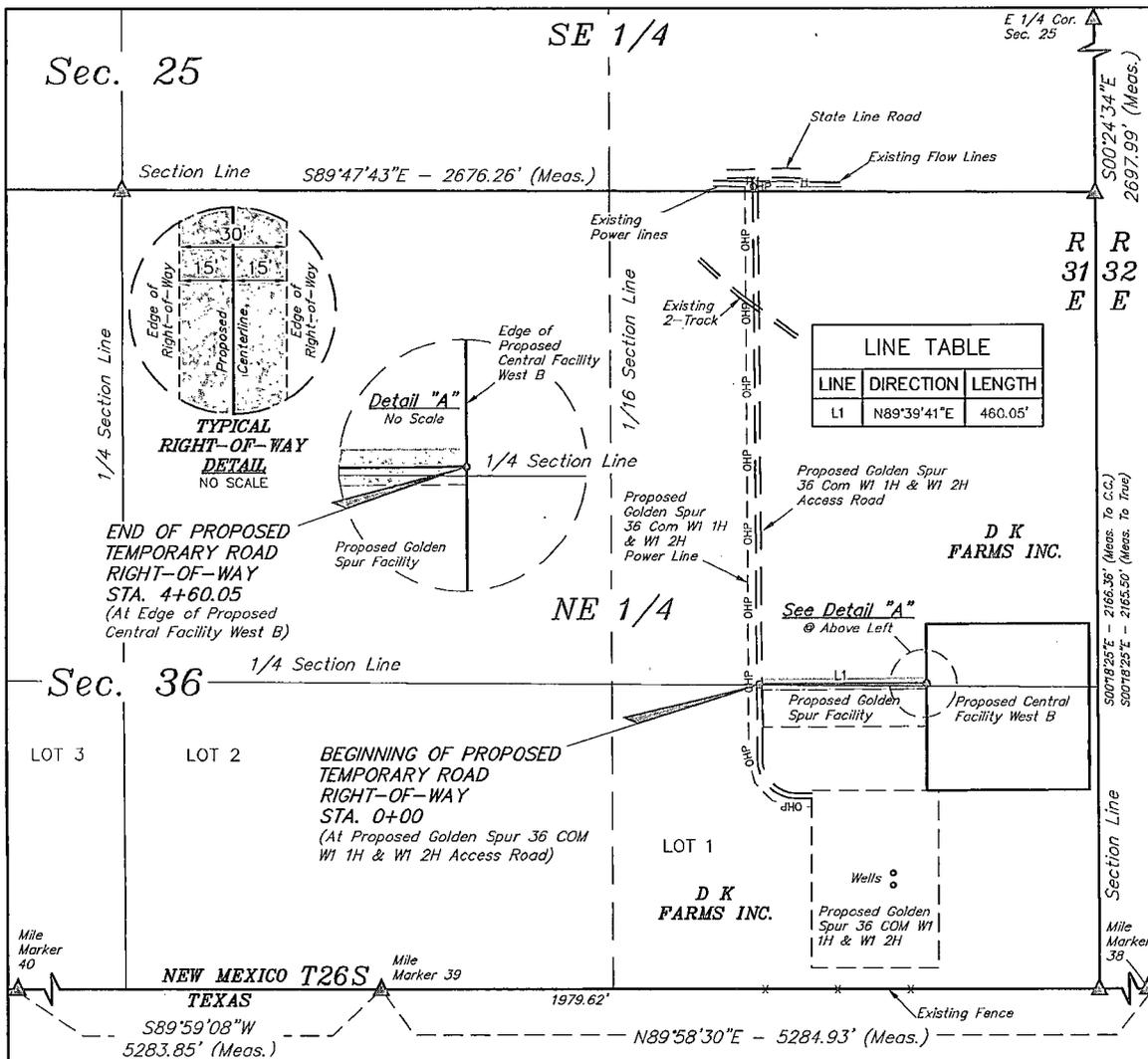
DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1" = 2000'	REVISED: 00-00-00

**ACCESS ROAD MAP**

**TOPO B**



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



**TEMPORARY ROAD RIGHT-OF-WAY DESCRIPTION**

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NE 1/4 OF SECTION 36, T26S, R31E, N.M.P.M., WHICH BEARS S34°45'17"W 1628.41' FROM THE NORTHEAST CORNER OF SAID SECTION 36, THENCE N89°39'41"E 460.05' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 36, WHICH BEARS S19°19'34"W 1414.92' FROM THE NORTHEAST CORNER OF SAID SECTION 36. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.317 ACRES MORE OR LESS.

BEGINNING OF TEMPORARY ROAD STA. 0+00 BEARS S34°45'17"W 1628.41' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.

END OF TEMPORARY ROAD STA. 4+60.05 BEARS S19°19'34"W 1414.92' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
TEMP. ACCESS ROAD	D K FARMS INC.	460.05	27.88	0.317

△ = SECTION CORNERS LOCATED.

NOTES:  
 • The maximum grade of existing ground for the proposed access road is ±0.2%.

CERTIFICATE OF PROFESSIONAL SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE MAP WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  
 Nelson J. Marshall  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 12446  
 STATE OF NEW MEXICO MAR 2011  
 06-17-15

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
 SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 00-00-00

**TEMPORARY ACCESS ROAD R-O-W**

BEGINNING AT THE INTERSECTION OF HIGHWAY 18 AND HIGHWAY 128 PROCEED IN A WESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION FROM JAL, NEW MEXICO ALONG HIGHWAY 128 APPROXIMATELY 30.0 MILES TO THE JUNCTION OF THIS ROAD AND J-1/ORLA ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 15.2 MILES TO THE JUNCTION OF THIS ROAD AND STATE LINE ROAD TO THE EAST; TURN RIGHT AND PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 0.6 MILES TO THE BEGINNING OF THE PROPOSED ACCESS FOR THE GOLDEN SPUR 36 COM W1 1H & 2H WELL PAD TO THE SOUTH; FOLLOW ROAD FLAGS IN A SOUTHERLY DIRECTION APPROXIMATELY 1,379' TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE EAST; FOLLOW ROAD FLAGS IN AN EASTERLY DIRECTION APPROXIMATELY 460' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM JAL, NEW MEXICO TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 46.1 MILES.

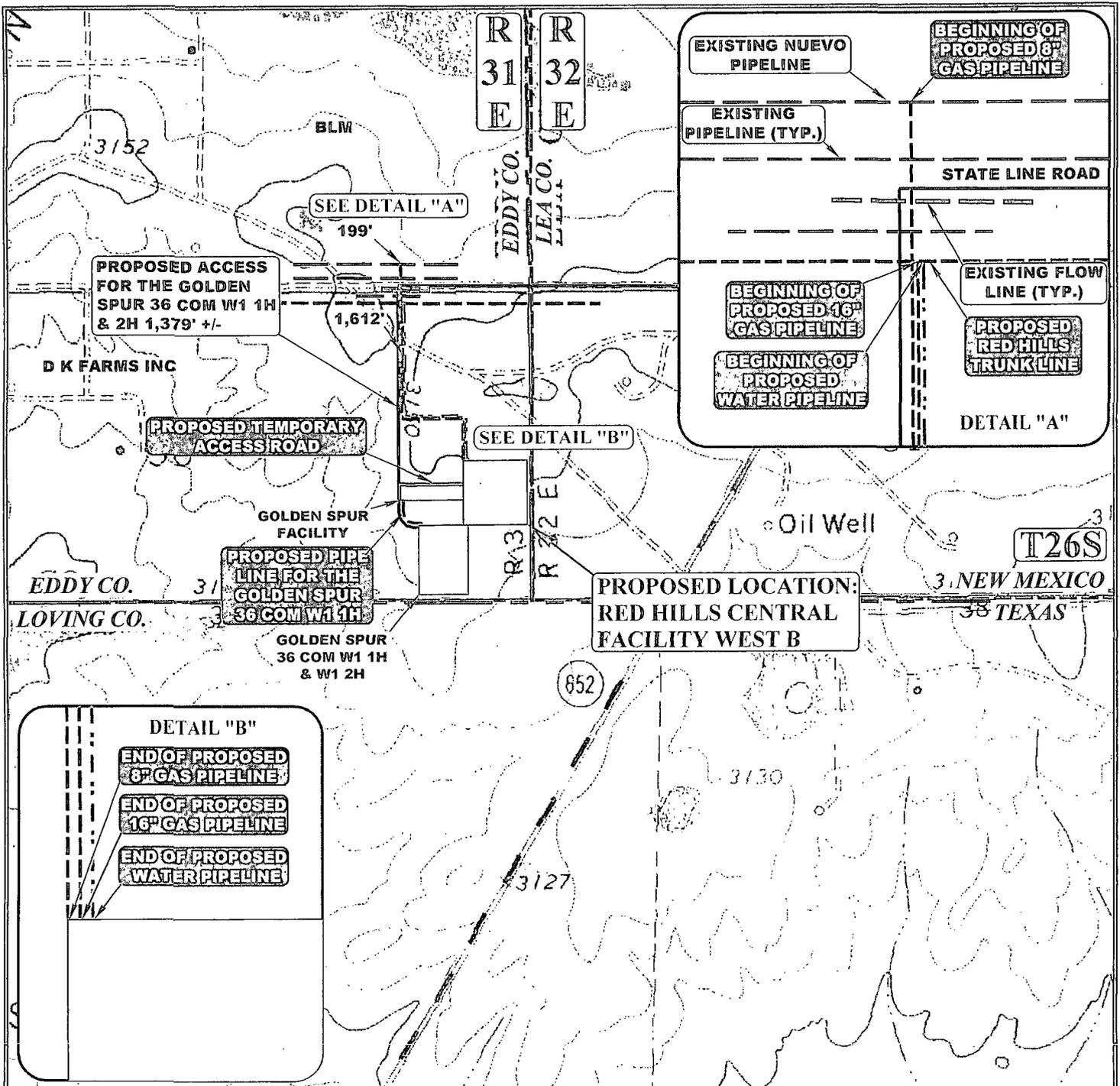
**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**



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

DRAWN BY: R.C.	DATE DRAWN: 06-12-15
	REVISED: 00-00-00
<b>ROAD DESCRIPTION</b>	



APPROXIMATE TOTAL WATER PIPELINE DISTANCE = 1,537' +/-

APPROXIMATE TOTAL 16" GAS PIPELINE DISTANCE = 1,537' +/-

APPROXIMATE TOTAL 8" GAS PIPELINE DISTANCE = 1,811' +/-

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**

- EXISTING ROAD
- - - PROPOSED ROAD
- - - - PROPOSED WATER LINE
- - - - PROPOSED 8" PIPELINE
- - - - PROPOSED 16" PIPELINE
- - - - EXISTING PIPELINE
- - - - PROPOSED PIPELINE (SERVICING OTHER WELLS)

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**

DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1" = 1000'	REVISED: 07-28-15 B.D.H.

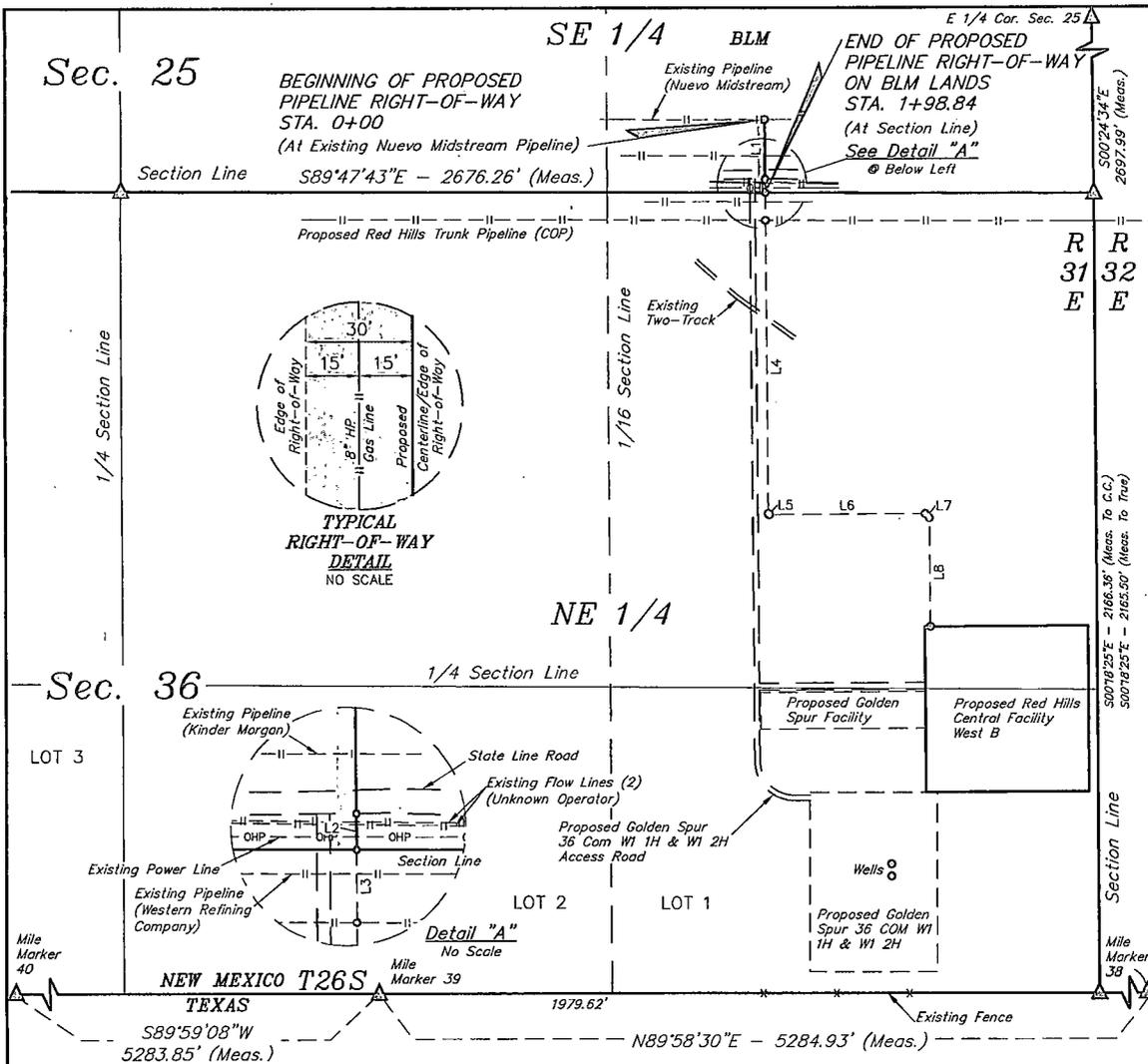
**PIPELINE MAP**

**TOPO D**



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





**PIPELINE RIGHT-OF-WAY DESCRIPTION ON BLM LANDS**

BEGINNING AT A POINT IN THE SE 1/4 SE 1/4 SECTION 25, T26S, R31E, N.M.P.M., WHICH BEARS  $N77^{\circ}23'19''W$   $925.44'$  FROM THE SOUTHEAST CORNER OF SAID SECTION 25, THENCE A  $30'$  WIDE RIGHT-OF-WAY BEING  $30'$  ON THE RIGHT SIDE OF THE FOLLOWING THE DESCRIBED CENTERLINE,  $S00^{\circ}21'53''E$   $161.47'$ ; THENCE  $S00^{\circ}21'53''E$   $37.37'$  TO A POINT ON THE SOUTH LINE OF THE SE 1/4 SE 1/4 OF SAID SECTION 25, WHICH BEARS  $N89^{\circ}47'43''W$   $901.85'$  FROM THE SOUTHEAST CORNER OF SAID SECTION 25. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS  $0.137$  ACRES MORE OR LESS.

BEGINNING OF PIPELINE STA. 0+00 BEARS  $N77^{\circ}23'19''W$   $925.44'$  FROM THE SOUTHEAST CORNER OF SECTION 25, T26S, R31E, N.M.P.M.

END OF PIPELINE ON BLM LANDS STA. 1+98.84 BEARS  $N89^{\circ}47'43''W$   $901.85'$  FROM THE SOUTHEAST CORNER OF SECTION 25, T26S, R31E, N.M.P.M.

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	$S00^{\circ}21'53''E$	161.47'
L2	$S00^{\circ}21'53''E$	37.37'



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
PIPELINE	BLM	198.84	12.05	0.137

▲ = SECTION CORNERS LOCATED.

CERTIFICATE OF PROFESSIONAL SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Nelson Marshall*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 12446  
 STATE OF NEW MEXICO  
 06-30-15

**NOTES:**

**ConocoPhillips Company**

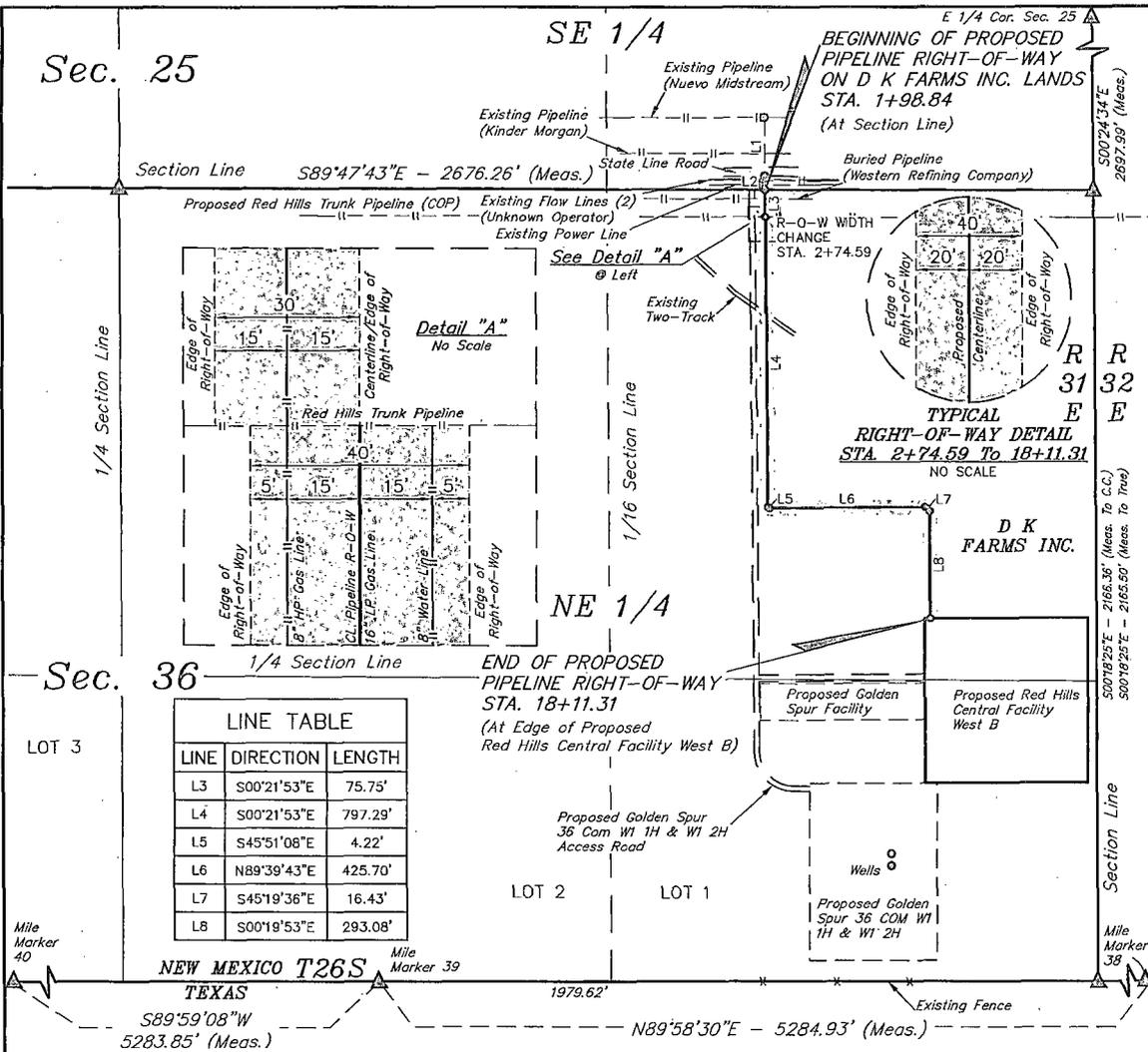
**RED HILLS CENTRAL FACILITY WEST B  
 SECTION 25, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: T.E. DATE DRAWN: 06-16-15  
 SCALE: 1" = 400' REVISED: 06-30-15 B.D.H.



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

**PIPELINE ROW**



**LINE TABLE**

LINE	DIRECTION	LENGTH
L3	S00°21'53"E	75.75'
L4	S00°21'53"E	797.29'
L5	S45°51'08"E	4.22'
L6	N89°39'43"E	425.70'
L7	S45°19'36"E	16.43'
L8	S00°19'53"E	293.08'

LOT 3

LOT 2

LOT 1

NEW MEXICO T26S

TEXAS  
S89°59'08"W  
5283.85' (Meas.)

1979.62'

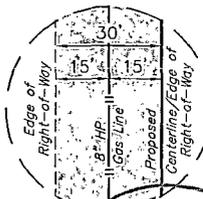
N89°58'30"E - 5284.93' (Meas.)

**PIPELINE RIGHT-OF-WAY DESCRIPTION ON D K FARMS INC. LANDS**

BEGINNING AT A POINT ON THE NORTH LINE OF THE NE 1/4 NE 1/4 OF SECTION 36, T26S, R31E, N.M.P.M., WHICH BEARS N89°47'43"W 901.85' FROM THE NORTHEAST CORNER OF SAID SECTION 36, THENCE A 30' WIDE RIGHT-OF-WAY BEING 30' ON THE RIGHT SIDE OF THE FOLLOWING THE DESCRIBED CENTERLINE, THENCE S00°21'53"E 75.75' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 36 WHICH BEARS S85°23'58"W 904.27' FROM THE NORTHEAST CORNER OF SAID SECTION 36, THENCE A 40' WIDE RIGHT-OF-WAY, 20' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE, THENCE S00°21'53"E 797.29', THENCE S45°51'08"E 4.22'; THENCE N89°39'43"E 425.70'; THENCE S45°19'36"E 16.43'; THENCE S00°19'53"E 293.08' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 36, WHICH BEARS S21°08'09"W 1259.59' FROM THE NORTHEAST CORNER OF SAID SECTION 36. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 1.463 ACRES MORE OR LESS.

BEGINNING OF PIPELINE ON D K FARMS INC. LANDS STA. 1+98.84 BEARS N89°47'43"W 901.85' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.  
R-O-W WIDTH CHANGE STA. 2+74.59 BEARS S85°23'58"W 904.27' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.  
END OF PIPELINE STA. 18+11.31 BEARS S21°08'09"W 1259.59' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.

**TYPICAL RIGHT-OF-WAY DETAIL**  
STA. 1+98.84 TO 2+74.59  
NO SCALE



**ACREAGE / LENGTH TABLE**

	OWNERSHIP	FEET	RODS	ACRES
PIPELINE	D K FARMS INC.	1612.47	97.73	1.463

▲ = SECTION CORNERS LOCATED.

THIS IS TO CERTIFY THAT THE ABOVE PLANS WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

**CERTIFICATE OF PROFESSIONAL SURVEYOR**  
NELSON MARSHALL  
REGISTERED LAND SURVEYOR  
REGISTRATION NO. 12446  
STATE OF NEW MEXICO  
07-28-15

NOTES:

**ConocoPhillips Company**

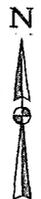
**RED HILLS CENTRAL FACILITY WEST B**  
SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO

DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 07-28-15 B.D.H.

**PIPELINE R-O-W**

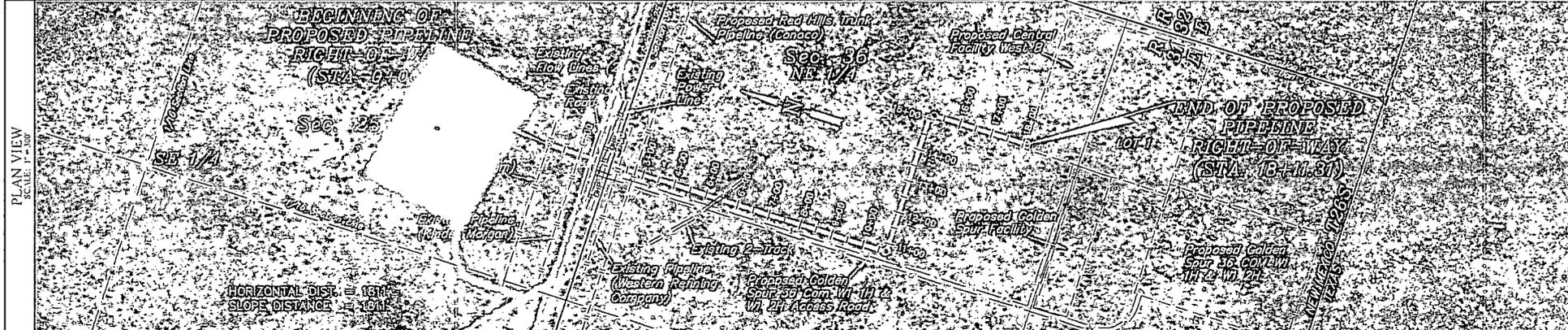


**UELS, I.L.C.**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

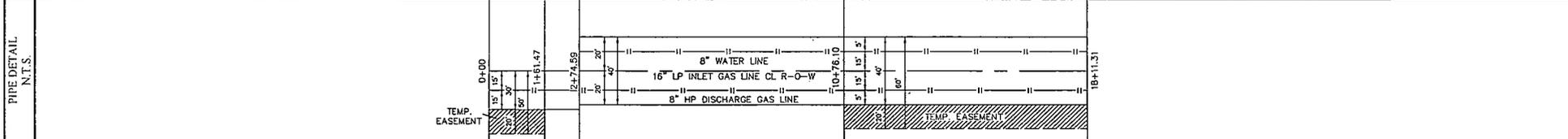
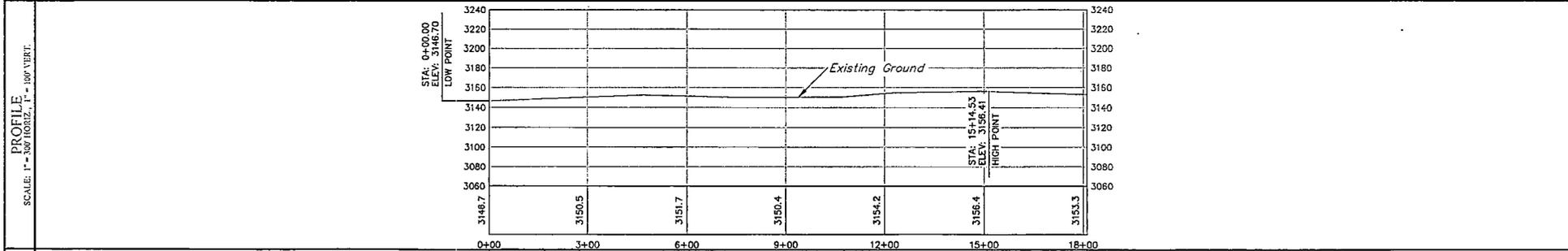


EDDY COUNTY, NEW MEXICO

OWNERSHIP FEET/RODS	0+00	BLM SE 1/4 SE 1/4 SEC. 25, T26S, R31E, N.M.P.M. 198.84' 12.05 RODS	1+98.84	D K FARMS INC. NE 1/4 NE 1/4 SEC. 36, T26S, R31E, N.M.P.M. 1612.47' 97.73 RODS	18+11.31
	PLAIN VIEW SCALE: 1" = 100'				



STATIONING	0+00	0+99.89 PIPELINE KINDER MORGAN	1+00.00 CL ROAD	1+70.21 FLOW LINE	1+85.72 POWER LINE	1+98.84 12" LP INLET GAS LINE	2+74.59 PIPELINE CONOCO	5+41.36 CL 2-TRACK	10+71.08 P.I. 4529.15' L	10+76.10 P.I. 4429.09' L	15+01.00 P.I. 4530.41' R	15+10.23 P.I. 4425.43' R
	PROFILE SCALE: 1" = 30' HORIZ., 1" = 100' VERT.											

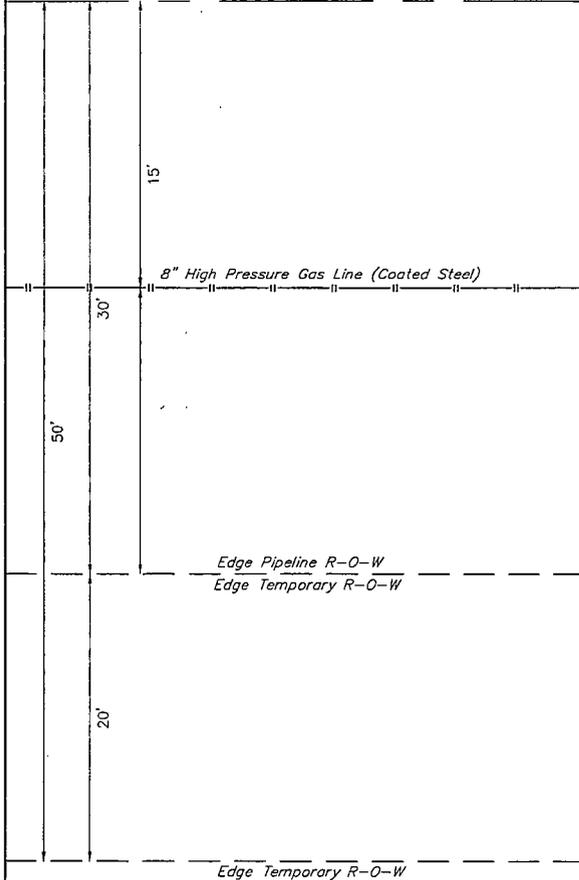


	<b>UELS, LLC</b> Corporate Office * 85 South 200 East Vernal, UT 84078 * (435) 789-1017		REVISION NO. 1 DESCRIPTION DATE 2. R-O-W WIDTH ON 8" HP DISCHARGE GAS LINE 06-30-15 B.D.H. 3. CHANGE 12" LP INLET GAS LINE TO 16" LP INLET GAS LINE 07-28-15 B.D.H.	SUMMARY OF MATERIALS (TH) (NG) LINEAR FEET DESCRIPTION	PROJECT DATA SURVEYED BY: J.V. DRAWN BY: S.O. DATE: 06-16-15	SCALE: AS SHOWN DRAWING# 5 9 7 5 2 SHEET: 1 OF 1	LOCATED IN SECTIONS 25 & 36, T26S, R31E N.M.P.M., EDDY COUNTY, NEW MEXICO	ConocoPhillips Company RED HILL CENTRAL FACILITY TEST B PIPELINE PLAN & PROFILE
--	-----------------------------------------------------------------------------------------------	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------	-----------------------------------------------------------------------	--------------------------------------------------------	------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------

**RIGHT-OF-WAY DETAIL**  
NO SCALE

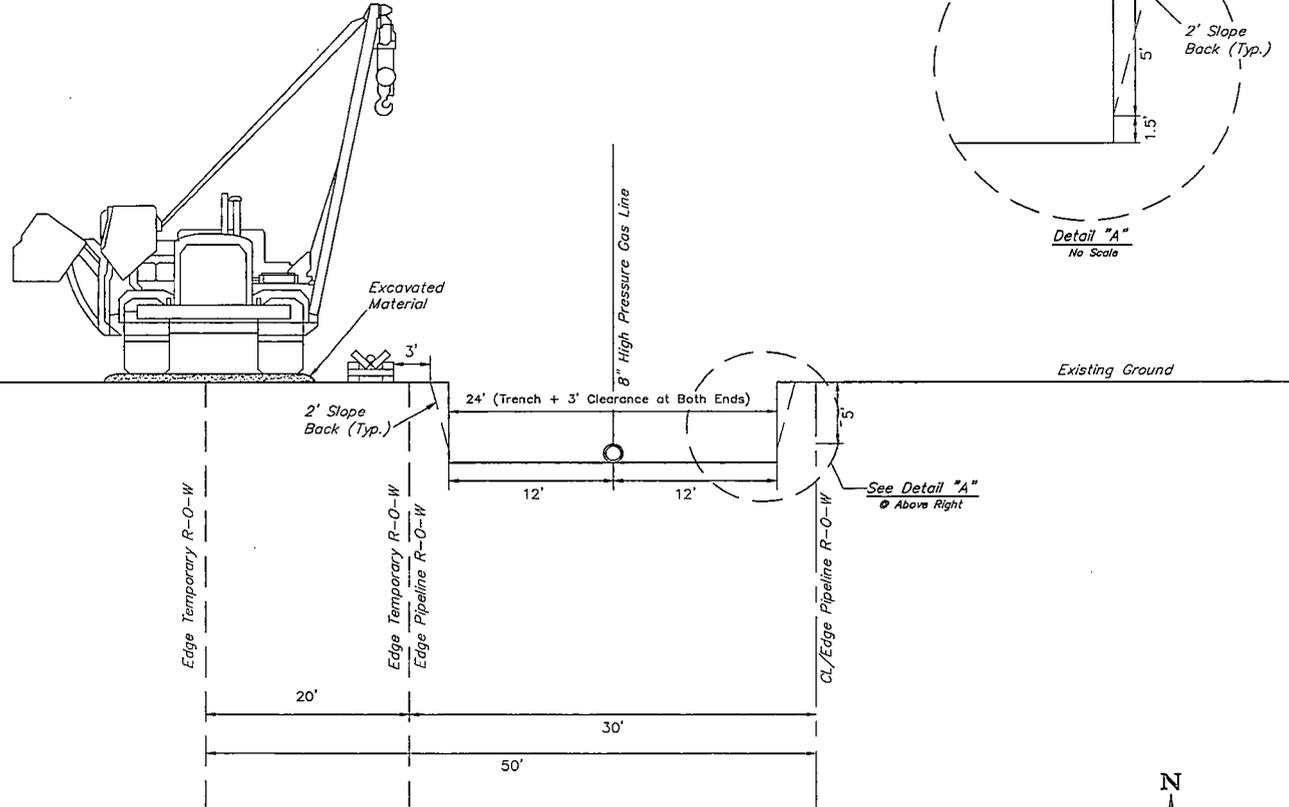
R-O-W Direction

CL/Edge Pipeline R-O-W



**TRENCH DETAIL**  
NO SCALE

STA. 0+00 TO 1+61.47



**UELS, LLC**  
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REVISION			SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	TOTAL NO.	DESCRIPTION
1.	CORRECT R-O-W DIRECTION	06-25-15 B.D.H.	(TOTAL LINEAR FEET)	
2.	CORRECT R-O-W WIDTH	08-30-15 B.D.H.		

PROJECT DATA	
SURVEYED BY: J.V.	SCALE: N/A
DRAWN BY: S.O.	DRAWING# N/A
DATE: 06-17-15	SHEET: 1 OF 4

LOCATED IN  
SECTIONS 25 & 36,  
T26S, R31E, N4M, P.M.,  
EDDY COUNTY, NEW MEXICO

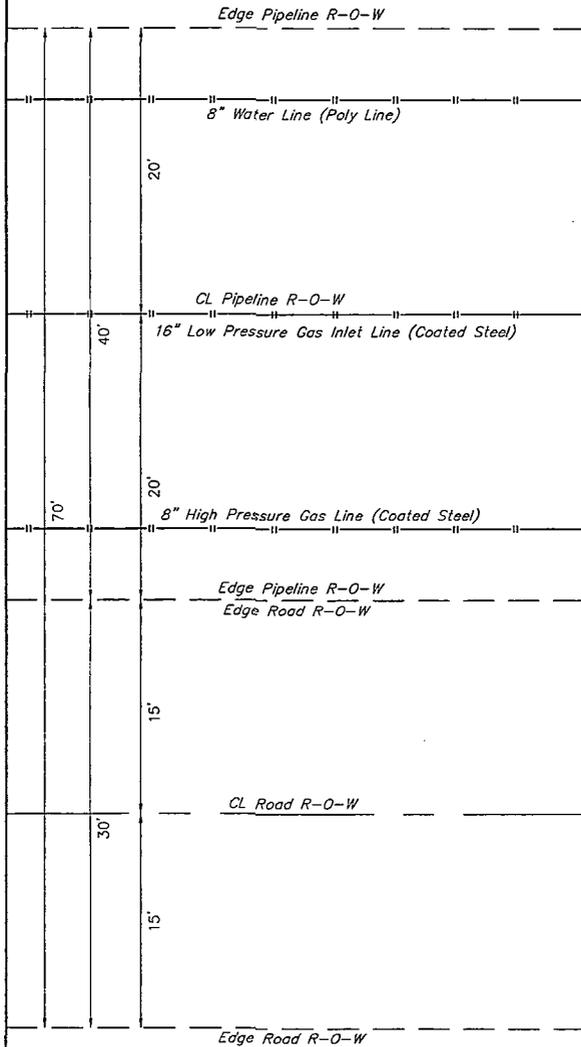
**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
RIGHT-OF-WAY DETAIL



**RIGHT-OF-WAY DETAIL**

NO SCALE

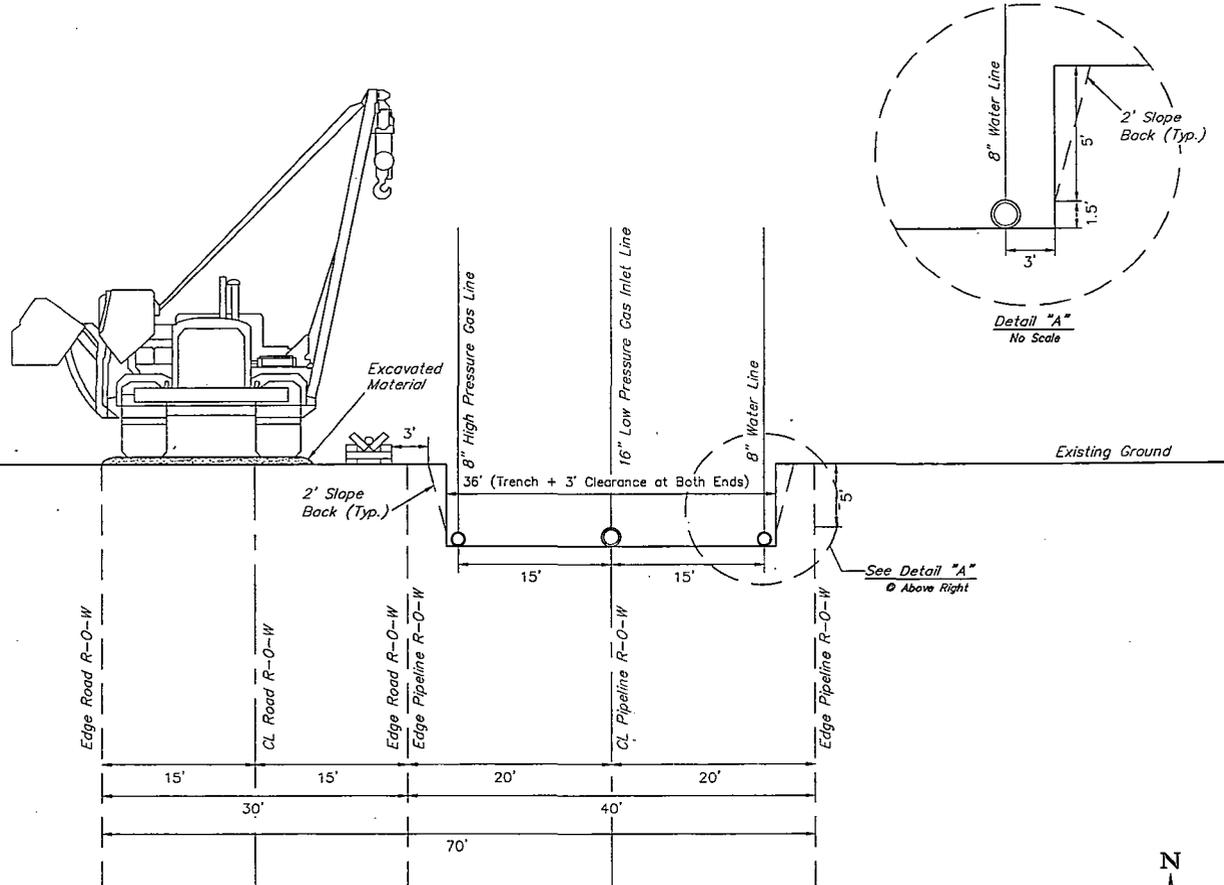
R-O-W Direction



**TRENCH DETAIL**

NO SCALE

STA. 2+74.59 TO 10+76.10



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REVISION		SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	DESCRIPTION
1.	CORRECT R-O-W DIRECTION	06-25-15 B.D.H.	
2.	CHANGE 12" LP GAS INLET TO 18"	07-28-15 B.D.H.	

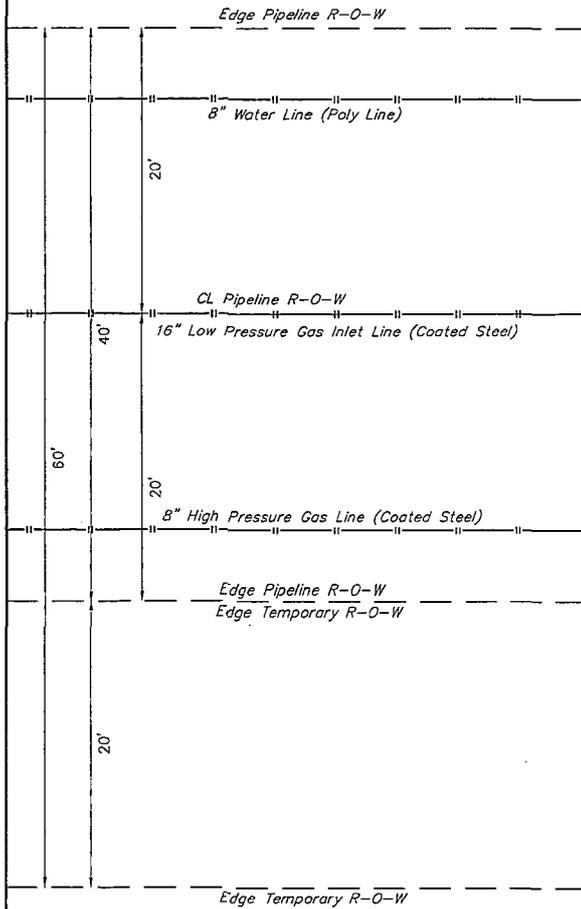
PROJECT DATA	
SURVEYED BY: J.V.	SCALE: N/A
DRAWN BY: S.O.	DRAWING# N/A
DATE: 06-17-15	SHEET: 3 OF 4

LOCATED IN  
 SECTIONS 25 & 36,  
 T26S, R31E, N4M, P14  
 EDDY COUNTY, NEW MEXICO

**ConocoPhillips Company**  
 RED HILLS CENTRAL  
 FACILITY WEST B  
 RIGHT-OF-WAY DETAIL

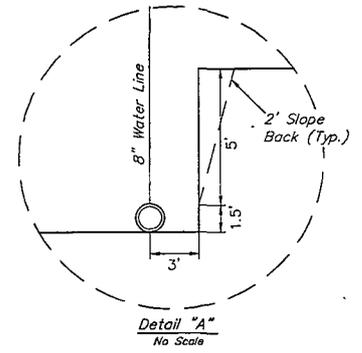
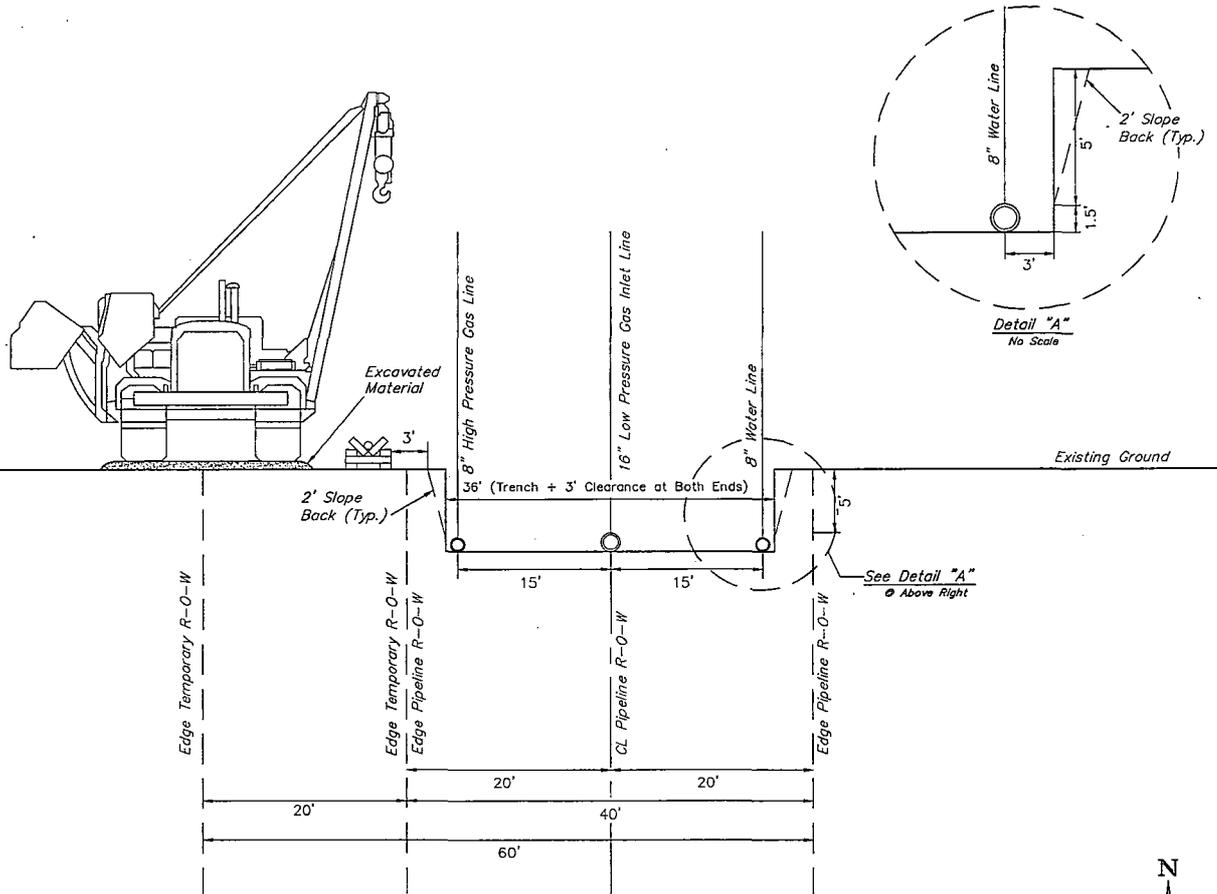
**RIGHT-OF-WAY DETAIL**  
NO SCALE

R-O-W Direction



**TRENCH DETAIL**  
NO SCALE

STA. 10+76.10 TO 18+11.31



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

REVISION		SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	LINEAR FEET
1.	CORRECT R-O-W DIRECTION	06-25-15 B.D.H.	
2.	CHANGE 12" LP GAS INLET TO 16"	07-28-15 B.D.H.	

PROJECT DATA	
SURVEYED BY: J.V.	SCALE: N/A
DRAWN BY: S.O.	DRAWING# N/A
DATE: 06-17-15	SHEET: 4 OF 4

LOCATED IN  
SECTIONS 26 & 36,  
T28S, R31E, N4PM,  
EDDY COUNTY, NEW MEXICO

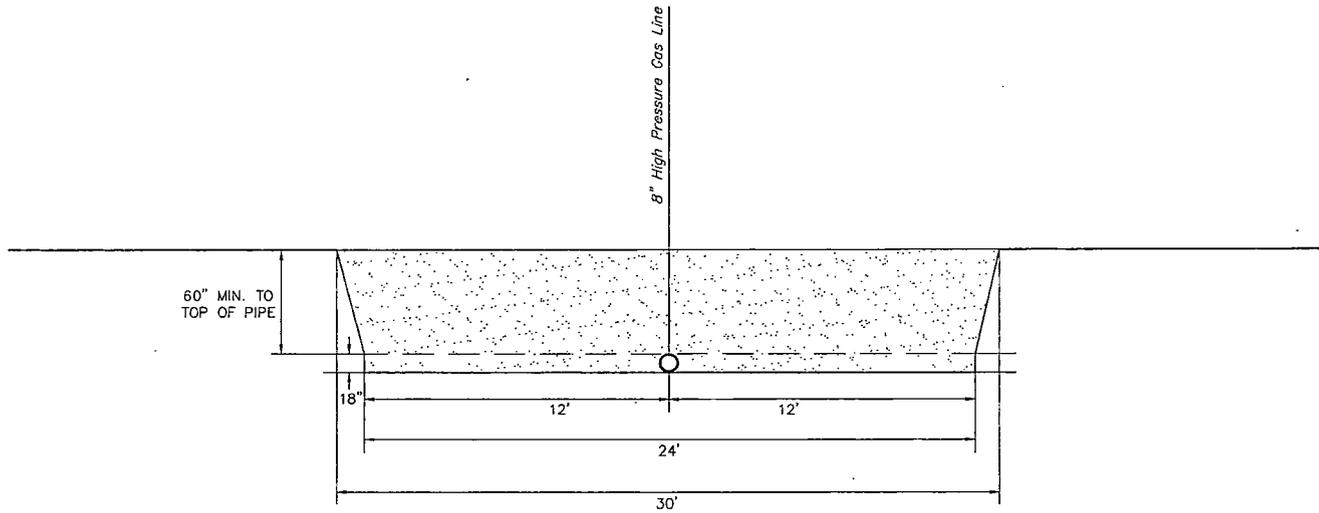
**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
RIGHT-OF-WAY DETAIL

**BACKFILL DIAGRAM**

NO SCALE

STA. 0+00 TO 2+74.59

R-O-W Direction



BACKFILL DIRT TO BE AS FREE OF ROCKS AND LARGE PARTICLES AS POSSIBLE

3" WATER LINE WILL BE POLY LINE

SOFT FILL DIRT OR SAND WITH NO ROCKS OR SOLID PARTICLES GREATER THAN 1" IN CIRCUMFERENCE

5' CLEARANCE AT BOTH ENDS



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REVISION			SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	ITEM NO.	LINEAR FEET
1.	CORRECT R-O-W WIDTH	06-30-15 B.D.H.		

PROJECT DATA	
SCALE: N/A	
SURVEYED BY: J.V.	
DRAWN BY: S.O.	
DATE: 06-17-15	

DRAWING# N/A
SHEET: 1 OF 1

LOCATED BY  
 SECTIONS 20 & 30,  
 T26S, R31E, N4M.P.M.,  
 EDDY COUNTY, NEW MEXICO

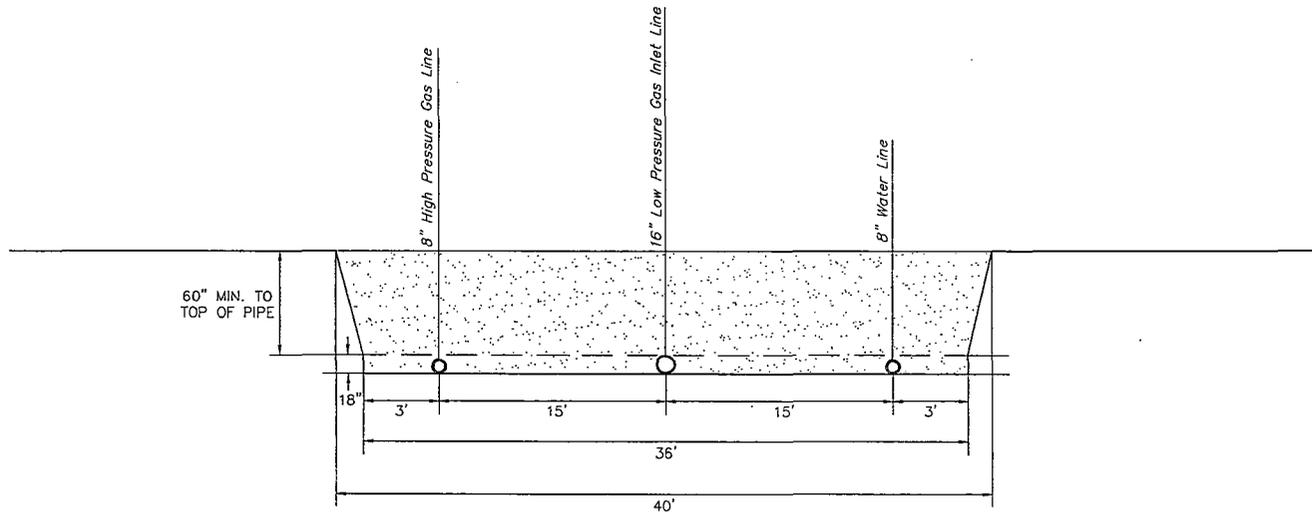
**ConocoPhillips Company**  
 RED HILLS CENTRAL  
 FACILITY WEST B  
 BACKFILL DIAGRAM

**BACKFILL DIAGRAM**

NO SCALE

STA. 2+74.59 TO 18+11.31

R-O-W Direction



BACKFILL DIRT TO BE AS FREE OF ROCKS AND LARGE PARTICLES AS POSSIBLE

8" HIGH PRESSURE GAS LINE WILL BE COATED STEEL

12" LOW PRESSURE GAS INLET LINE WILL BE COATED STEEL

8" WATER LINE WILL BE POLY LINE

SOFT FILL DIRT OR SAND WITH NO ROCKS OR SOLID PARTICLES GREATER THAN 1" IN CIRCUMFERENCE

5' CLEARANCE AT BOTH ENDS

15' CLEARANCE BETWEEN EACH PIPE



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REVISION			SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	ITEM NO.	LINEAR FEET
1.	CORRECT R-O-W WIDTH	06-30-15 B.D.H.		
2.	CHANGE 12" LP GAS INLET TO 16"	07-28-15 B.D.H.		

**PROJECT DATA**

SURVEYED BY: J.V.  
DRAWN BY: S.O.  
DATE: 06-17-15

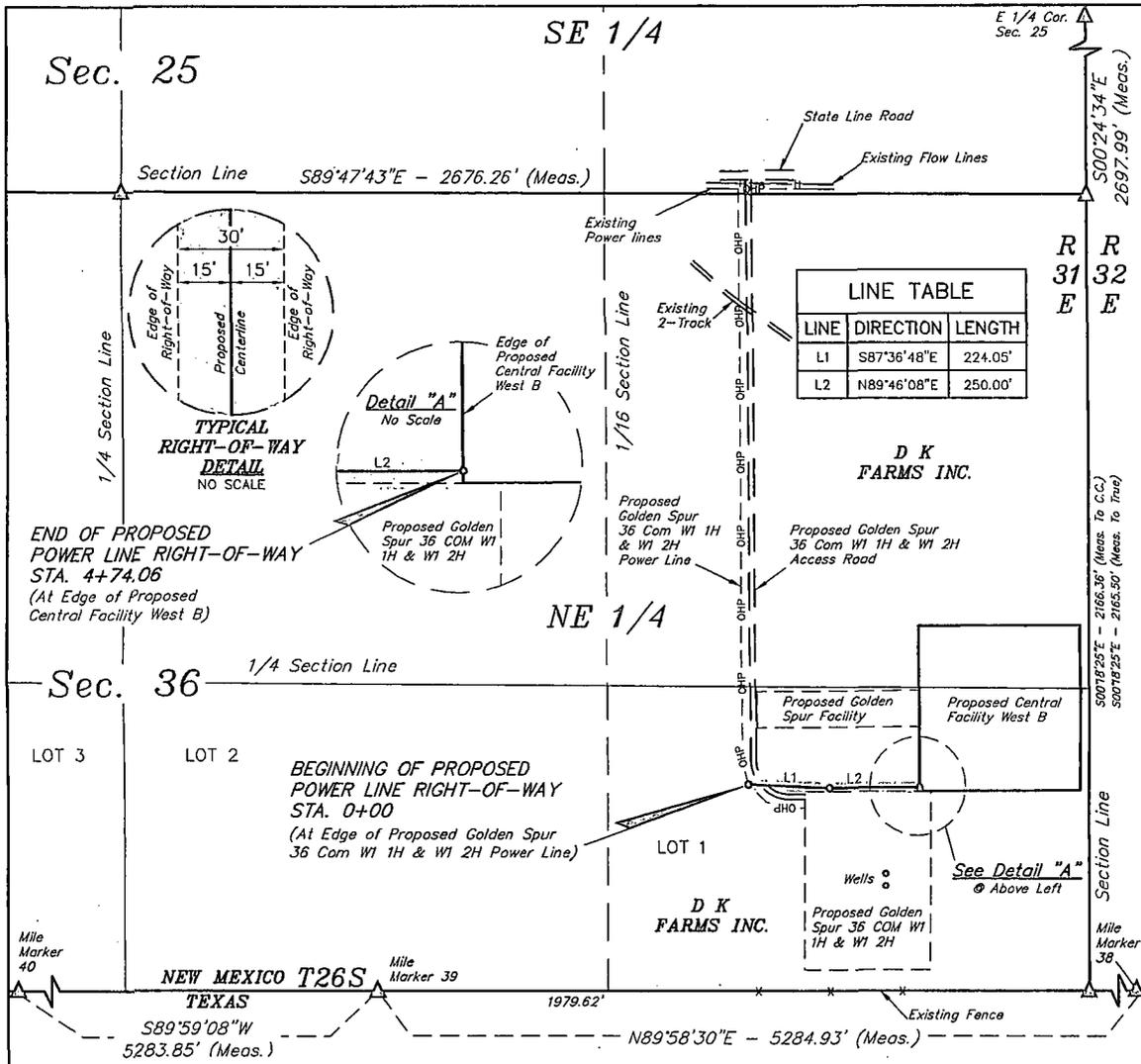
SCALE: N/A

DRAWING# N/A

SHEET: 1 OF 1

LOCATED IN  
SECTIONS 22 & 36,  
T26S, R31E, N41PM,  
EDDY COUNTY, NEW MEXICO

**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
BACKFILL DIAGRAM



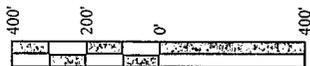
**POWER LINE RIGHT-OF-WAY DESCRIPTION**

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN LOT 1 OF SECTION 36, T26S, R31E, N.M.P.M., WHICH BEARS S30°20'43"W 1861.60' FROM THE NORTHEAST CORNER OF SAID SECTION 36, THENCE S87°36'48"E 224.05'; THENCE N89°46'08"E 250.00' TO A POINT IN LOT 1 OF SAID SECTION 36, WHICH BEARS S16°07'03"W 1680.95' FROM THE NORTHEAST CORNER OF SAID SECTION 36. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.326 ACRES MORE OR LESS.

BEGINNING OF POWER LINE STA. 0+00 BEARS S30°20'43"W 1861.60' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.

END OF POWER LINE STA. 4+74.06 BEARS S16°07'03"W 1680.95' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
POWER LINE	D K FARMS INC.	474.06	28.73	0.326

△ = SECTION CORNERS LOCATED.

NOTES:

CERTIFICATE OF PROFESSIONAL SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE MAP WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Robert Marshall*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 12446  
 STATE OF NEW MEXICO  
 06-17-15

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
 SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

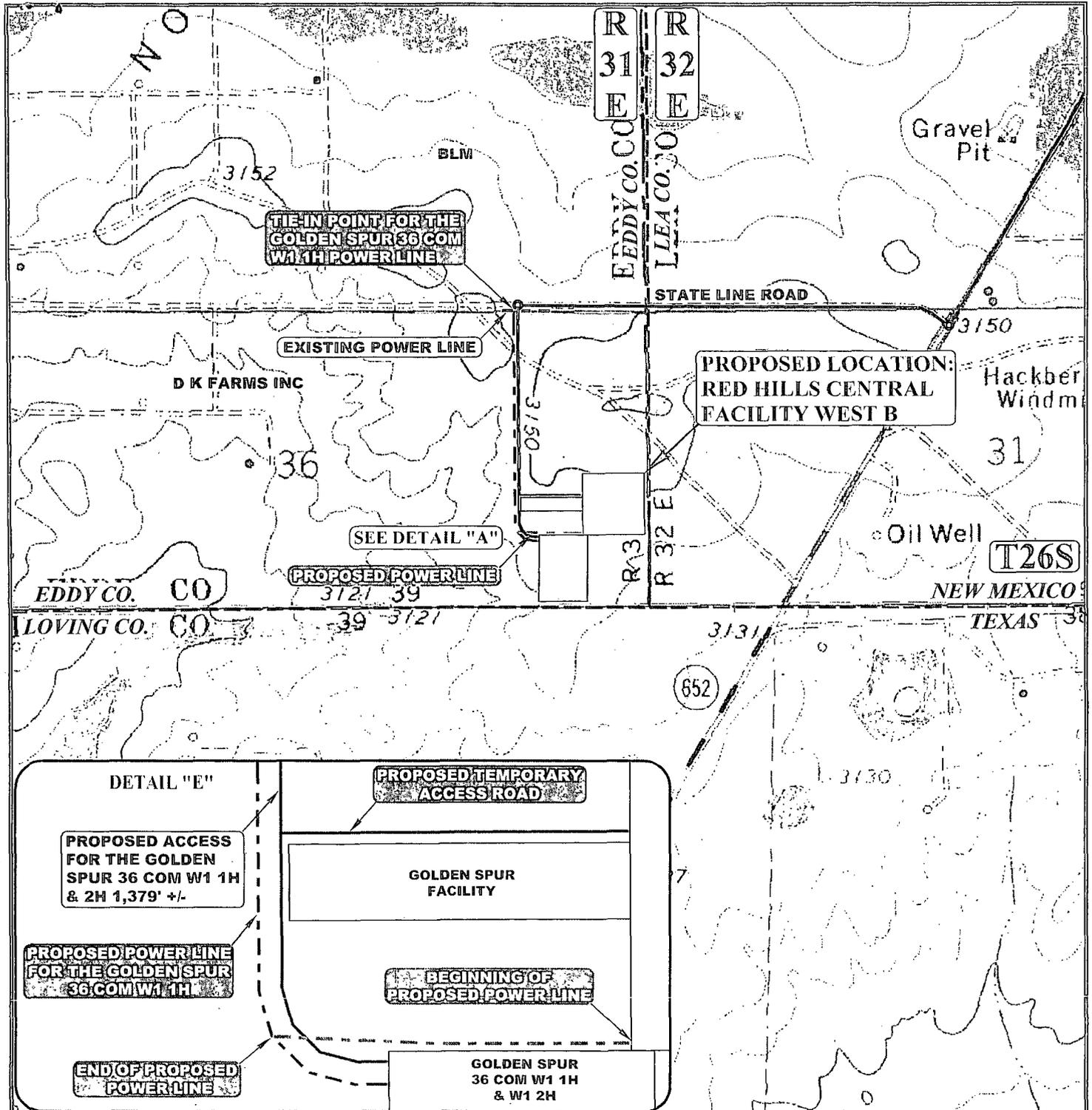
DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 00-00-00

**POWER LINE R-O-W**



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 Vernal, UT 84078 \* (435) 789-1017





APPROXIMATE TOTAL POWER LINE DISTANCE = 474' +/-

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**

	EXISTING ROAD
	PROPOSED ROAD
	PROPOSED POWER LINE
	EXISTING POWER LINE
	PROPOSED POWER LINE (SERVICING OTHER WELLS)

**ConocoPhillips Company**

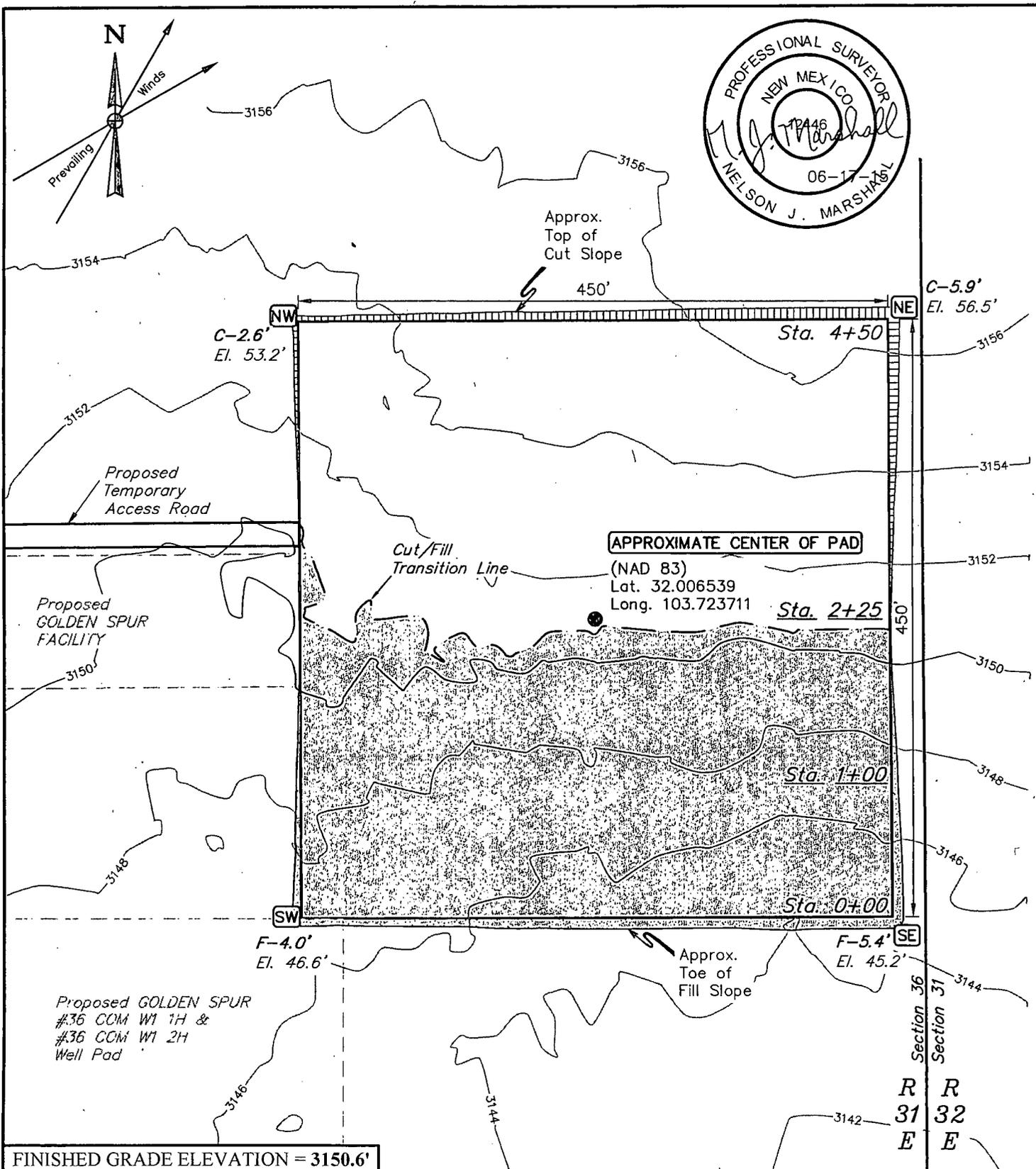
**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**



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



DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1" = 1000'	REVISED: 00-00-00
<b>POWERLINE MAP</b>	<b>TOPO</b>



NOTES:  
 • Contours shown at 2' intervals.

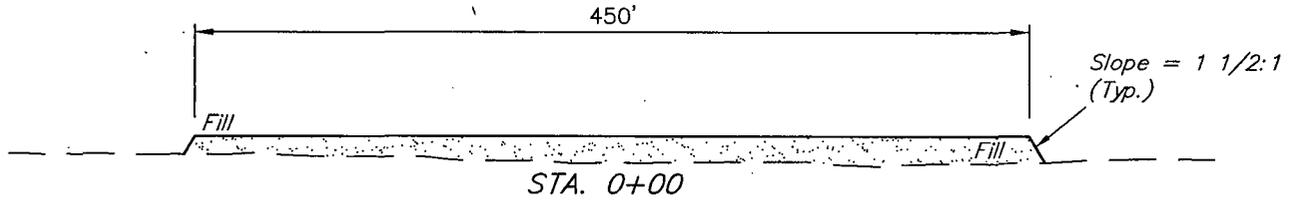
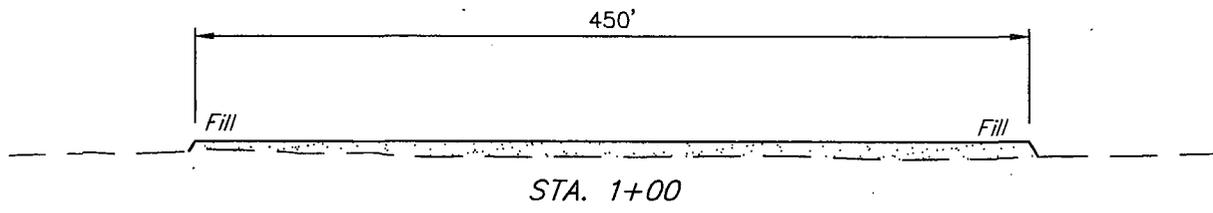
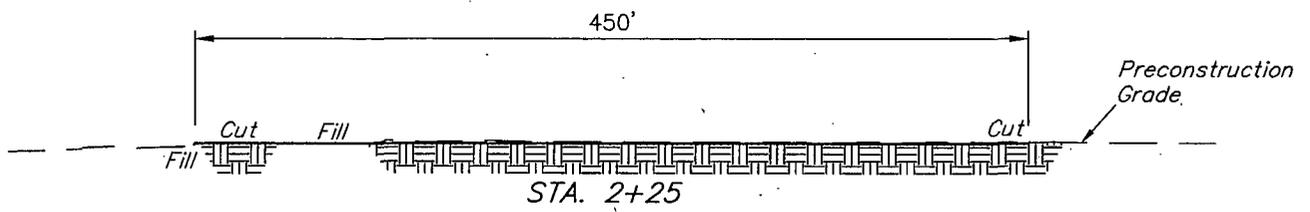
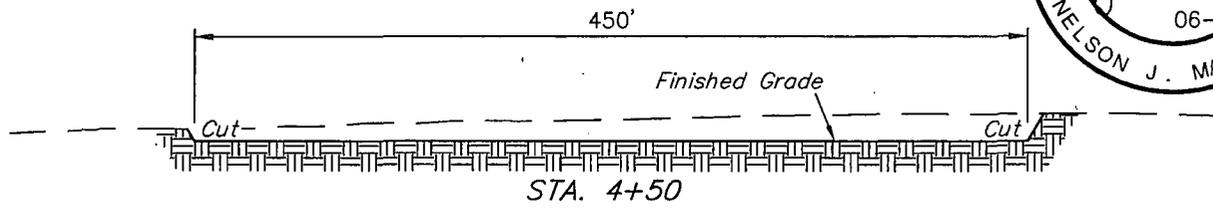
**ConocoPhillips Company**  
**RED HILLS CENTRAL FACILITY WEST B**  
**LOT 1,**  
**SECTION 36, T26S, R31E, N.M.P.M.**  
**EDDY COUNTY, NEW MEXICO**



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

DRAWN BY: H.W.	DATE DRAWN: 06-08-15
SCALE: 1" = 100'	REVISED: 00-00-00
<b>LOCATION LAYOUT</b>	<b>FIGURE #1</b>

1" = 40'  
 X-Section  
 Scale  
 1" = 100'



APPROXIMATE EARTHWORK QUANTITIES	
NO TOPSOIL STRIPPING	0 Cu. Yds.
REMAINING LOCATION	10,730 Cu. Yds.
<b>TOTAL CUT</b>	<b>10,730 Cu. Yds.</b>
<b>FILL</b>	<b>11,090 Cu. Yds.</b>
DEFICIT MATERIAL	<360> Cu. Yds.
TOPSOIL	0 Cu. Yds.
<b>DEFFICIT UNBALANCE</b> (After Interim Rehabilitation)	<b>&lt;360&gt; Cu. Yds.</b>

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
TANK BATTERY SITE DISTURBANCE	NA	±4.879'
TEMPORARY ACCESS ROAD R-O-W DISTURBANCE	±460.05'	±0.317
PIPELINE R-O-W DISTURBANCE	±1,811.31'	±1.463
POWER LINE R-O-W DISTURBANCE	±474.06'	±0.326
<b>TOTAL SURFACE USE AREA</b>		<b>±6.985</b>

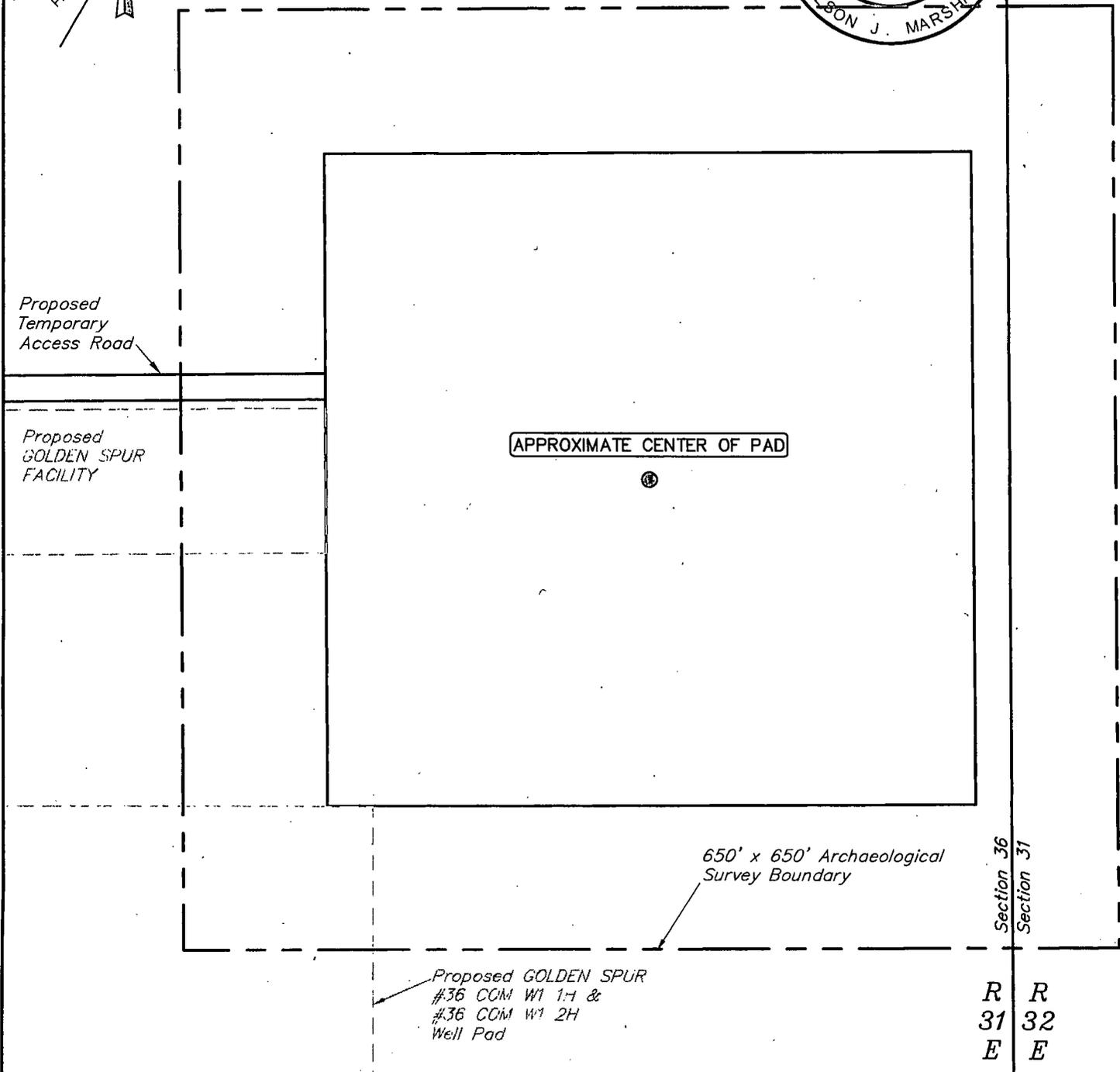
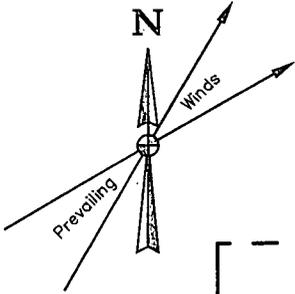
- NOTES:**
- Fill quantity includes 5% for compaction.
  - Deficit material to be obtained from approved borrow area.

**ConocoPhillips Company**  
**RED HILLS CENTRAL FACILITY WEST B**  
**LOT 1,**  
**SECTION 36, T26S, R31E, N.M.P.M.**  
**EDDY COUNTY, NEW MEXICO**



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

DRAWN BY: H.W.	DATE DRAWN: 06-08-15
SCALE: AS SHOWN	REVISED: 06-30-15 B.D.H.
<b>TYPICAL CROSS SECTIONS</b>	
<b>FIGURE #2</b>	



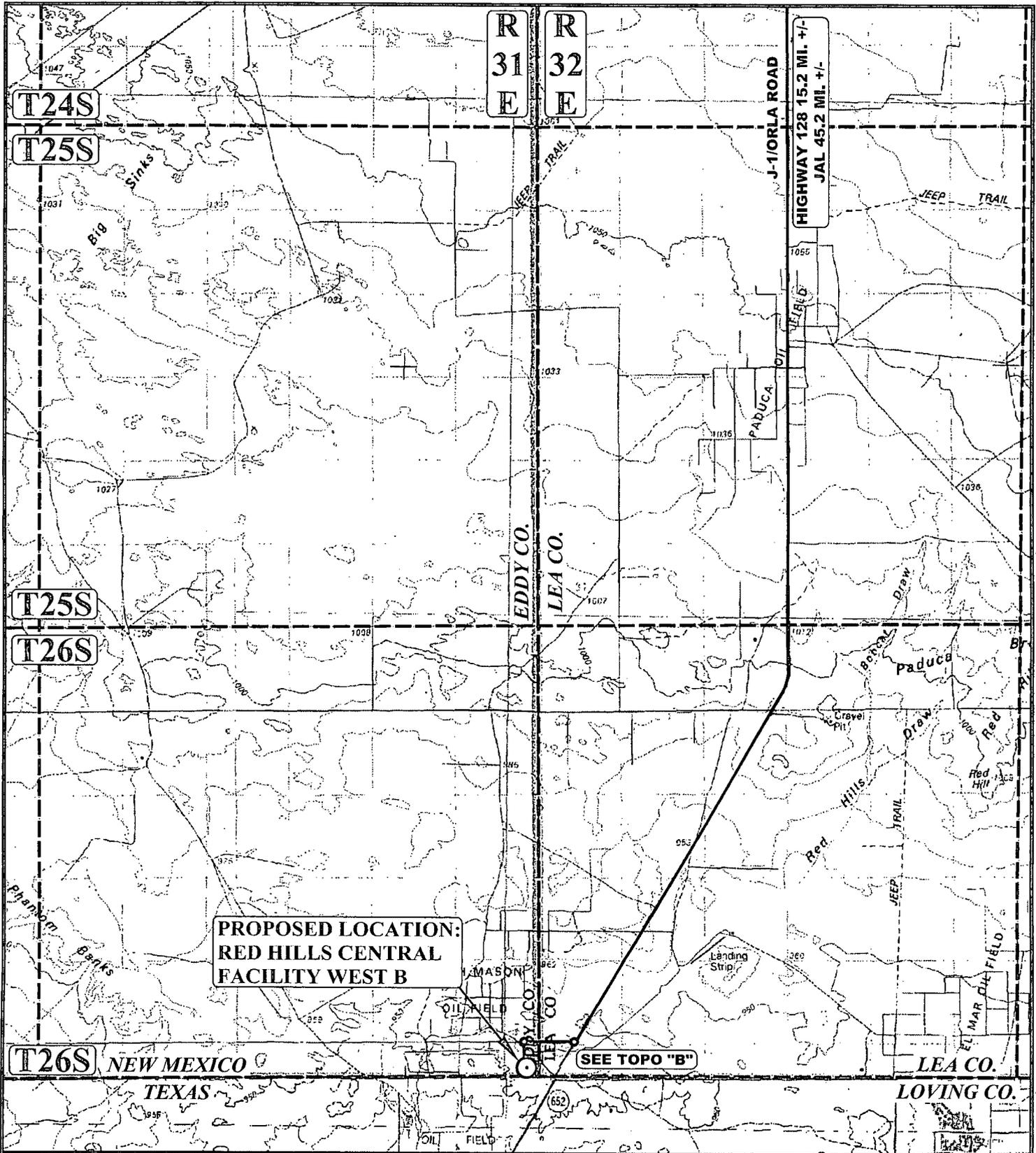
**NOTES:**

**ConocoPhillips Company**  
**RED HILLS CENTRAL FACILITY WEST B**  
**LOT 1,**  
**SECTION 36, T26S, R31E, N.M.P.M.**  
**EDDY COUNTY, NEW MEXICO**



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

DRAWN BY: H.W.	DATE DRAWN: 06-08-15
SCALE: 1" = 100'	REVISED: 00-00-00
<b>ARCHAEOLOGICAL SURVEY BOUNDARY</b>	
<b>FIGURE #5</b>	



**PROPOSED LOCATION:  
RED HILLS CENTRAL  
FACILITY WEST B**

SEE TOPO "B"

**LEGEND:**

⊙ PROPOSED LOCATION

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**

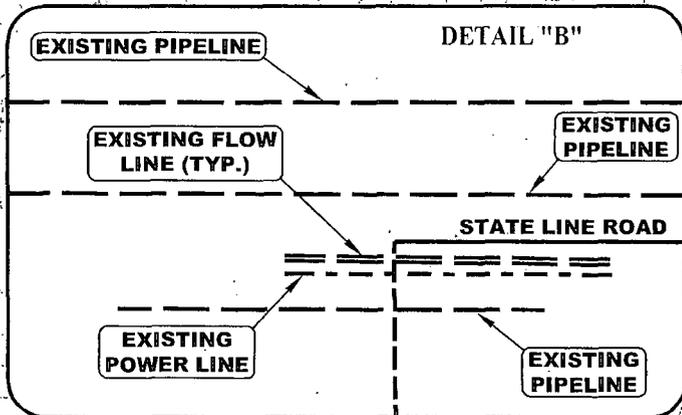
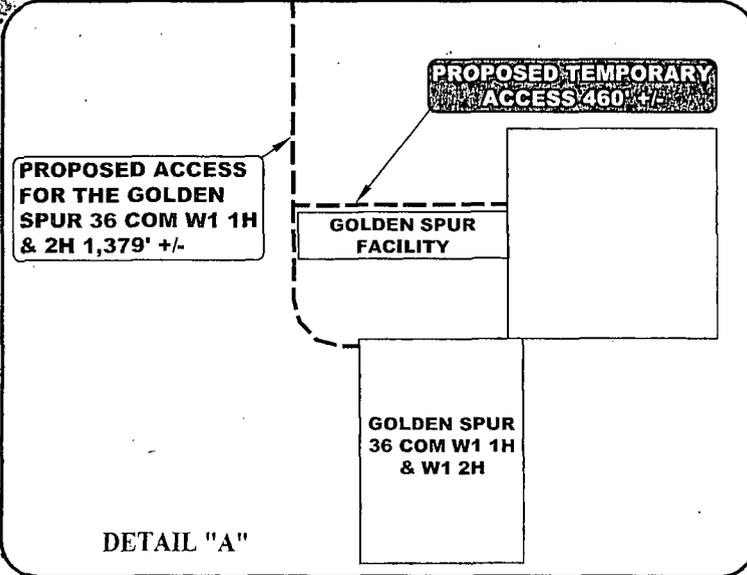
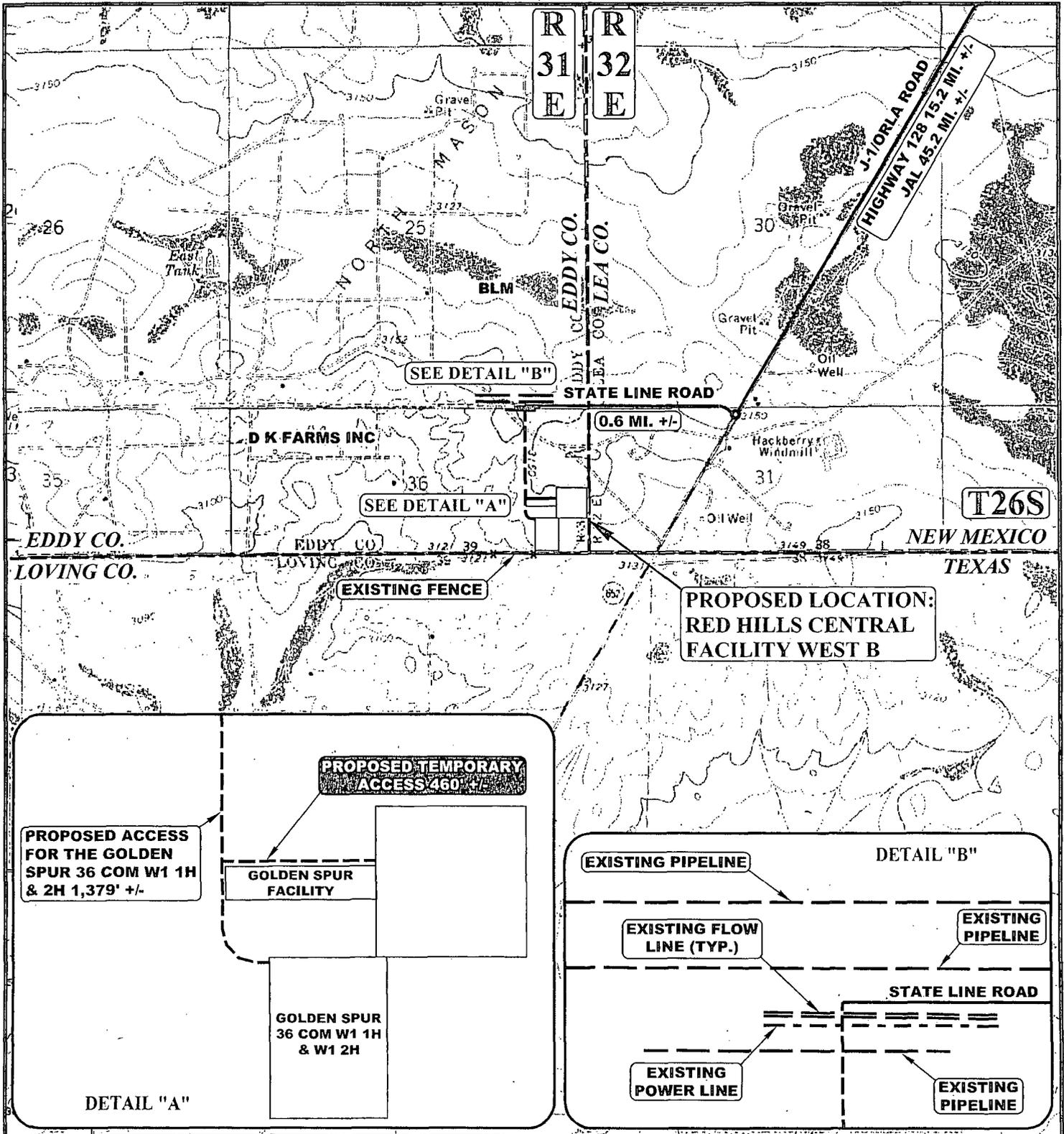
DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1:100,000	REVISED: 00-00-00

**ACCESS ROAD MAP TOPO A**



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





NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

- LEGEND:**
- EXISTING ROAD
  - - - PROPOSED ROAD
  - \* - \* - EXISTING FENCE
  - - - - EXISTING POWER LINE
  - - - - EXISTING PIPELINE



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

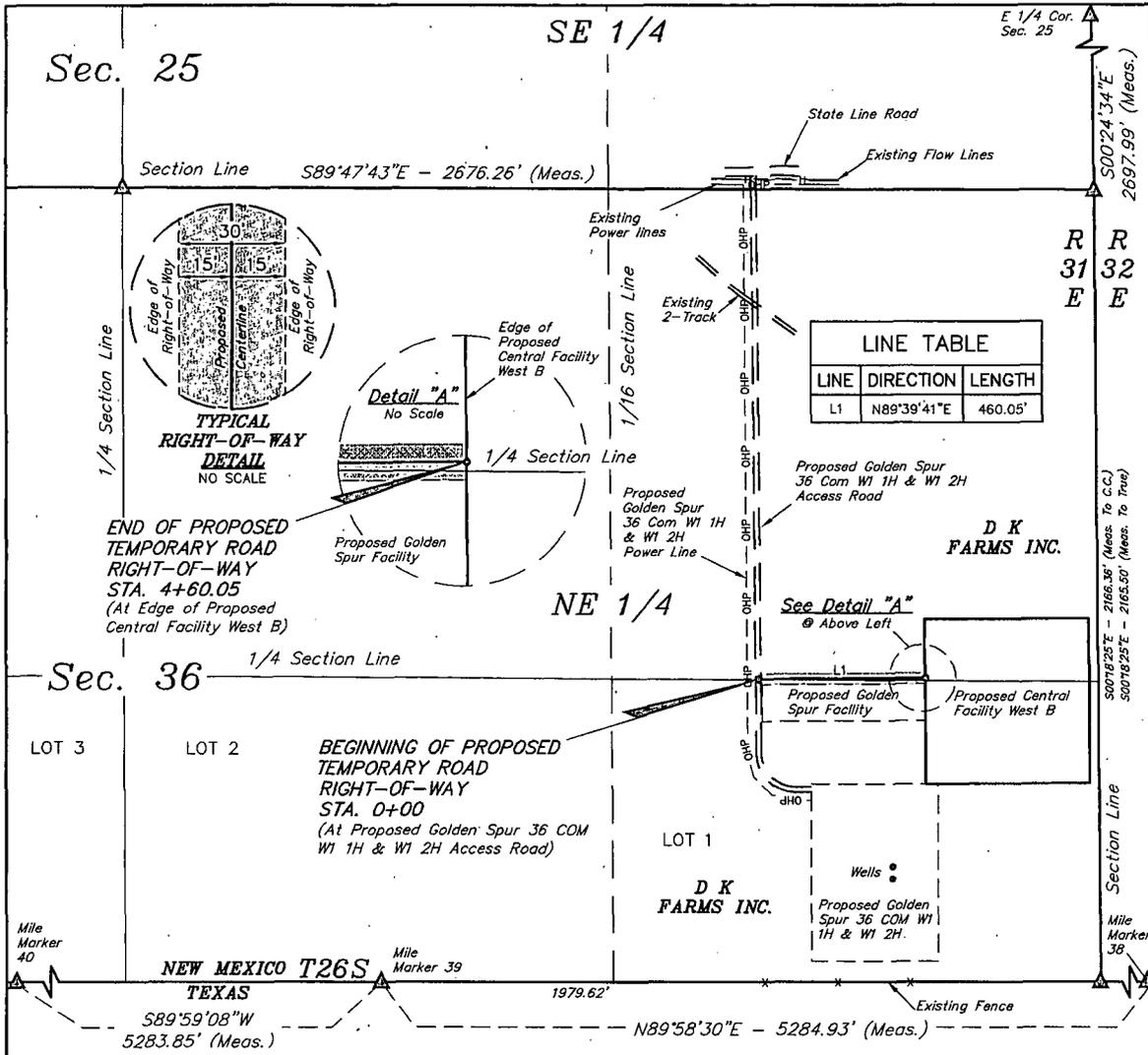


**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
 LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1" = 2000'	REVISED: 00-00-00

**ACCESS ROAD MAP      TOPO B**



**TEMPORARY ROAD RIGHT-OF-WAY DESCRIPTION**

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NE 1/4 OF SECTION 36, T26S, R31E, N.M.P.M., WHICH BEARS S34°45'17\"/>

BEGINNING OF TEMPORARY ROAD STA. 0+00 BEARS S34°45'17\"/>

END OF TEMPORARY ROAD STA. 4+60.05 BEARS S19°19'34\"/>



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
TEMP. ACCESS ROAD	D K FARMS INC.	460.05	27.88	0.317

▲ = SECTION CORNERS LOCATED.

**NOTES:**

- The maximum grade of existing ground for the proposed access road is ±0.2%.

CERTIFICATE OF PROFESSIONAL SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE PLAN WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Walter J. Marshall*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 12446  
 STATE OF NEW MEXICO  
 06-17-15

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
 SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 00-00-00

**TEMPORARY ACCESS ROAD R-O-W**



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



BEGINNING AT THE INTERSECTION OF HIGHWAY 18 AND HIGHWAY 128 PROCEED IN A WESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION FROM JAL, NEW MEXICO ALONG HIGHWAY 128 APPROXIMATELY 30.0 MILES TO THE JUNCTION OF THIS ROAD AND J-1/ORLA ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 15.2 MILES TO THE JUNCTION OF THIS ROAD AND STATE LINE ROAD TO THE EAST; TURN RIGHT AND PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 0.6 MILES TO THE BEGINNING OF THE PROPOSED ACCESS FOR THE GOLDEN SPUR 36 COM W1 1H & 2H WELL PAD TO THE SOUTH; FOLLOW ROAD FLAGS IN A SOUTHERLY DIRECTION APPROXIMATELY 1,379' TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE EAST; FOLLOW ROAD FLAGS IN AN EASTERLY DIRECTION APPROXIMATELY 460' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM JAL, NEW MEXICO TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 46.1 MILES.

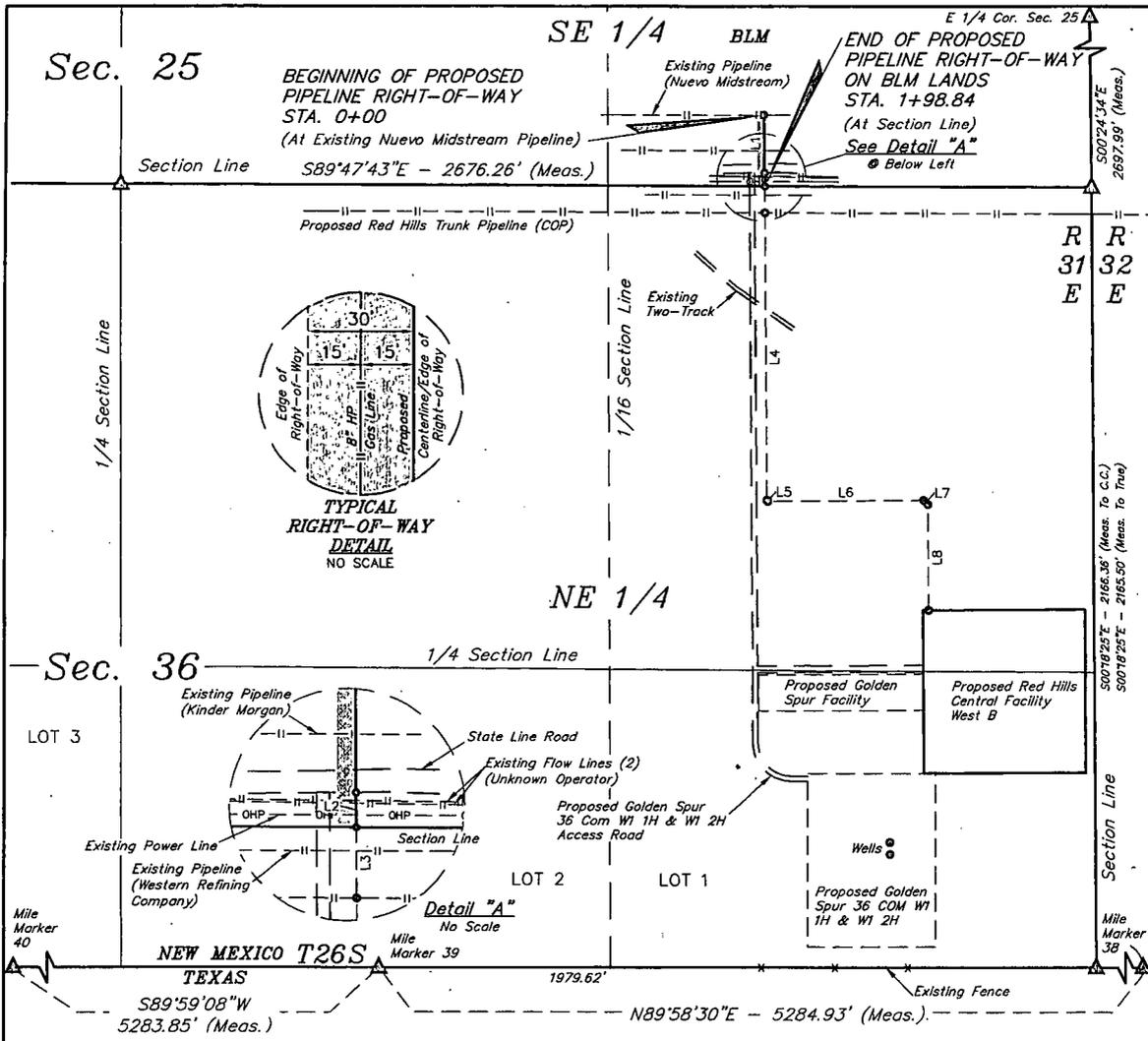
**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**

DRAWN BY: R.C.	DATE DRAWN: 06-12-15
	REVISED: 00-00-00
<b>ROAD DESCRIPTION</b>	



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Vernal, UT 84078 \* (435) 789-1017



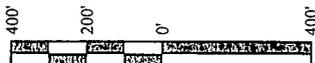
**PIPELINE RIGHT-OF-WAY DESCRIPTION ON BLM LANDS**

BEGINNING AT A POINT IN THE SE 1/4 SE 1/4 SECTION 25, T26S, R31E, N.M.P.M., WHICH BEARS N77°23'19"W 925.44' FROM THE SOUTHEAST CORNER OF SAID SECTION 25, THENCE A 30' WIDE RIGHT-OF-WAY BEING 30' ON THE RIGHT SIDE OF THE FOLLOWING THE DESCRIBED CENTERLINE, S00°21'53"E 161.47'; THENCE S00°21'53"E 37.37' TO A POINT ON THE SOUTH LINE OF THE SE 1/4 SE 1/4 SECTION 25, WHICH BEARS N89°47'43"W 901.85' FROM THE SOUTHEAST CORNER OF SAID SECTION 25. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.137 ACRES MORE OR LESS.

BEGINNING OF PIPELINE STA. 0+00 BEARS N77°23'19"W 925.44' FROM THE SOUTHEAST CORNER OF SECTION 25, T26S, R31E, N.M.P.M.

END OF PIPELINE ON BLM LANDS STA. 1+98.84 BEARS N89°47'43"W 901.85' FROM THE SOUTHEAST CORNER OF SECTION 25, T26S, R31E, N.M.P.M.

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S00°21'53"E	161.47'
L2	S00°21'53"E	37.37'



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
PIPELINE	BLM	198.84	12.05	0.137

▲ = SECTION CORNERS LOCATED.

NOTES:

CERTIFICATE OF PROFESSIONAL SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT COPY OF THE FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Heleen Marshall*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 12446  
 STATE OF NEW MEXICO  
 06-30-15

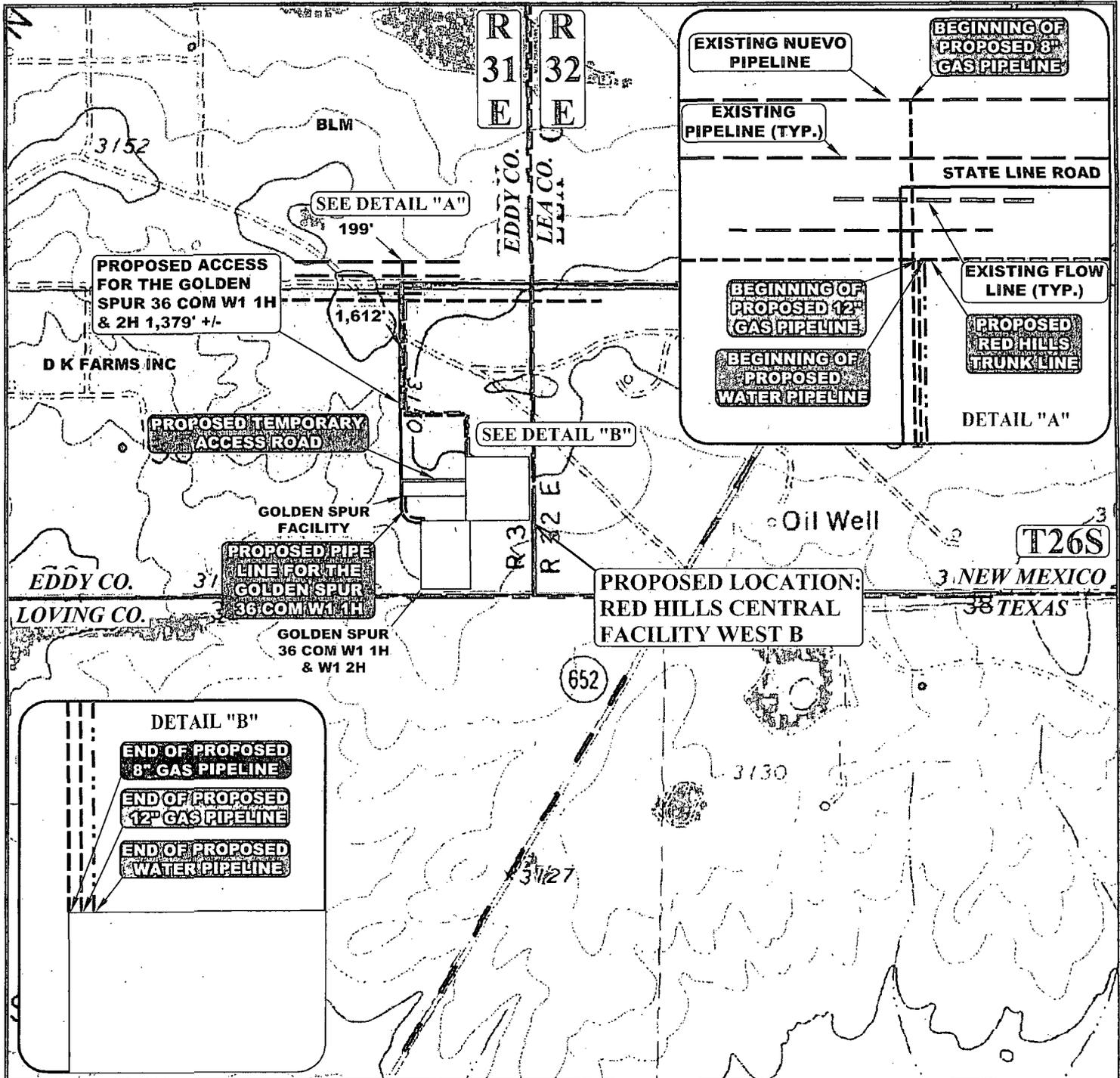
**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B**  
 SECTION 25, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO

DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 06-30-15 B.D.H.



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 Vernal, UT 84078 \* (435) 789-1017



APPROXIMATE TOTAL WATER PIPELINE DISTANCE = 1,537' +/-  
 APPROXIMATE TOTAL 12" GAS PIPELINE DISTANCE = 1,537' +/-  
 APPROXIMATE TOTAL 8" GAS PIPELINE DISTANCE = 1,811' +/-

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**

	EXISTING ROAD
	PROPOSED ROAD
	PROPOSED WATER LINE
	PROPOSED 8" PIPELINE
	PROPOSED 12" PIPELINE
	EXISTING PIPELINE
	PROPOSED PIPELINE (SERVICING OTHER WELLS)

**ConocoPhillips Company**

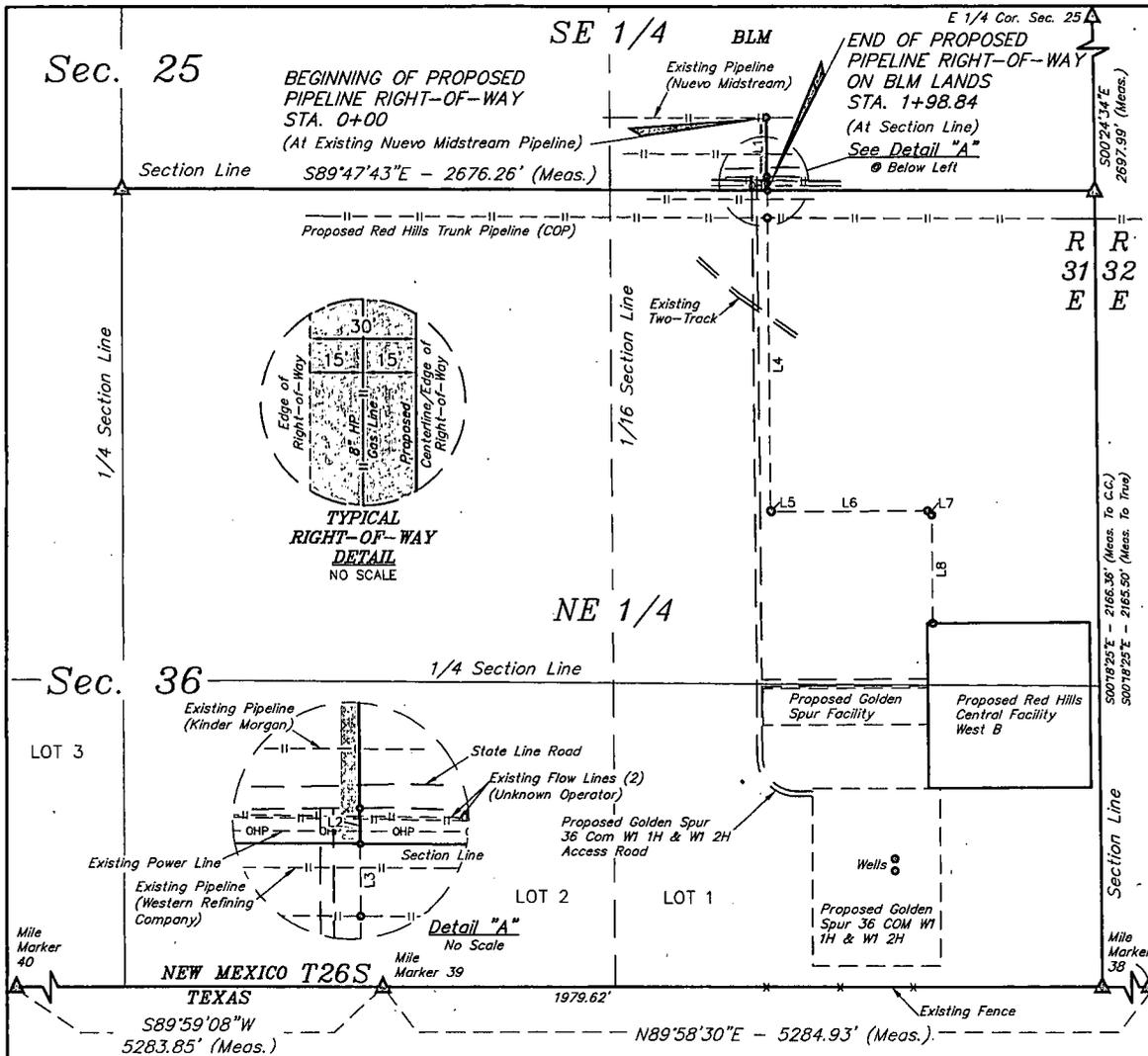
**RED HILLS CENTRAL FACILITY WEST B**  
 LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO



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



DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1" = 1000'	REVISED: 06-25-15
<b>PIPELINE MAP</b>	<b>TOPO D</b>



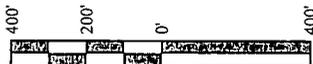
**PIPELINE RIGHT-OF-WAY DESCRIPTION ON BLM LANDS**

BEGINNING AT A POINT IN THE SE 1/4 SE 1/4 SECTION 25, T26S, R31E, N.M.P.M., WHICH BEARS N77°23'19"W 925.44' FROM THE SOUTHEAST CORNER OF SAID SECTION 25, THENCE A 30' WIDE RIGHT-OF-WAY BEING 30' ON THE RIGHT SIDE OF THE FOLLOWING DESCRIBED CENTERLINE, S00°21'53"E 161.47'; THENCE S00°21'53"E 37.37' TO A POINT ON THE SOUTH LINE OF THE SE 1/4 SE 1/4 OF SAID SECTION 25, WHICH BEARS N89°47'43"W 901.85' FROM THE SOUTHEAST CORNER OF SAID SECTION 25. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.137 ACRES MORE OR LESS.

BEGINNING OF PIPELINE STA. 0+00 BEARS N77°23'19"W 925.44' FROM THE SOUTHEAST CORNER OF SECTION 25, T26S, R31E, N.M.P.M.

END OF PIPELINE ON BLM LANDS STA. 1+98.84 BEARS N89°47'43"W 901.85' FROM THE SOUTHEAST CORNER OF SECTION 25, T26S, R31E, N.M.P.M.

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S00°21'53"E	161.47'
L2	S00°21'53"E	37.37'



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
PIPELINE	BLM	198.84	12.05	0.137

▲ = SECTION CORNERS LOCATED.

NOTES:

CERTIFICATE OF PROFESSIONAL SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE PLAN WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Hebron Marshall*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 12446  
 STATE OF NEW MEXICO  
 06-30-15

**ConocoPhillips Company**

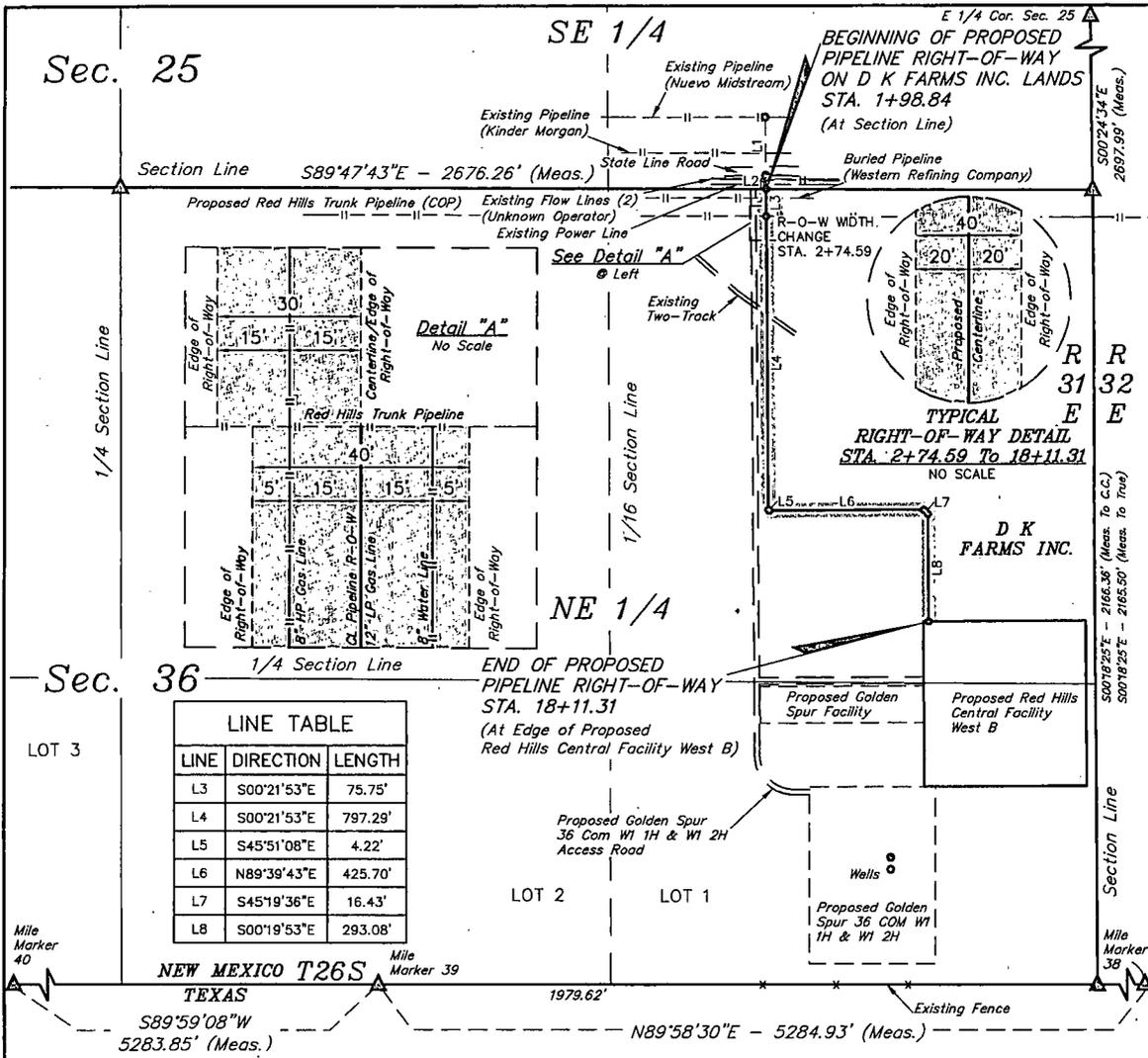
**RED HILLS CENTRAL FACILITY WEST B  
 SECTION 25, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 06-30-15 B.D.H.



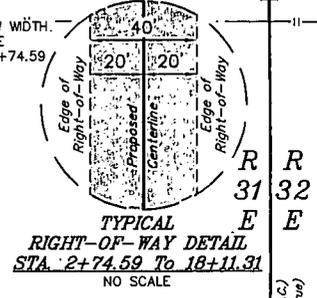
**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017





**LINE TABLE**

LINE	DIRECTION	LENGTH
L3	S00°21'53"E	75.75'
L4	S00°21'53"E	797.29'
L5	S45°51'08"E	4.22'
L6	N89°39'43"E	425.70'
L7	S45°19'36"E	16.43'
L8	S00°19'53"E	293.08'



**PIPELINE RIGHT-OF-WAY DESCRIPTION ON D K FARMS INC. LANDS**

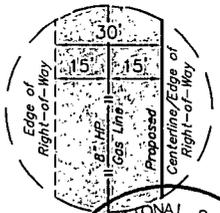
BEGINNING AT A POINT ON THE NORTH LINE OF THE NE 1/4 NE 1/4 OF SECTION 36, T26S, R31E, N.M.P.M., WHICH BEARS N89°47'43"W 901.85' FROM THE NORTHEAST CORNER OF SAID SECTION 36, THENCE A 30' WIDE RIGHT-OF-WAY BEING 30' ON THE RIGHT SIDE OF THE FOLLOWING DESCRIBED CENTERLINE, THENCE S00°21'53"E 75.75' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 36 WHICH BEARS S85°23'58"W 904.27' FROM THE NORTHEAST CORNER OF SAID SECTION 36, THENCE A 40' WIDE RIGHT-OF-WAY, 20' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE, THENCE S00°21'53"E 797.29', THENCE S45°51'08"E 4.22'; THENCE N89°39'43"E 425.70'; THENCE S45°19'36"E 16.43'; THENCE S00°19'53"E 293.08' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 36, WHICH BEARS S21°08'09"W 1259.59' FROM THE NORTHEAST CORNER OF SAID SECTION 36. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 1.463 ACRES MORE OR LESS.

BEGINNING OF PIPELINE ON D K FARMS INC. LANDS STA. 1+98.84 BEARS N89°47'43"W 901.85' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.

R-O-W WIDTH CHANGE STA. 2+74.59 BEARS S85°23'58"W 904.27' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.

END OF PIPELINE STA. 18+11.31 BEARS S21°08'09"W 1259.59' FROM THE NORTHEAST CORNER OF SECTION 36, T26S, R31E, N.M.P.M.

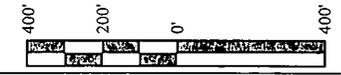
**TYPICAL RIGHT-OF-WAY DETAIL STA. 1+98.84 TO 2+74.59**  
NO SCALE



**CERTIFICATE OF PROFESSIONAL SURVEYOR**

THIS IS TO CERTIFY THAT THE ABOVE PLANS AND MEMORANDUM NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Nelson Marshall*  
REGISTERED LAND SURVEYOR  
REGISTRATION NO. 12446  
STATE OF NEW MEXICO  
06-30-15



**ACREAGE / LENGTH TABLE**

	OWNERSHIP	FEET	RODS	ACRES
PIPELINE	D K FARMS INC.	1612.47	97.73	1.463

▲ = SECTION CORNERS LOCATED.

NOTES:

**ConocoPhillips Company**

**RED HILLS CENTRAL FACILITY WEST B  
SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**

DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 06-30-15 B.D.H.

**PIPELINE R-O-W**

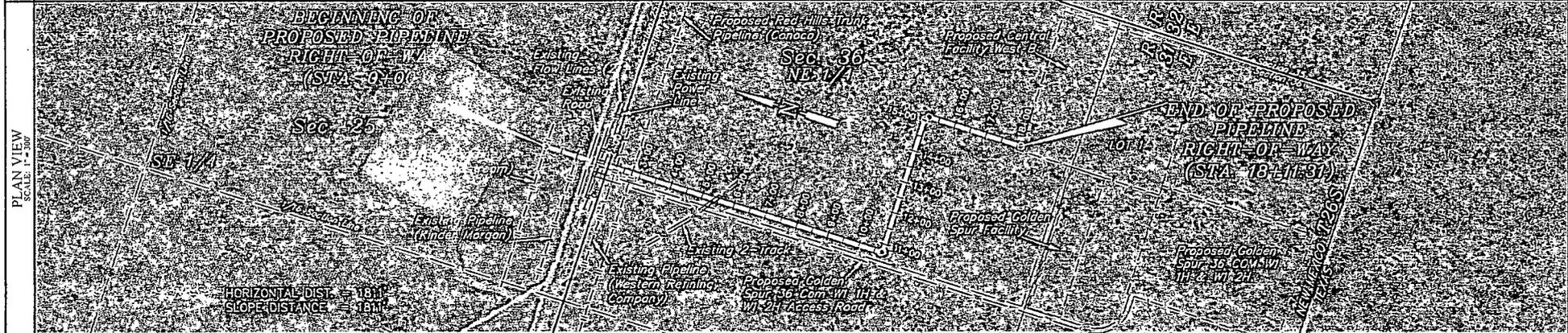


**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

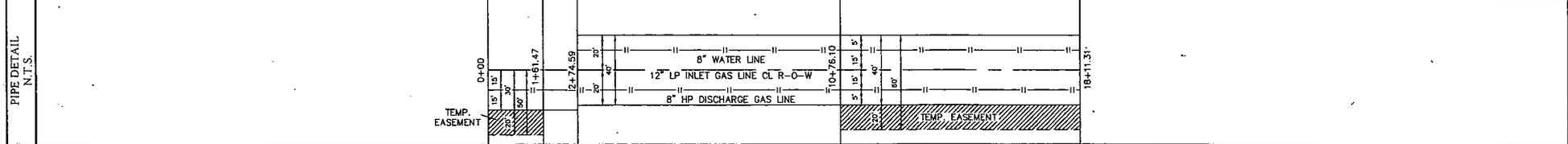
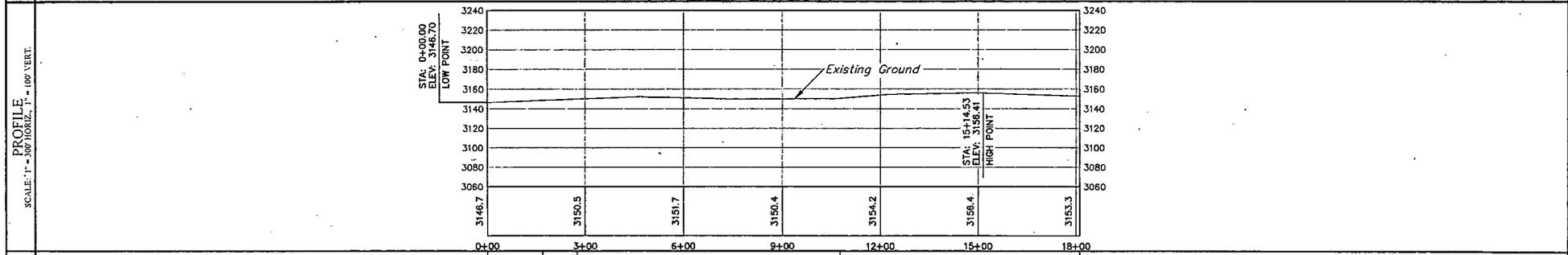


**EDDY COUNTY, NEW MEXICO**

OWNERSHIP FEET/RODS	0+00	BLM SE 1/4 SE 1/4 SEC. 25, T26S, R31E, N.M.P.M. 198.84' 12.05 RODS	1+98.84	D K FARMS INC. NE 1/4 NE 1/4 SEC. 36, T26S, R31E, N.M.P.M. 1612.47' 97.73 RODS	18+11.31



STATIONING	0+00	0+00.00 PIPELINE KINDER MORGAN	1+49.50 CL ROAD	1+71.61 FLOW LINE	1+85.77 POWER LINE	2+24.02 PIPELINE WESTERN REFINING	2+74.59 PIPELINE CONOCO	5+41.36 CL 2-TRACK	10+71.88 P.I. 4579'15" L	10+76.10 P.I. 4479'09" L	15+01.89 P.I. 4500'14" R	15+10.23 P.I. 4459'45" R



	<b>REVISION</b>		<b>SUMMARY OF MATERIALS</b>		<b>PROJECT DATA</b>		SCALE: AS SHOWN DRAWING# 59752 SHEET: 1 OF 1	LOCATED IN SECTIONS 25 & 36, T26S, R31E, N.M.P.M., EDDY COUNTY, NEW MEXICO	<b>ConocoPhillips Company</b> RED HILL CENTRAL FACILITY WEST B PIPELINE PLAN & PROFILE
	NO. DESCRIPTION DATE 1. ADDED PROPOSED PIPELINE & SHORTENED 8" WATER & GAS LINE R-5'-W WIDTH ON 8" HP DISCHARGE GAS LINE 06-25-15 N.W. 2. 06-30-15 B.D.H.	ITEM NO. LINEAR FEET DESCRIPTION 10+76.10 15' 8" 8" HP DISCHARGE GAS LINE 10+76.10 15' 5" 12" LP INLET GAS LINE CL R-C-W 10+76.10 15' 5" 8" WATER LINE	SURVEYED BY: J.V. DRAWN BY: S.D. DATE: 06-16-15						



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NO.	DESCRIPTION	DATE	ITEM NO.	LINEAR FEET	DESCRIPTION
1.	ADDED PROPOSED PIPELINE & SHORTENED 8" WATER & GAS LINE R-5'-W WIDTH ON 8" HP DISCHARGE GAS LINE	06-25-15 N.W.			
2.		06-30-15 B.D.H.			

SURVEYED BY: J.V.	SCALE: AS SHOWN
DRAWN BY: S.D.	DRAWING# 59752
DATE: 06-16-15	SHEET: 1 OF 1

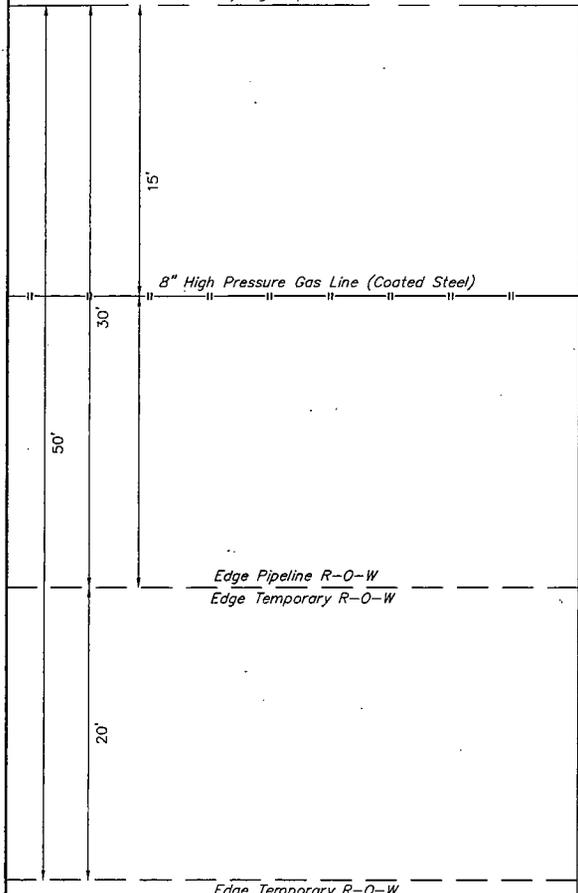
LOCATED IN  
 SECTIONS 25 & 36,  
 T26S, R31E, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO

**ConocoPhillips Company**  
 RED HILL CENTRAL  
 FACILITY WEST B  
 PIPELINE PLAN & PROFILE

**RIGHT-OF-WAY DETAIL**  
NO SCALE

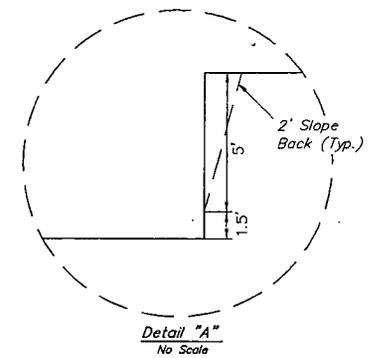
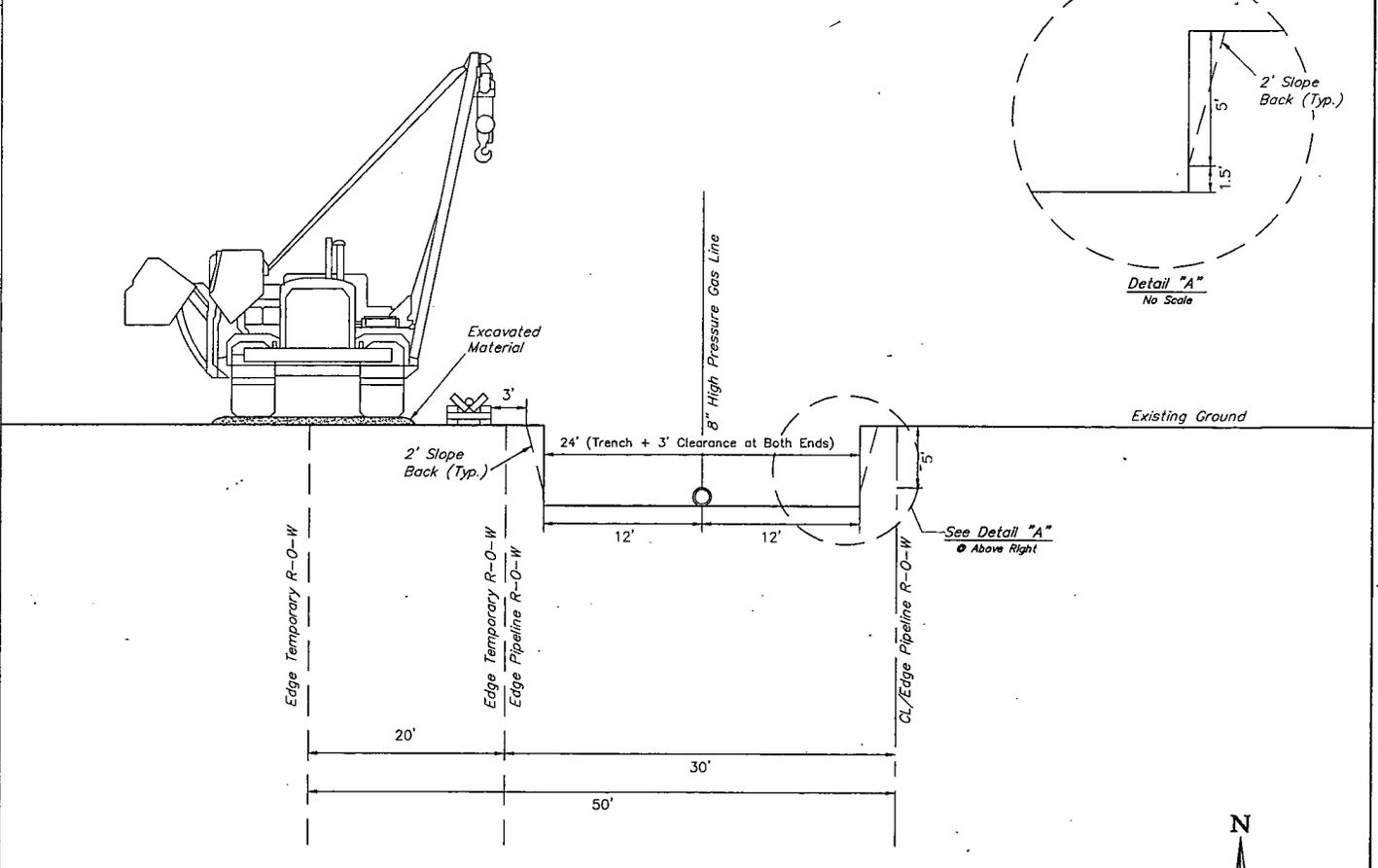
R-O-W Direction

CL/Edge Pipeline R-O-W



**TRENCH DETAIL**  
NO SCALE

STA. 0+00 TO 1+61.47



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

REVISION		SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	ITEM NO.
1.	CORRECT R-O-W DIRECTION	06-26-15 B.D.H.	
2.	CORRECT R-O-W WIDTH	06-30-15 B.D.H.	

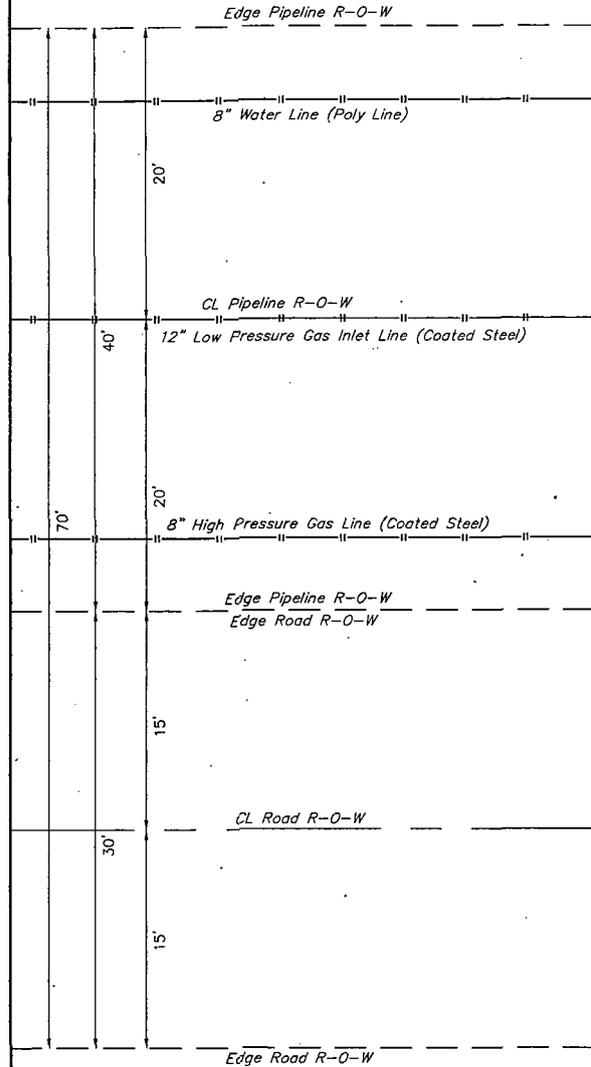
PROJECT DATA	
SURVEYED BY: J.V.	SCALE: N/A
DRAWN BY: S.O.	DRAWING# N/A
DATE: 06-17-15	SHEET: 1 OF 4

LOCATED IN  
SECTIONS 25 & 36  
T26S, R31E, N41P.M.  
EDDY COUNTY, NEW MEXICO

**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
RIGHT-OF-WAY DETAIL

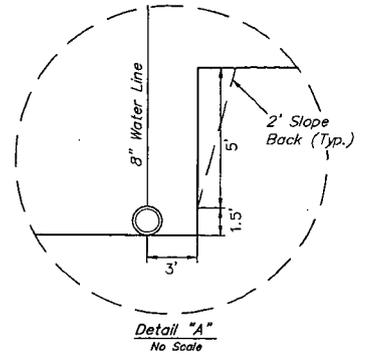
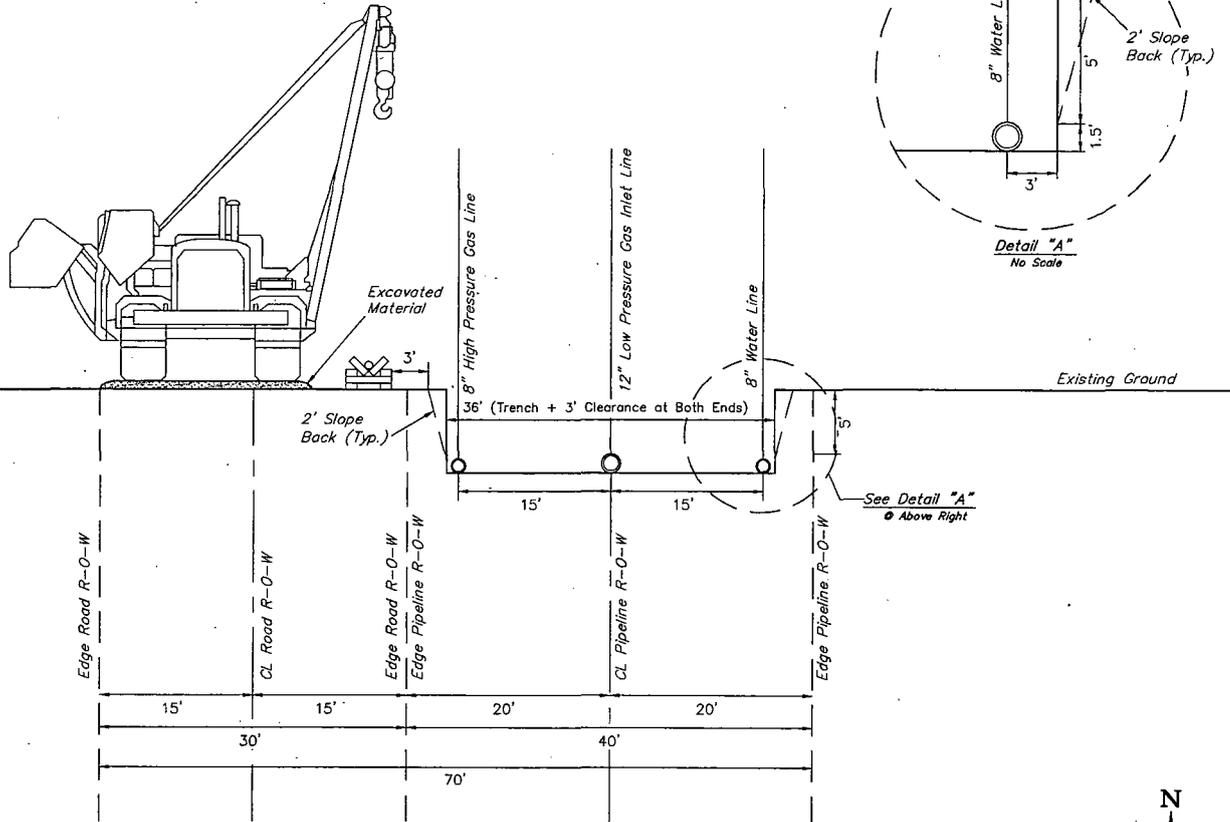
**RIGHT-OF-WAY DETAIL**  
NO SCALE

R-O-W Direction



**TRENCH DETAIL**  
NO SCALE

STA. 2+74.59 TO 10+76.10



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

REVISION		SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	ITEM NO. LINEAR FEET
1.	CORRECT R-O-W DIRECTION	06-25-15 B.D.H.	

PROJECT DATA	
SURVEYED BY: J.V.	SCALE: N/A
DRAWN BY: S.O.	DRAWING# N/A
DATE: 06-17-15	SHEET: 3 OF 4

LOCATED IN  
SECTIONS 25 & 36,  
T26S, R31E, N13E, M.P.M.,  
EDDY COUNTY, NEW MEXICO

**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
RIGHT-OF-WAY DETAIL

**RIGHT-OF-WAY DETAIL**  
NO SCALE

R-O-W Direction

Edge Pipeline R-O-W

8" Water Line (Poly Line)

20'

CL Pipeline R-O-W

12" Low Pressure Gas Inlet Line (Coated Steel)

40'

20'

8" High Pressure Gas Line (Coated Steel)

Edge Pipeline R-O-W

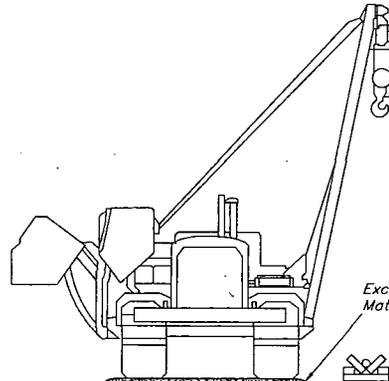
Edge Temporary R-O-W

20'

Edge Temporary R-O-W

**TRENCH DETAIL**  
NO SCALE

STA. 10+76.10 TO 18+11.31



Excavated Material

3'

2' Slope Back (Typ.)

8" High Pressure Gas Line

36' (Trench + 3' Clearance at Both Ends)

12" Low Pressure Gas Inlet Line

8" Water Line

Existing Ground

See Detail "A"  
Above Right

Edge Temporary R-O-W

Edge Temporary R-O-W

Edge Pipeline R-O-W

CL Pipeline R-O-W

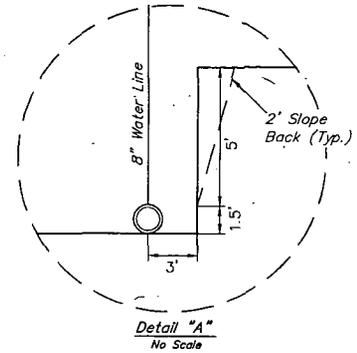
Edge Pipeline R-O-W

20'

20'

20'

60'



Detail "A"  
No Scale



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Vernal, UT 84078 • (435) 789-1017

REVISION			SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	ITEM NO.	LINEAR FEET
1.	CORRECT R-O-W DIRECTION	06-25-15 B.D.H.		

PROJECT DATA	
SURVEYED BY: J.V.	SCALE: N/A
DRAWN BY: S.O.	DRAWING# N/A
DATE: 06-17-15	SHEET: 4 OF 4

LOCATED IN  
SECTIONS 24 & 36,  
T26S, R31E, N14P1W,  
EDDY COUNTY, NEW MEXICO

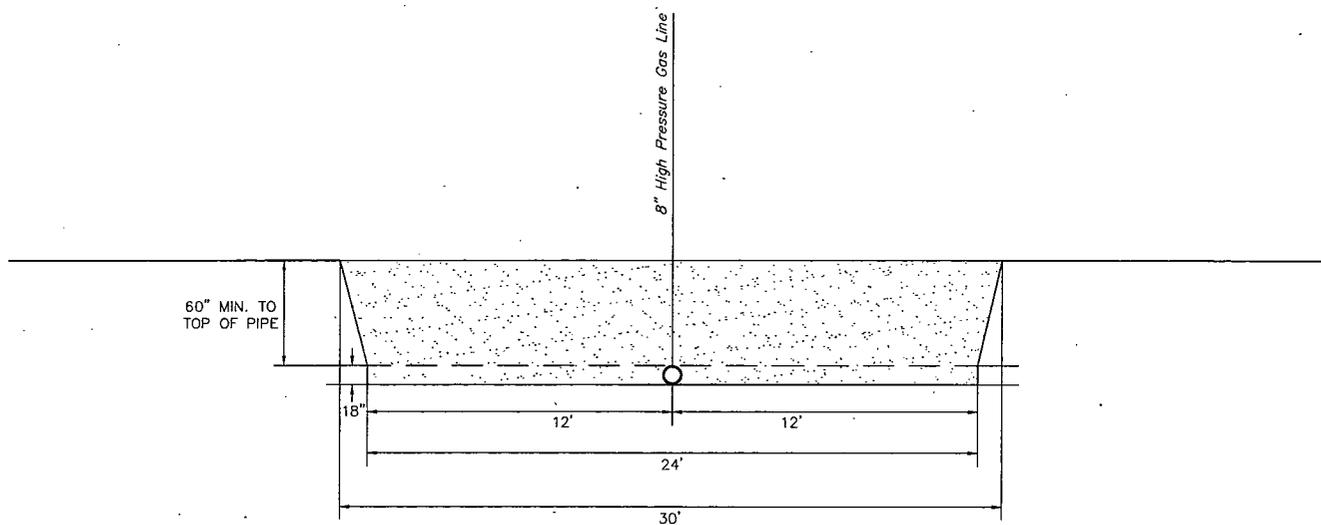
**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
RIGHT-OF-WAY DETAIL

**BACKFILL DIAGRAM**

NO SCALE

STA. 0+00 TO 2+74.59

R-O-W Direction



BACKFILL DIRT TO BE AS FREE OF ROCKS AND  
LARGE PARTICLES AS POSSIBLE

8" WATER LINE WILL BE POLY LINE

SOFT FILL DIRT OR SAND WITH NO ROCKS OR SOLID  
PARTICLES GREATER THAN 1" IN CIRCUMFERENCE

5' CLEARANCE AT BOTH ENDS



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

REVISION			SUMMARY OF MATERIALS	
NO.	DESCRIPTION	DATE	ITEM NO.	LINEAR FEET
1.	CORRECT R-O-W WIDTH	06-30-15 B.D.H.		

PROJECT DATA		SCALE: N/A
SURVEYED BY: J.V.		
DRAWN BY: S.O.		DRAWING# N/A
DATE: 06-17-15		SHEET: 1 OF 1

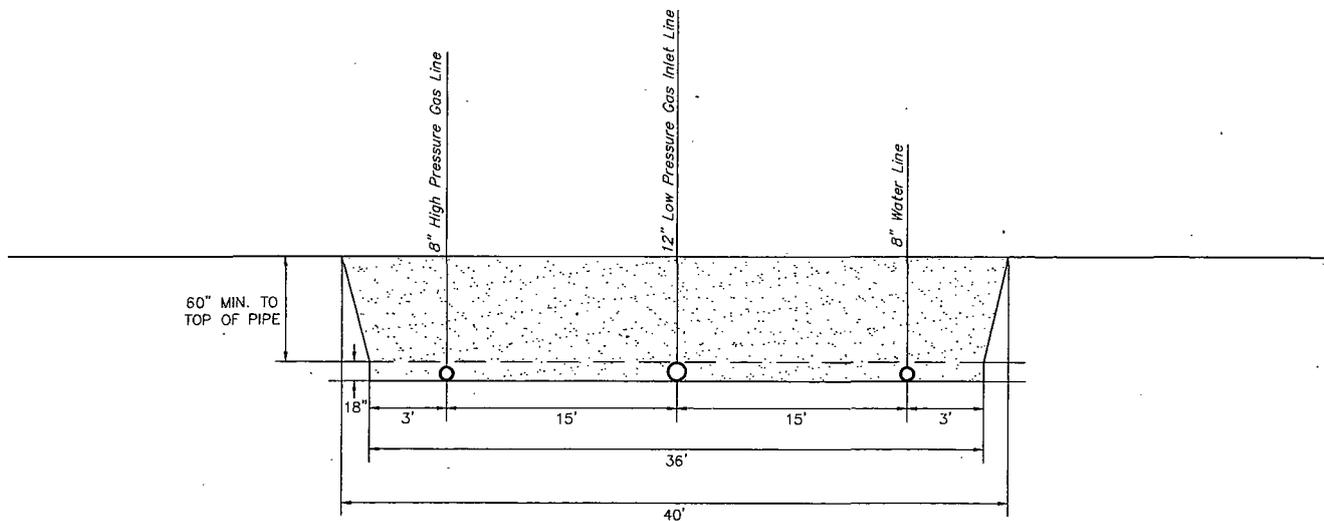
LOCATED IN  
SECTIONS 25 & 36,  
T26S, R31E, N41P14,  
EDDY COUNTY, NEW MEXICO

**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
BACKFILL DIAGRAM

**BACKFILL DIAGRAM**  
NO SCALE

STA. 2+74.59 TO 18+11.31

R-O-W Direction



BACKFILL DIRT TO BE AS FREE OF ROCKS AND  
LARGE PARTICLES AS POSSIBLE

8" HIGH PRESSURE GAS LINE WILL BE COATED STEEL

12" LOW PRESSURE GAS INLET LINE WILL BE  
COATED STEEL

8" WATER LINE WILL BE POLY LINE

SOFT FILL DIRT OR SAND WITH NO ROCKS OR SOLID  
PARTICLES GREATER THAN 1" IN CIRCUMFERENCE

5' CLEARANCE AT BOTH ENDS

15' CLEARANCE BETWEEN EACH PIPE



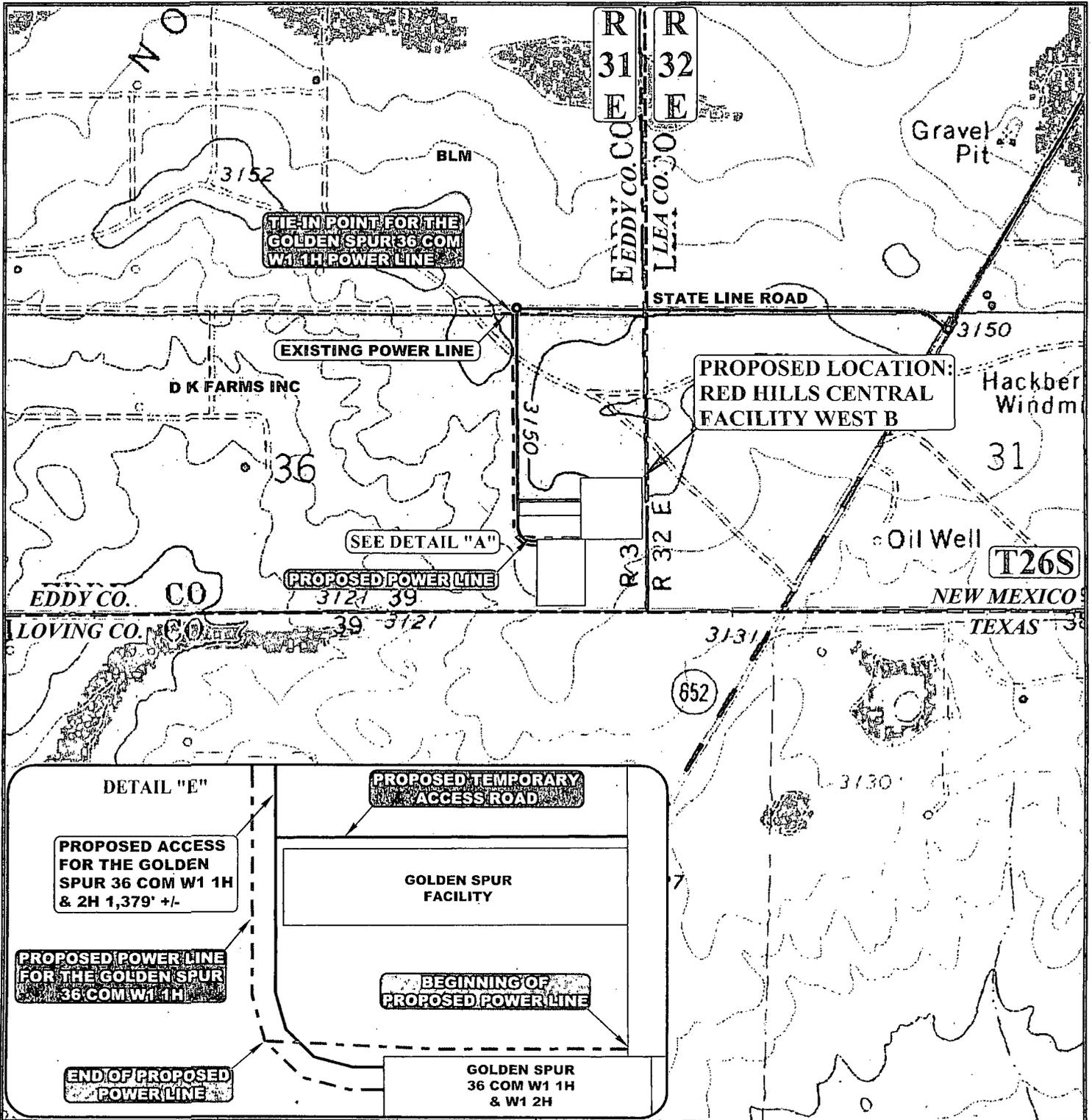
**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

REVISION			SUMMARY OF MATERIALS		
NO.	DESCRIPTION	DATE	ITEM NO.	LINEAR FEET	DESCRIPTION
1.	CORRECT R-O-W WIDTH	06-30-15 B.D.H.			

PROJECT DATA		SCALE: N/A
SURVEYED BY: J.V.	DRAWING# N/A	
DRAWN BY: S.O.	SHEET: 1 OF 1	
DATE: 06-17-15		

LOCATED IN  
SECTIONS 25 & 36,  
T26S, R31E, N4M.P.M.,  
EDDY COUNTY, NEW MEXICO

**ConocoPhillips Company**  
RED HILLS CENTRAL  
FACILITY WEST B  
BACKFILL DIAGRAM



APPROXIMATE TOTAL POWER LINE DISTANCE = 474' +/-

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**

- EXISTING ROAD
- PROPOSED ROAD
- - - PROPOSED POWER LINE
- - - EXISTING POWER LINE
- - - PROPOSED POWER LINE (SERVICING OTHER WELLS)

ConocoPhillips Company

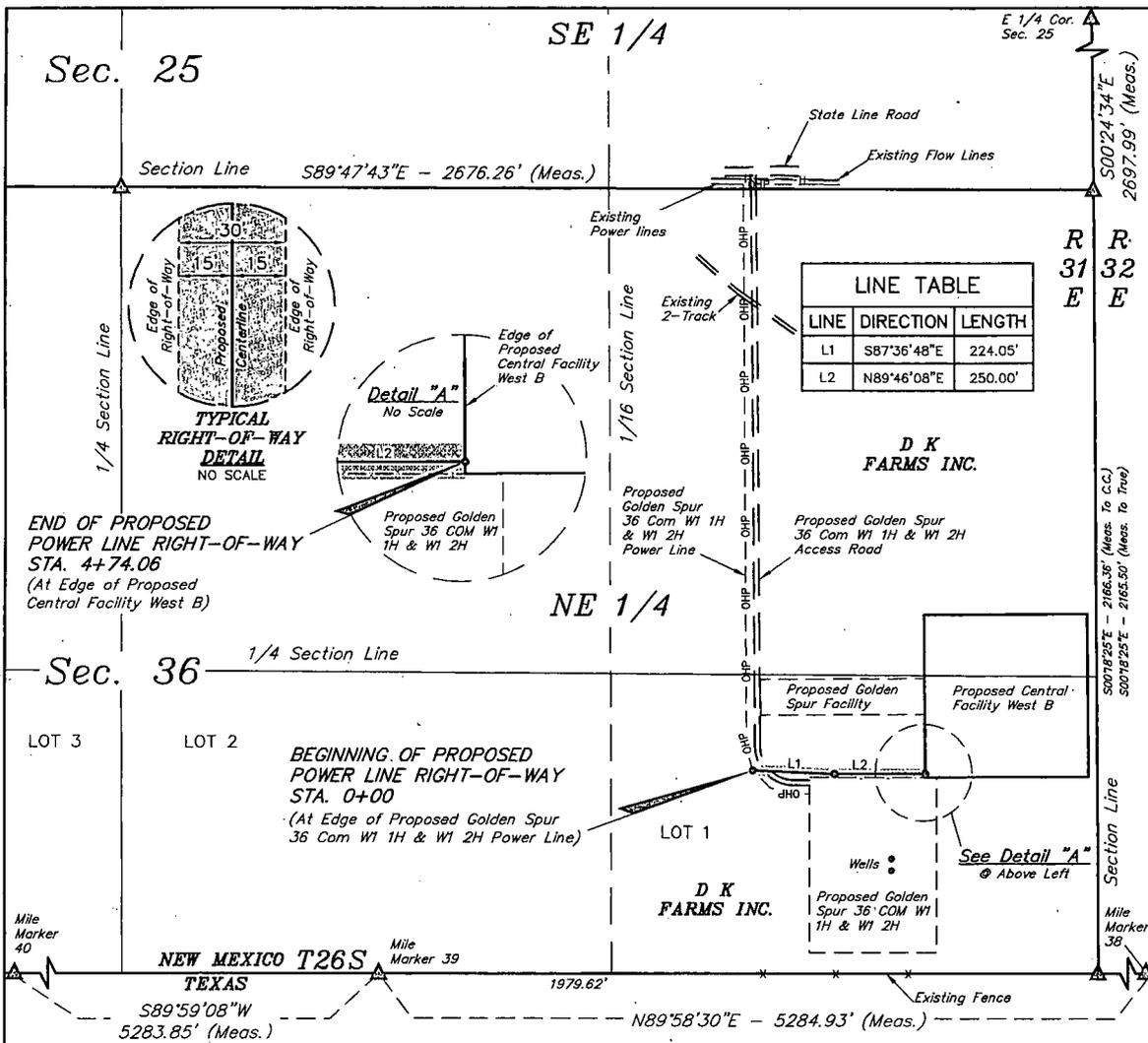
**RED HILLS CENTRAL FACILITY WEST B  
LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**



DRAWN BY: R.C.	DATE DRAWN: 06-12-15
SCALE: 1" = 1000'	REVISED: 00-00-00
<b>POWER LINE MAP</b>	<b>TOPO E</b>



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



**POWER LINE RIGHT-OF-WAY DESCRIPTION**

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN LOT 1 OF SECTION 36, T26S, R31E, N.M.P.M., WHICH BEARS S30°20'43\"/>

BEGINNING OF POWER LINE STA. 0+00 BEARS S30°20'43\"/>

END OF POWER LINE STA. 4+74.06 BEARS S16°07'03\"/>



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
POWER LINE	D K FARMS INC.	474.06	28.73	0.326

CERTIFICATE OF PROFESSIONAL SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  
 Nelson J. Marshall  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 12446  
 STATE OF NEW MEXICO MARSHAL 06-17-15

Δ = SECTION CORNERS LOCATED.

NOTES:

ConocoPhillips Company

RED HILLS CENTRAL FACILITY WEST B  
 SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO

DRAWN BY: T.E.	DATE DRAWN: 06-16-15
SCALE: 1" = 400'	REVISED: 00-00-00



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



**POWER LINE R-O-W**

## ConocoPhillips, Golden Spur 36 COM W1 2H

### 1. Geologic Formations

TVD of target	11,605	Pilot hole depth	N/A
MD at TD:	18,834	Deepest expected fresh water:	300

#### Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards
Quaternary Fill	Surface	Water	
Base of Fresh Water	300	Water	
Rustler	920	Water	
Top of Salt / Salado	1,355	Salt	
Castile	2,300	Salt	
Delaware Top / Base Salt	4,165	Oil/Gas	Loss of Circulation
Ford Shale	4,235	Oil/Gas	
Cherry Canyon	5,110	Oil/Gas	Loss of Circulation
Brushy Canyon	6,485	Oil/Gas	Loss of Circulation
Bone Springs	9,150	Oil/Gas	Loss of Circulation
Bone Springs 3 <sup>rd</sup> Carb	10,220	Oil/Gas	
WolfCamp	11,330	Oil/Gas	
WolfCamp 1	11,530	Target Zone	

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

**ConocoPhillips, Golden Spur 36 COM W1 2H**

Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

**3. Cementing Program**

Casing	# Sk	Wt. lb/gal	Yld. ft <sup>3</sup> /sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	300	13.7	1.63	8.50	7	Lead: Class C + 1.5% Bentonite + 1.0% CaCl <sub>2</sub> + 0.2% Anti-Foam + 0.2% Dispersant.
	400	14.8	1.33	6.34	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Dispersant.
Contingency Inter. 1	2000	11.5	2.74	15.25	15	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 5lb/sk LCM + 0.25% Dispersant + 0.25% Retarder.
	350	13.5	1.35	6.34	5	Tail: Class C + 0.2% Anti-Foam + 0.25% Retarder + 0.5% Extender.
	DV/ECP Tool: NO					
9-5/8" Casing will be set aside as contingency string for cementing with severe losses if necessary.						
Inter. 2	900	11.5	2.57	14.21	7	Lead: Class C + 10.0 lb/sk Extender + 0.25% Anti-Foam + 0.5% Retarder + 0.3% Fluid Loss + 1% Dispersant + 5 lbs/sk LCM + 4% Expanding Agent.
	140	13.5	1.49	6.76	7	Tail: Class C + 0.9% Gas Control + 9.0% Extender + 0.4% Dispersant + 0.5% Retarder + 0.2% Anti-Foam + 0.25 lb/sk Lost Circ Control + 5 lbs/sk LCM + 3.0% Expanding Agent
	DV/ECP Tool ~4,500' (OPTIONAL)					
	400	11.5	2.57	15.25	15	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 5lb/sk LCM + 0.25% Dispersant + 0.25% Retarder.
Prod.	800	16.4	1.10	4.28	5	Tail: Class H + 1.800 gal/sk Gas Control Agent + 0.025 gal/sk Dispersant + 0.080 gal/sk Retarder + 0.030 gal/sk Anti-Foam.
	DV/ECP Tool NO'					

see COA  
see COA

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

**ConocoPhillips, Golden Spur 36 COM W1 2H**

**2. Casing Program – Option Not to Run 9-5/8”**

see  
COA

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Dry Tension
	From	To							
17.50"	0	990 1040	13.375"	54.5	J55	BTC	2.36	5.70	15.8
12.25" x 9.875"	0	4,165 x 11,879	7.625"	29.7	P110	BTC	**1.7 COP Collapse Design S.F.	1.46	2.72
6.75"	0	18,834 (11605 TVD)	5.0"	18	P110	TXPBTC	1.59	1.65	2.78
BLM Minimum Safety Factor							1.125	1.00	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

**9-5/8” Contingency Option**

ConocoPhillips Company respectfully requests the option to not run 9-5/8” 40# L-80 BTC Casing and spare it as a contingency if the next hole section failed to support the hydrostatic column of the previous mud weight. The intent for the casing and cementing program:

- Drill the 12-1/4” to the Base of the Salt and 9-7/8” hole from Base of Salt to Wolfcamp 1 with the same density mud (OBM or Saturated Brine).
- Case and cement the well with 13-3/8” surface, 7-5/8” intermediate and 5” production casing (3-strings).
- Isolate the Salt & Delaware utilizing Annulus Casing Packer and Stage Tool if necessary.
- Bring cement from 7-5/8” casing shoe to surface.
- Provided that if the hole can no longer support the hydrostatic column of the previous mud weight, a contingency plan to run the 9-5/8” casing for cementing with severe losses if necessary.

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
12.25"	0	4,165	9.625"	40.0	L80	BTC	2.53	1.36	5.50
8.75"	0	11,879	7.625"	29.7	P110	TenW523	**1.7 COP Collapse Design S.F.	1.46	2.72

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM’s minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
<b>Is well located within Capitan Reef?</b>	
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50’ above the Reef?	
Is well within the designated 4 string boundary.	
<b>Is well located in SOPA but not in R-111-P?</b>	
Is well located in SOPA but not in R-111-P?	R N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500’ into previous casing?	R N

## ConocoPhillips, Golden Spur 36 COM W1 2H

Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

### 3. Cementing Program

Casing	# Sk	Wt lb/ gal	Yld ft/ sack	H <sub>2</sub> O gal/sk	500# Comp Strength (hours)	Slurry Description
Surf.	300	13.7	1.63	8.50	7	Lead: Class C + 1.5% Bentonite + 1.0% CaCl <sub>2</sub> + 0.2% Anti-Foam + 0.2% Dispersant.
	400	14.8	1.33	6.34	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Dispersant.
Contingency Inter. 1	2000	11.5	2.74	15.25	15	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 5lb/sk LCM + 0.25% Dispersant + 0.25% Retarder.
	350	13.5	1.35	6.34	5	Tail: Class C + 0.2% Anti-Foam + 0.25% Retarder + 0.5% Extender.
	DV/ECP Tool NO					
9-5/8" Casing will be set aside as contingency string for cementing with severe losses if necessary.						
Inter. 2	900	11.5	2.57	14.21	7	Lead: Class C + 10.0 lb/sk Extender + 0.25% Anti-Foam + 0.5% Retarder + 0.3% Fluid Loss + 1% Dispersant + 5 lbs/sk LCM + 4% Expanding Agent.
	140	13.5	1.49	6.76	7	Tail: Class C + 0.9% Gas Control + 9.0% Extender + 0.4% Dispersant + 0.5% Retarder + 0.2% Anti-Foam + 0.25 lb/sk Lost Circ Control + 5 lbs/sk LCM + 3.0% Expanding Agent
	DV/ECP Tool ~4,500' (OPTIONAL)					
Prod.	400	11.5	2.57	15.25	15	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 5lb/sk LCM + 0.25% Dispersant + 0.25% Retarder.
	800	16.4	1.10	4.28	5	Tail: Class H + 1.800 gal/sk Gas Control Agent + 0.025 gal/sk Dispersant + 0.080 gal/sk Retarder + 0.030 gal/sk Anti-Foam.
DV/ECP Tool NO						

see  
COA  
  
see  
COA

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

**ConocoPhillips, Golden Spur 36 COM W1 2H**

Casing String	TOC	% Excess
Surface	0'	100%
Contingency Intermediate 1	0'	100% - 130%
Intermediate 2	0'	50%
Production	11,379'	30% - 35%

Include Pilot Hole Cementing specs: NO PILOT HOLE.

Pilot hole depth N/A

KOP

*see COA*

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld. ft <sup>3</sup> /sack	Water gal/sk	Slurry Description and Cement Type

**4. Pressure Control Equipment**

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
------------------------------------------------------------------------------------------------------

BOP installed and tested before drilling which hole?	Size	Min. Required WP	Type	✓	Tested to:
12-1/4" x 9-7/8"	13-5/8"	5M	Annular	x	50% of working pressure
			Blind Ram	x	
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram	x	
			Pipe Ram	x	
			Double Ram	x	
			Other*		

\*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

## ConocoPhillips, Golden Spur 36 COM W1 2H

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. <ul style="list-style-type: none"> <li>◦ Provide description here</li> </ul> <p>See attached schematic.</p>

### 5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	990 <del>1040</del>	Spud Mud	8.6-9.3	32-36	N/C
990	4,165	Brine or OBM	8.9-10.5	28-40	≤5
4,165	11,879	Brine or OBM	8.9-10.5	28-40	≤5
11,879	18,834	Oil Base Mud	12.0-14.0	30-40	≤5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---------------------------------------------------------	-----------------------------

### 6. Logging and Testing Procedures

Logging, Coring and Testing	
X	GR from 200' above KOP to TD (GR as part of the BHA while drilling). Not log in the lateral.
X	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain
X	Dry samples taken 30' from intermediate 1 casing point to TD. GC Tracers KOP to TD.

Additional logs planned	Interval
	Resistivity
	Density
	CBL
X	Mud log
	PEX

**ConocoPhillips, Golden Spur 36 COM W1 2H**

**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	~6,600 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Use of 20 ppb – 25 ppb Wellbore Strengthening material (Walnut Fine) in 8.9 ppg to 10.5 ppg OBM or Saturated Brine with Axiom 3-deck shakers for recycling to increase the formation breakdown pressure above what would have with clear saturated 10 ppg brine.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
X	H2S is present
X	H2S Plan attached

**8. Other facets of operation**

Is this a walking operation? If yes, describe. Yes, please see below.

Will be pre-setting casing? If yes, describe. Yes, please see below.

**Spudder Rig and Skid Operations:** Depending on rig availability, ConocoPhillips may pre-set the surface casing. 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 Orders). 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.

## ConocoPhillips, Golden Spur 36 COM W1 2H

### Attachments:

- Attachment#1: Directional Plan.
- Attachment#2: Casing & Cement Wellbore Schematic.
- Attachment#3: Wellhead Schematics
- Attachment #4: Choke & BOPE Schematics.
- Attachment #5: Special (Premium) Connections
- Attachment #6: Flex Hose Documentation.
- Attachment #7: Spudder Rig Layout

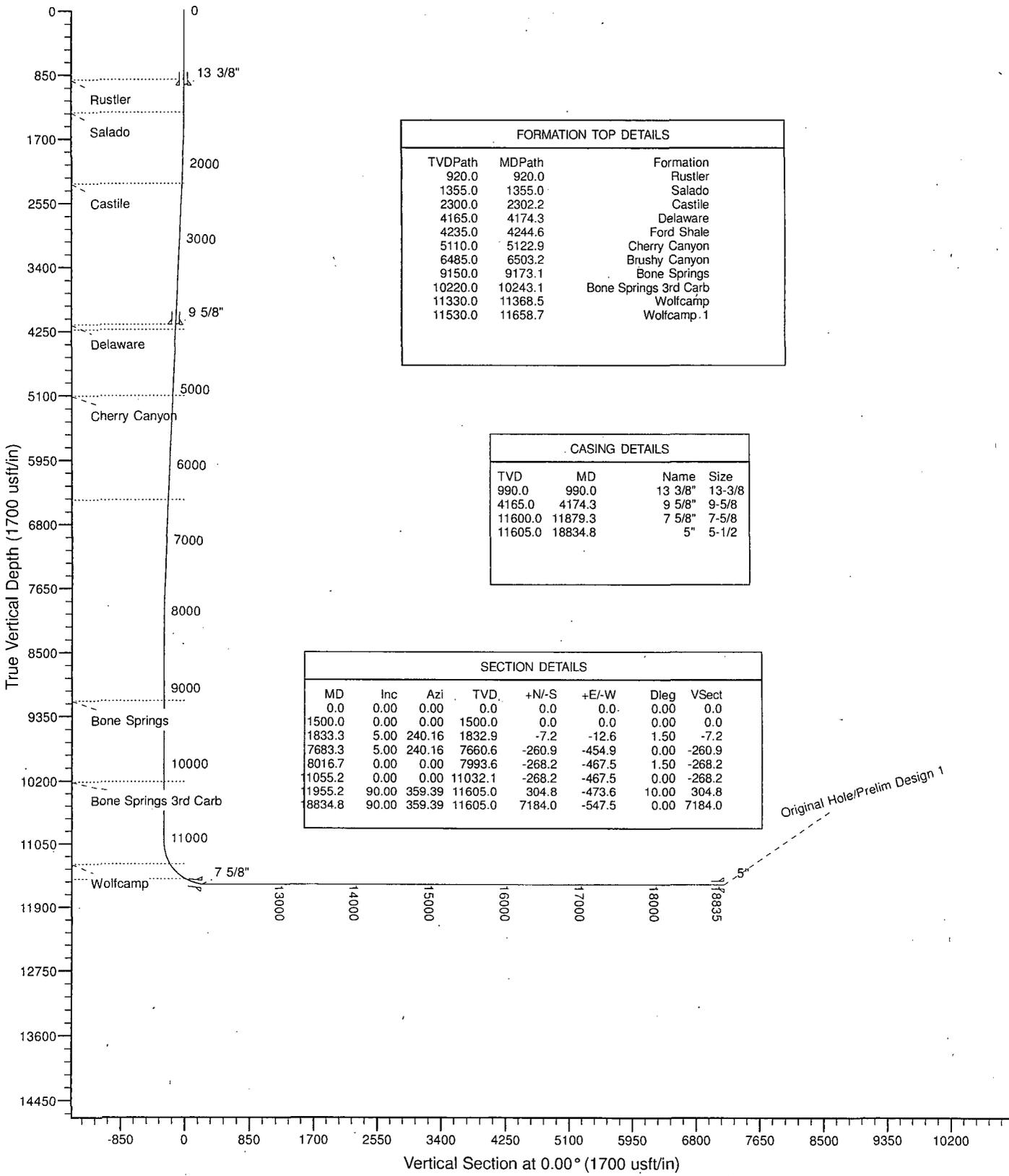


ConocoPhillips MCBU  
 Permian Delaware Hz New Mexico  
 GOLDEN SPUR 36 COM W1 2H - PS  
 Golden Spur 36 COM W1 2H  
 Original Hole  
 Plan: Prelim Design 1 (Golden Spur 36 COM W1 2H/Original Hole)  
 WELL @ 3171.0usft (Original Well Elev)  
 US State Plane 1927 (Exact solution)  
 NAD 1927 (NADCON CONUS)  
 Clarke 1866  
 New Mexico East 3001



Azimuths to Grid North  
 True North: -0.32°  
 Magnetic North: 7.01°

Magnetic Field  
 Strength: 48019.4snT  
 Dip Angle: 59.85°  
 Date: 5/13/2015  
 Model: BGM2014



# ConocoPhillips MCBU

Permian Delaware Hz New Mexico  
GOLDEN SPUR 36 COM W1 2H - PS  
Golden Spur 36 COM W1 2H

Original Hole

Plan: Prelim Design 1

## Standard Planning Report

14 May, 2015

# ConocoPhillips Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim Design 1		

<b>Project:</b>	Permian Delaware Hz New Mexico, Mexico		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS, Section 36 and 25		
<b>Site Position:</b>	<b>Northing:</b>	364,604.44 usft	<b>Latitude:</b> 32° 0' 3.417 N
<b>From:</b> Map	<b>Easting:</b>	688,807.80 usft	<b>Longitude:</b> 103° 43' 27.351 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b> 13-3/16"	<b>Grid Convergence:</b> 0.32 °

<b>Well:</b>	Golden Spur 36 COM W1 2H, Exploration - Horizontal		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 364,604.44 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 688,807.80 usft
			<b>Longitude:</b> 103° 43' 27.351 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b> usft
			<b>Ground Level:</b> 3,146.0 usft

<b>Wellbore:</b>	Original Hole		
<b>Magnetics:</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b> (°)
	BGGM2014	5/13/2015	7.34
			<b>Dip Angle</b> (°)
			59.85
			<b>Field Strength</b> (nT)
			48,019

<b>Design:</b>	Prelim Design 1		
<b>Audit Notes:</b>			
<b>Version:</b>	1	<b>Phase:</b>	PROTOTYPE
		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b> (usft)	<b>+N/-S</b> (usft)	<b>+E/-W</b> (usft)
	0.0	0.0	0.0
			<b>Direction</b> (°)
			0.00

<b>Plan Sections:</b>										
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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,833.3	5.00	240.16	1,832.9	-7.2	-12.6	1.50	1.50	0.00	240.16	GS_36_W1_2H_VT
7,683.3	5.00	240.16	7,660.6	-260.9	-454.9	0.00	0.00	0.00	0.00	
8,016.7	0.00	0.00	7,993.6	-268.2	-467.5	1.50	-1.50	0.00	180.00	
11,055.2	0.00	0.00	11,032.1	-268.2	-467.5	0.00	0.00	0.00	0.00	
11,955.2	90.00	359.39	11,605.0	304.8	-473.6	10.00	10.00	-0.07	359.39	
18,834.8	90.00	359.39	11,605.0	7,184.0	-547.5	0.00	0.00	0.00	0.00	GS_36_W1_2H_BHL

# ConocoPhillips Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>IVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim 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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00	
<b>Rustler</b>										
990.0	0.00	0.00	990.0	0.0	0.0	0.0	0.00	0.00	0.00	
<b>13 3/8"</b>										
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,355.0	0.00	0.00	1,355.0	0.0	0.0	0.0	0.00	0.00	0.00	
<b>Salado</b>										
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,600.0	1.50	240.16	1,600.0	-0.7	-1.1	-0.7	1.50	1.50	0.00	
1,700.0	3.00	240.16	1,699.9	-2.6	-4.5	-2.6	1.50	1.50	0.00	
1,800.0	4.50	240.16	1,799.7	-5.9	-10.2	-5.9	1.50	1.50	0.00	
1,833.3	5.00	240.16	1,832.9	-7.2	-12.6	-7.2	1.50	1.50	0.00	
1,900.0	5.00	240.16	1,899.3	-10.1	-17.6	-10.1	0.00	0.00	0.00	
2,000.0	5.00	240.16	1,998.9	-14.5	-25.2	-14.5	0.00	0.00	0.00	
2,100.0	5.00	240.16	2,098.6	-18.8	-32.8	-18.8	0.00	0.00	0.00	
2,200.0	5.00	240.16	2,198.2	-23.1	-40.3	-23.1	0.00	0.00	0.00	
2,300.0	5.00	240.16	2,297.8	-27.5	-47.9	-27.5	0.00	0.00	0.00	
2,302.2	5.00	240.16	2,300.0	-27.6	-48.1	-27.6	0.00	0.00	0.00	
<b>Castile</b>										
2,400.0	5.00	240.16	2,397.4	-31.8	-55.4	-31.8	0.00	0.00	0.00	
2,500.0	5.00	240.16	2,497.0	-36.1	-63.0	-36.1	0.00	0.00	0.00	
2,600.0	5.00	240.16	2,596.7	-40.5	-70.6	-40.5	0.00	0.00	0.00	
2,700.0	5.00	240.16	2,696.3	-44.8	-78.1	-44.8	0.00	0.00	0.00	
2,800.0	5.00	240.16	2,795.9	-49.2	-85.7	-49.2	0.00	0.00	0.00	
2,900.0	5.00	240.16	2,895.5	-53.5	-93.2	-53.5	0.00	0.00	0.00	
3,000.0	5.00	240.16	2,995.1	-57.8	-100.8	-57.8	0.00	0.00	0.00	
3,100.0	5.00	240.16	3,094.8	-62.2	-108.4	-62.2	0.00	0.00	0.00	
3,200.0	5.00	240.16	3,194.4	-66.5	-115.9	-66.5	0.00	0.00	0.00	
3,300.0	5.00	240.16	3,294.0	-70.8	-123.5	-70.8	0.00	0.00	0.00	
3,400.0	5.00	240.16	3,393.6	-75.2	-131.0	-75.2	0.00	0.00	0.00	
3,500.0	5.00	240.16	3,493.2	-79.5	-138.6	-79.5	0.00	0.00	0.00	
3,600.0	5.00	240.16	3,592.9	-83.8	-146.2	-83.8	0.00	0.00	0.00	
3,700.0	5.00	240.16	3,692.5	-88.2	-153.7	-88.2	0.00	0.00	0.00	
3,800.0	5.00	240.16	3,792.1	-92.5	-161.3	-92.5	0.00	0.00	0.00	
3,900.0	5.00	240.16	3,891.7	-96.9	-168.9	-96.9	0.00	0.00	0.00	
4,000.0	5.00	240.16	3,991.3	-101.2	-176.4	-101.2	0.00	0.00	0.00	
4,100.0	5.00	240.16	4,091.0	-105.5	-184.0	-105.5	0.00	0.00	0.00	
4,174.3	5.00	240.16	4,165.0	-108.8	-189.6	-108.8	0.00	0.00	0.00	

Delaware - 9 5/8"

# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local CO-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore Design:</b>	Original Hole Prelim 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)	
4,200.0	5.00	240.16	4,190.6	-109.9	-191.5	-109.9	0.00	0.00	0.00	
4,244.6	5.00	240.16	4,235.0	-111.8	-194.9	-111.8	0.00	0.00	0.00	
<b>Ford Shale</b>										
4,300.0	5.00	240.16	4,290.2	-114.2	-199.1	-114.2	0.00	0.00	0.00	
4,400.0	5.00	240.16	4,389.8	-118.5	-206.7	-118.5	0.00	0.00	0.00	
4,500.0	5.00	240.16	4,489.4	-122.9	-214.2	-122.9	0.00	0.00	0.00	
4,600.0	5.00	240.16	4,589.0	-127.2	-221.8	-127.2	0.00	0.00	0.00	
4,700.0	5.00	240.16	4,688.7	-131.5	-229.3	-131.5	0.00	0.00	0.00	
4,800.0	5.00	240.16	4,788.3	-135.9	-236.9	-135.9	0.00	0.00	0.00	
4,900.0	5.00	240.16	4,887.9	-140.2	-244.5	-140.2	0.00	0.00	0.00	
5,000.0	5.00	240.16	4,987.5	-144.6	-252.0	-144.6	0.00	0.00	0.00	
5,100.0	5.00	240.16	5,087.1	-148.9	-259.6	-148.9	0.00	0.00	0.00	
5,122.9	5.00	240.16	5,110.0	-149.9	-261.3	-149.9	0.00	0.00	0.00	
<b>Cherry Canyon</b>										
5,200.0	5.00	240.16	5,186.8	-153.2	-267.1	-153.2	0.00	0.00	0.00	
5,300.0	5.00	240.16	5,286.4	-157.6	-274.7	-157.6	0.00	0.00	0.00	
5,400.0	5.00	240.16	5,386.0	-161.9	-282.3	-161.9	0.00	0.00	0.00	
5,500.0	5.00	240.16	5,485.6	-166.2	-289.8	-166.2	0.00	0.00	0.00	
5,600.0	5.00	240.16	5,585.2	-170.6	-297.4	-170.6	0.00	0.00	0.00	
5,700.0	5.00	240.16	5,684.9	-174.9	-304.9	-174.9	0.00	0.00	0.00	
5,800.0	5.00	240.16	5,784.5	-179.3	-312.5	-179.3	0.00	0.00	0.00	
5,900.0	5.00	240.16	5,884.1	-183.6	-320.1	-183.6	0.00	0.00	0.00	
6,000.0	5.00	240.16	5,983.7	-187.9	-327.6	-187.9	0.00	0.00	0.00	
6,100.0	5.00	240.16	6,083.3	-192.3	-335.2	-192.3	0.00	0.00	0.00	
6,200.0	5.00	240.16	6,183.0	-196.6	-342.7	-196.6	0.00	0.00	0.00	
6,300.0	5.00	240.16	6,282.6	-200.9	-350.3	-200.9	0.00	0.00	0.00	
6,400.0	5.00	240.16	6,382.2	-205.3	-357.9	-205.3	0.00	0.00	0.00	
6,500.0	5.00	240.16	6,481.8	-209.6	-365.4	-209.6	0.00	0.00	0.00	
6,503.2	5.00	240.16	6,485.0	-209.7	-365.7	-209.7	0.00	0.00	0.00	
<b>Brushy Canyon</b>										
6,600.0	5.00	240.16	6,581.4	-213.9	-373.0	-213.9	0.00	0.00	0.00	
6,700.0	5.00	240.16	6,681.1	-218.3	-380.5	-218.3	0.00	0.00	0.00	
6,800.0	5.00	240.16	6,780.7	-222.6	-388.1	-222.6	0.00	0.00	0.00	
6,900.0	5.00	240.16	6,880.3	-227.0	-395.7	-227.0	0.00	0.00	0.00	
7,000.0	5.00	240.16	6,979.9	-231.3	-403.2	-231.3	0.00	0.00	0.00	
7,100.0	5.00	240.16	7,079.5	-235.6	-410.8	-235.6	0.00	0.00	0.00	
7,200.0	5.00	240.16	7,179.2	-240.0	-418.3	-240.0	0.00	0.00	0.00	
7,300.0	5.00	240.16	7,278.8	-244.3	-425.9	-244.3	0.00	0.00	0.00	
7,400.0	5.00	240.16	7,378.4	-248.6	-433.5	-248.6	0.00	0.00	0.00	
7,500.0	5.00	240.16	7,478.0	-253.0	-441.0	-253.0	0.00	0.00	0.00	
7,600.0	5.00	240.16	7,577.6	-257.3	-448.6	-257.3	0.00	0.00	0.00	
7,683.3	5.00	240.16	7,660.6	-260.9	-454.9	-260.9	0.00	0.00	0.00	
7,700.0	4.75	240.16	7,677.3	-261.6	-456.1	-261.6	1.50	-1.50	0.00	
7,800.0	3.25	240.16	7,777.0	-265.1	-462.2	-265.1	1.50	-1.50	0.00	
7,900.0	1.75	240.16	7,876.9	-267.3	-465.9	-267.3	1.50	-1.50	0.00	
8,000.0	0.25	240.16	7,976.9	-268.1	-467.5	-268.1	1.50	-1.50	0.00	
8,016.7	0.00	0.00	7,993.6	-268.2	-467.5	-268.2	1.50	-1.50	0.00	
8,100.0	0.00	0.00	8,076.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,176.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,276.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,376.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,476.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,576.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	

**ConocoPhillips**  
Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian, Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1.2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore Design:</b>	Original Hole Prelim 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)	
8,700.0	0.00	0.00	8,676.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,776.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,876.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,976.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,076.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,173.1	0.00	0.00	9,150.0	-268.2	-467.5	-268.2	0.00	0.00	0.00	
<b>Bone Springs</b>										
9,200.0	0.00	0.00	9,176.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,276.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,376.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,476.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,576.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,676.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,776.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,876.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,976.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,076.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,176.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,243.1	0.00	0.00	10,220.0	-268.2	-467.5	-268.2	0.00	0.00	0.00	
<b>Bone Springs 3rd Carb</b>										
10,300.0	0.00	0.00	10,276.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,376.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,500.0	0.00	0.00	10,476.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,600.0	0.00	0.00	10,576.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,700.0	0.00	0.00	10,676.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,800.0	0.00	0.00	10,776.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
10,900.0	0.00	0.00	10,876.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
11,000.0	0.00	0.00	10,976.9	-268.2	-467.5	-268.2	0.00	0.00	0.00	
11,055.2	0.00	0.00	11,032.1	-268.2	-467.5	-268.2	0.00	0.00	0.00	
11,100.0	4.48	359.39	11,076.8	-266.4	-467.5	-266.4	10.00	10.00	0.00	
11,200.0	14.48	359.39	11,175.4	-249.9	-467.7	-249.9	10.00	10.00	0.00	
11,300.0	24.48	359.39	11,269.5	-216.6	-468.0	-216.6	10.00	10.00	0.00	
11,368.5	31.33	359.39	11,330.0	-184.6	-468.4	-184.6	10.00	10.00	0.00	
<b>Wolfcamp</b>										
11,400.0	34.48	359.39	11,356.4	-167.5	-468.6	-167.5	10.00	10.00	0.00	
11,500.0	44.48	359.39	11,433.5	-104.0	-469.2	-104.0	10.00	10.00	0.00	
11,600.0	54.48	359.39	11,498.4	-28.1	-470.1	-28.1	10.00	10.00	0.00	
11,658.7	60.35	359.39	11,530.0	21.3	-470.6	21.3	10.00	10.00	0.00	
<b>Wolfcamp 1</b>										
11,700.0	64.48	359.39	11,549.1	58.0	-471.0	58.0	10.00	10.00	0.00	
11,800.0	74.48	359.39	11,584.1	151.5	-472.0	151.5	10.00	10.00	0.00	
11,879.3	82.41	359.39	11,600.0	229.1	-472.8	229.1	10.00	10.00	0.00	
<b>7 5/8"</b>										
11,900.0	84.48	359.39	11,602.4	249.7	-473.0	249.7	10.00	10.00	0.00	
11,955.2	90.00	359.39	11,605.0	304.8	-473.6	304.8	10.00	10.00	0.00	
12,000.0	90.00	359.39	11,605.0	349.6	-474.1	349.6	0.00	0.00	0.00	
12,100.0	90.00	359.39	11,605.0	449.6	-475.2	449.6	0.00	0.00	0.00	
12,200.0	90.00	359.39	11,605.0	549.6	-476.3	549.6	0.00	0.00	0.00	
12,300.0	90.00	359.39	11,605.0	649.6	-477.3	649.6	0.00	0.00	0.00	
12,400.0	90.00	359.39	11,605.0	749.6	-478.4	749.6	0.00	0.00	0.00	
12,500.0	90.00	359.39	11,605.0	849.6	-479.5	849.6	0.00	0.00	0.00	
12,600.0	90.00	359.39	11,605.0	949.6	-480.6	949.6	0.00	0.00	0.00	
12,700.0	90.00	359.39	11,605.0	1,049.6	-481.6	1,049.6	0.00	0.00	0.00	

# ConocoPhillips

## Planning Report

<b>Database:</b> EDM Central Planning	<b>Local Co-ordinate Reference:</b> Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b> ConocoPhillips MCBU	<b>TVD Reference:</b> WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b> Permian Delaware Hz New Mexico	<b>MD Reference:</b> WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b> GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b> Grid
<b>Well:</b> Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> Original Hole	
<b>Design:</b> Prelim 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)	
12,800.0	90.00	359.39	11,605.0	1,149.6	-482.7	1,149.6	0.00	0.00	0.00	
12,900.0	90.00	359.39	11,605.0	1,249.5	-483.8	1,249.5	0.00	0.00	0.00	
13,000.0	90.00	359.39	11,605.0	1,349.5	-484.8	1,349.5	0.00	0.00	0.00	
13,100.0	90.00	359.39	11,605.0	1,449.5	-485.9	1,449.5	0.00	0.00	0.00	
13,200.0	90.00	359.39	11,605.0	1,549.5	-487.0	1,549.5	0.00	0.00	0.00	
13,300.0	90.00	359.39	11,605.0	1,649.5	-488.1	1,649.5	0.00	0.00	0.00	
13,400.0	90.00	359.39	11,605.0	1,749.5	-489.1	1,749.5	0.00	0.00	0.00	
13,500.0	90.00	359.39	11,605.0	1,849.5	-490.2	1,849.5	0.00	0.00	0.00	
13,600.0	90.00	359.39	11,605.0	1,949.5	-491.3	1,949.5	0.00	0.00	0.00	
13,700.0	90.00	359.39	11,605.0	2,049.5	-492.4	2,049.5	0.00	0.00	0.00	
13,800.0	90.00	359.39	11,605.0	2,149.5	-493.4	2,149.5	0.00	0.00	0.00	
13,900.0	90.00	359.39	11,605.0	2,249.5	-494.5	2,249.5	0.00	0.00	0.00	
14,000.0	90.00	359.39	11,605.0	2,349.5	-495.6	2,349.5	0.00	0.00	0.00	
14,100.0	90.00	359.39	11,605.0	2,449.5	-496.7	2,449.5	0.00	0.00	0.00	
14,200.0	90.00	359.39	11,605.0	2,549.5	-497.7	2,549.5	0.00	0.00	0.00	
14,300.0	90.00	359.39	11,605.0	2,649.5	-498.8	2,649.5	0.00	0.00	0.00	
14,400.0	90.00	359.39	11,605.0	2,749.5	-499.9	2,749.5	0.00	0.00	0.00	
14,500.0	90.00	359.39	11,605.0	2,849.5	-500.9	2,849.5	0.00	0.00	0.00	
14,600.0	90.00	359.39	11,605.0	2,949.4	-502.0	2,949.4	0.00	0.00	0.00	
14,700.0	90.00	359.39	11,605.0	3,049.4	-503.1	3,049.4	0.00	0.00	0.00	
14,800.0	90.00	359.39	11,605.0	3,149.4	-504.2	3,149.4	0.00	0.00	0.00	
14,900.0	90.00	359.39	11,605.0	3,249.4	-505.2	3,249.4	0.00	0.00	0.00	
15,000.0	90.00	359.39	11,605.0	3,349.4	-506.3	3,349.4	0.00	0.00	0.00	
15,100.0	90.00	359.39	11,605.0	3,449.4	-507.4	3,449.4	0.00	0.00	0.00	
15,200.0	90.00	359.39	11,605.0	3,549.4	-508.5	3,549.4	0.00	0.00	0.00	
15,300.0	90.00	359.39	11,605.0	3,649.4	-509.5	3,649.4	0.00	0.00	0.00	
15,400.0	90.00	359.39	11,605.0	3,749.4	-510.6	3,749.4	0.00	0.00	0.00	
15,500.0	90.00	359.39	11,605.0	3,849.4	-511.7	3,849.4	0.00	0.00	0.00	
15,600.0	90.00	359.39	11,605.0	3,949.4	-512.8	3,949.4	0.00	0.00	0.00	
15,700.0	90.00	359.39	11,605.0	4,049.4	-513.8	4,049.4	0.00	0.00	0.00	
15,800.0	90.00	359.39	11,605.0	4,149.4	-514.9	4,149.4	0.00	0.00	0.00	
15,900.0	90.00	359.39	11,605.0	4,249.4	-516.0	4,249.4	0.00	0.00	0.00	
16,000.0	90.00	359.39	11,605.0	4,349.4	-517.0	4,349.4	0.00	0.00	0.00	
16,100.0	90.00	359.39	11,605.0	4,449.4	-518.1	4,449.4	0.00	0.00	0.00	
16,200.0	90.00	359.39	11,605.0	4,549.4	-519.2	4,549.4	0.00	0.00	0.00	
16,300.0	90.00	359.39	11,605.0	4,649.4	-520.3	4,649.4	0.00	0.00	0.00	
16,400.0	90.00	359.39	11,605.0	4,749.3	-521.3	4,749.3	0.00	0.00	0.00	
16,500.0	90.00	359.39	11,605.0	4,849.3	-522.4	4,849.3	0.00	0.00	0.00	
16,600.0	90.00	359.39	11,605.0	4,949.3	-523.5	4,949.3	0.00	0.00	0.00	
16,700.0	90.00	359.39	11,605.0	5,049.3	-524.6	5,049.3	0.00	0.00	0.00	
16,800.0	90.00	359.39	11,605.0	5,149.3	-525.6	5,149.3	0.00	0.00	0.00	
16,900.0	90.00	359.39	11,605.0	5,249.3	-526.7	5,249.3	0.00	0.00	0.00	
17,000.0	90.00	359.39	11,605.0	5,349.3	-527.8	5,349.3	0.00	0.00	0.00	
17,100.0	90.00	359.39	11,605.0	5,449.3	-528.8	5,449.3	0.00	0.00	0.00	
17,200.0	90.00	359.39	11,605.0	5,549.3	-529.9	5,549.3	0.00	0.00	0.00	
17,300.0	90.00	359.39	11,605.0	5,649.3	-531.0	5,649.3	0.00	0.00	0.00	
17,400.0	90.00	359.39	11,605.0	5,749.3	-532.1	5,749.3	0.00	0.00	0.00	
17,500.0	90.00	359.39	11,605.0	5,849.3	-533.1	5,849.3	0.00	0.00	0.00	
17,600.0	90.00	359.39	11,605.0	5,949.3	-534.2	5,949.3	0.00	0.00	0.00	
17,700.0	90.00	359.39	11,605.0	6,049.3	-535.3	6,049.3	0.00	0.00	0.00	
17,800.0	90.00	359.39	11,605.0	6,149.3	-536.4	6,149.3	0.00	0.00	0.00	
17,900.0	90.00	359.39	11,605.0	6,249.3	-537.4	6,249.3	0.00	0.00	0.00	
18,000.0	90.00	359.39	11,605.0	6,349.3	-538.5	6,349.3	0.00	0.00	0.00	
18,100.0	90.00	359.39	11,605.0	6,449.2	-539.6	6,449.2	0.00	0.00	0.00	

**ConocoPhillips**  
Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local/Co-ordinate Reference:</b>	Site GOLDEN SPUR 36 COM W1 2H - PS
<b>Company:</b>	ConocoPhillips MCBU	<b>TVD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Project:</b>	Permian Delaware Hz New Mexico	<b>MD Reference:</b>	WELL @ 3171.0usft (Original Well Elev)
<b>Site:</b>	GOLDEN SPUR 36 COM W1 2H - PS	<b>North Reference:</b>	Grid
<b>Well:</b>	Golden Spur 36 COM W1 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Prelim 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)	
18,200.0	90.00	359.39	11,605.0	6,549.2	-540.7	6,549.2	0.00	0.00	0.00	
18,300.0	90.00	359.39	11,605.0	6,649.2	-541.7	6,649.2	0.00	0.00	0.00	
18,400.0	90.00	359.39	11,605.0	6,749.2	-542.8	6,749.2	0.00	0.00	0.00	
18,500.0	90.00	359.39	11,605.0	6,849.2	-543.9	6,849.2	0.00	0.00	0.00	
18,600.0	90.00	359.39	11,605.0	6,949.2	-544.9	6,949.2	0.00	0.00	0.00	
18,700.0	90.00	359.39	11,605.0	7,049.2	-546.0	7,049.2	0.00	0.00	0.00	
18,800.0	90.00	359.39	11,605.0	7,149.2	-547.1	7,149.2	0.00	0.00	0.00	
18,834.8	90.00	359.39	11,605.0	7,184.0	-547.5	7,184.0	0.00	0.00	0.00	
5"										

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
GS_36_W1_2H_VT	- plan misses target center by 539.1usft at 20.0usft MD (20.0 TVD, 0.0 N, 0.0 E) - Point	0.00	0.00	20.0	-268.2	-467.6	364,336.21	688,340.19	32° 0' 0.788 N	103° 43' 32.799 W
GS_36_W1_2H_BHL	- plan hits target center - Point	0.00	0.00	11,605.0	7,184.0	-547.5	371,788.47	688,260.33	32° 1' 14.542 N	103° 43' 33.240 W

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
990.0	990.0	13 3/8"	13-3/8	17-1/2		
4,174.3	4,165.0	9 5/8"	9-5/8	12-1/4		
11,879.3	11,600.0	7 5/8"	7-5/8	8-3/4		
18,834.8	11,605.0	5"	5-1/2	6-3/4		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
9,173.1	9,150.0	Bone Springs				
5,122.9	5,110.0	Cherry Canyon				
11,658.7	11,530.0	Wolfcamp 1				
920.0	920.0	Rustler				
1,355.0	1,355.0	Salado				
4,174.3	4,165.0	Delaware				
10,243.1	10,220.0	Bone Springs 3rd Carb				
4,244.6	4,235.0	Ford Shale				
6,503.2	6,485.0	Brushy Canyon				
2,302.2	2,300.0	Castile				
11,368.5	11,330.0	Wolfcamp				

ConocoPhillips  
Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Site GOLDEN SPUR 36 COM W1 2H - PS
Company:	ConocoPhillips MCBU	TVD Reference:	WELL @ 3171.0usft (Original Well Elev)
Project:	Permian Delaware Hz New Mexico	MD Reference:	WELL @ 3171.0usft (Original Well Elev)
Site:	GOLDEN SPUR 36 COM W1 2H - PS	North Reference:	Grid
Well:	Golden Spur 36 COM W1 2H	Survey Calculation Method:	Minimum Curvature
Wellbore Design:	Original Hole Prelim Design 1		

# Golden Spur 36 W1 - Batch Drilling Sequence

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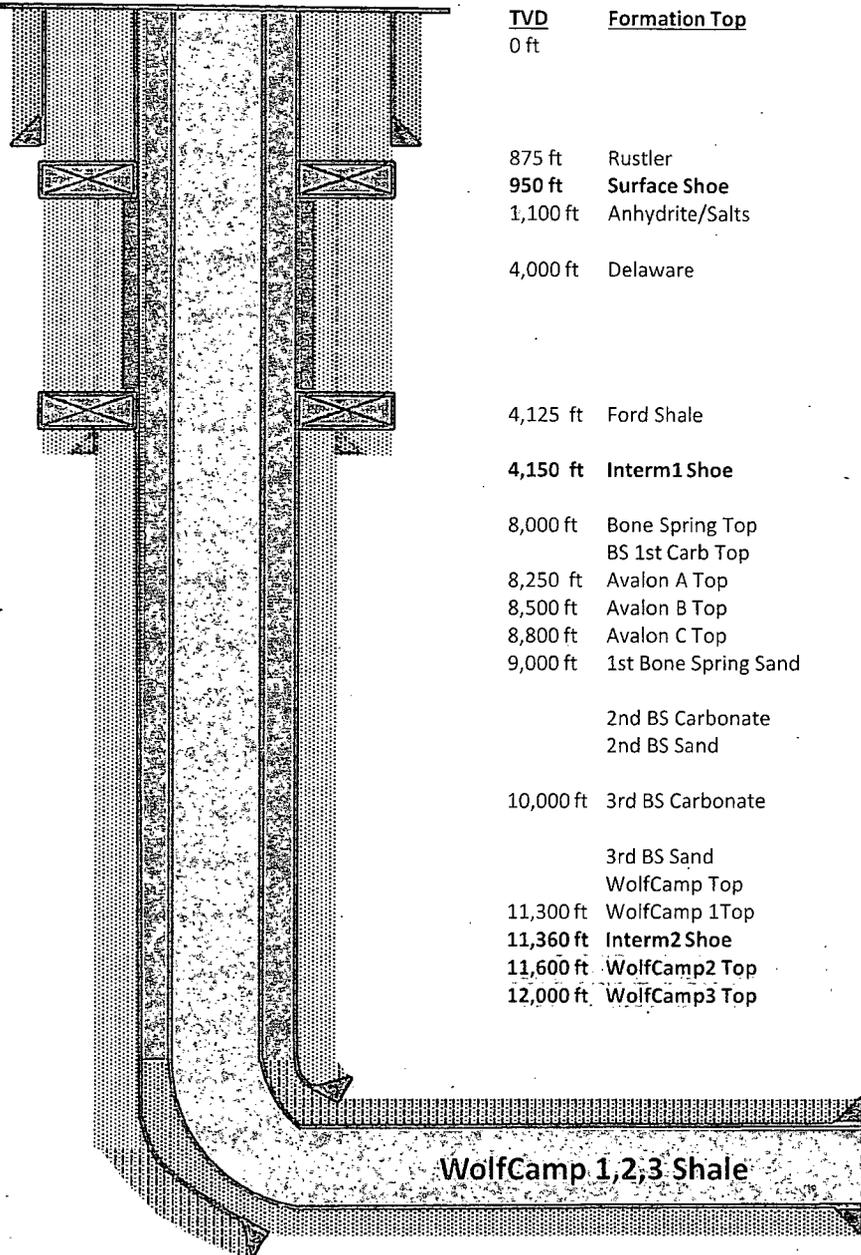
## ► TENTATIVE BATCH DRILLING OPERATION PLAN:

1. ALL SURFACE 13-3/8" CASINGS PRE-SET.
  2. Golden Spur Com W1 1H. 7-5/8" CASING – OBM..
  3. Golden Spur Com W1 2H. 7-5/8" CASING – OBM.
  4. Golden Spur Com W1 2H. 5" CASING – OBM.
  5. Golden Spur Com W1 1H. 5" CASING – OBM.
  6. RIG RELEASE.
- } ***"INTERMEDIATE 1" BATCH***
- } ***"PRODUCTION" BATCH***

### NOTE: CASING CONTINGENCY IN CASE HOLE ISSUES ARE PRESENT

1. 9-5/8" 40# L80 BTC IN A 12-1/4" HOLE SIZE
2. 7-5/8" 29.7# WEDGE523 P110 IN A 8-3/4" HOLE SIZE

# Attachment #2 – Option not to run 9-5/8” Csg



## ➤ Surface Section:

- Objective: Protect fresh water horizons.
- Drill 17-1/2” hole to +/- 950 ft. “Rustler”
- Mud weight: 8.6 – 9.1 ppg FW-Native Mud
- **Set 13-3/8” 54.5# J-55 BTC casing.**
- Cement to surface.

## ➤ Intermediate1 Section (Only for Contingency):

- **Objective: Isolate the Salado Salt and Delaware Sand interval.**
- Drill 12-1/4” hole to +/- 4,150 ft. “Ford Shale”
- **Mud weight: 10.0 ppg Brine.**
- **Set 9-5/8” 40# L-80 BTC casing.**
- **Cement to surface.**

## ➤ Intermediate2 Section:

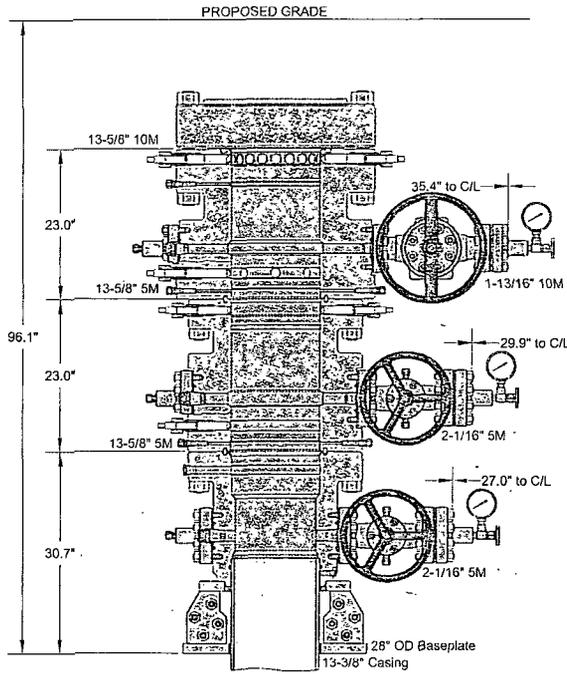
- Objective: Isolate depleted/weak formations above WC1.
- Drill 8-3/4” hole to +/- 11,360 ft. 110’-120’ inside WC1 Top.
- **Mud weight: 8.9 – 10.5 ppg Brine or OBM w/ 25 ppb WBS**
- **Set 7-5/8” 29.7# P-110 Tenaris W523 casing.**
- Cement to surface.
- 2 or 3-Stage Contingency with 2ea. Packer/Stage Collars
- Bond Coat ~ 3000’ of Csg covering the Delaware Sands

## ➤ Production Section:

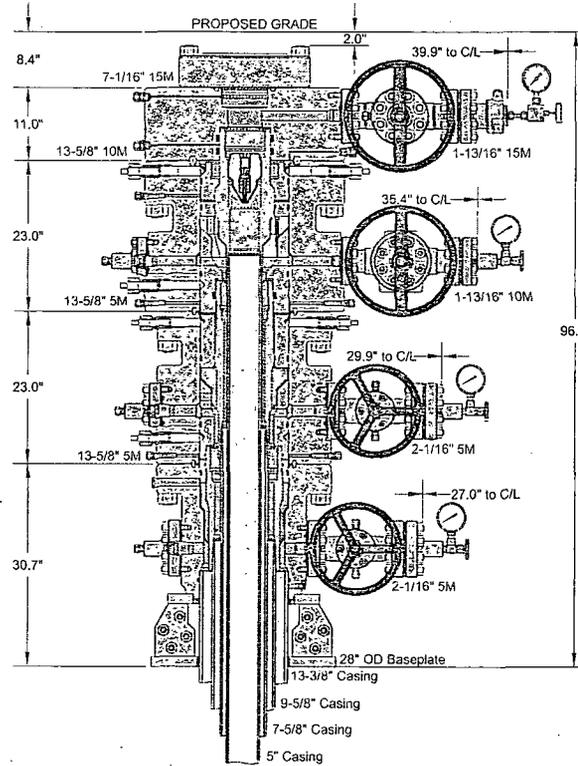
- Objective: Provide zonal isolation of production interval and provide medium for stimulation.
- Drill 6-3/4” hole to +/-18,000ft – 20,000ft. “Production TD”
- Mud Weight: 13.5 – 15.2 ppg OBM.
- **Set 5” 18# P-110 TenBlue/TXP casing.**
- Cement lap 500 ft above previous shoe (near KOP).

19,200 ft TD  
~6,500 ft Lateral

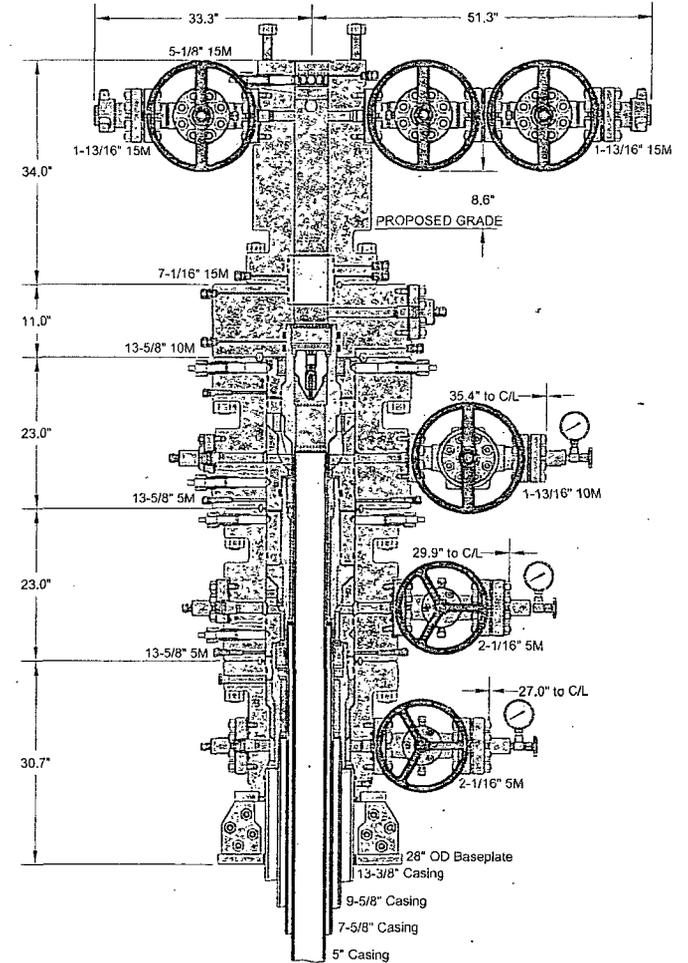
# Attachment #3



SPUD CONFIGURATION



DRILL & SKID CONFIGURATION



COMPLETION CONFIGURATION

## CACTUS WELLHEAD LLC

13-3/8" x 9-5/8" x 7-5/8" x 5" 5M MBS2 Wellhead System  
 With 13-5/8" 10M x 7-1/16" 15M DBLHPS DSPA And  
 7-1/16" 15M x 5-1/8" 15M CMT-FB-EN Tubing Head, 34" Tall

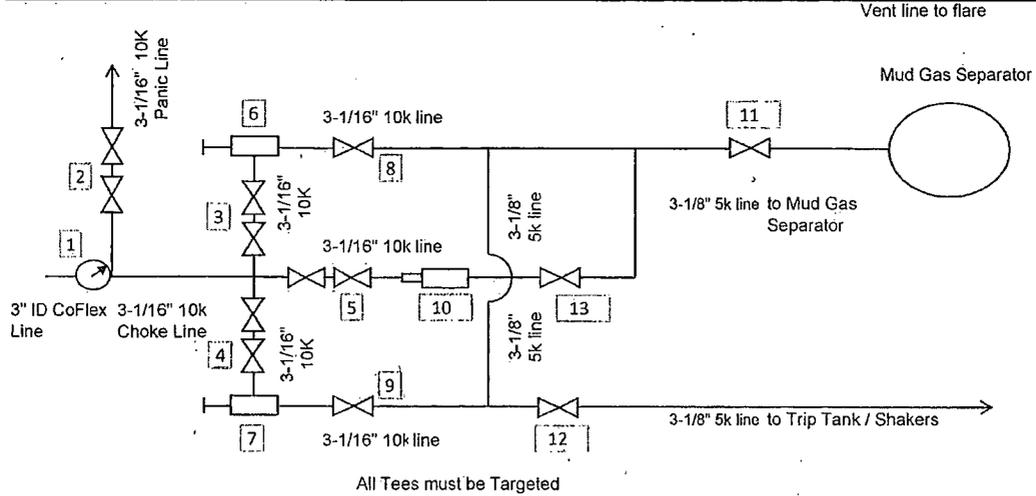
## CONOCOPHILLIPS 4 STRING CONFIGURATION

DRAWN	THH	23FEB15
APPRV		
DRAWING NO.	ODE0000491	

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# Attachment # 4

**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

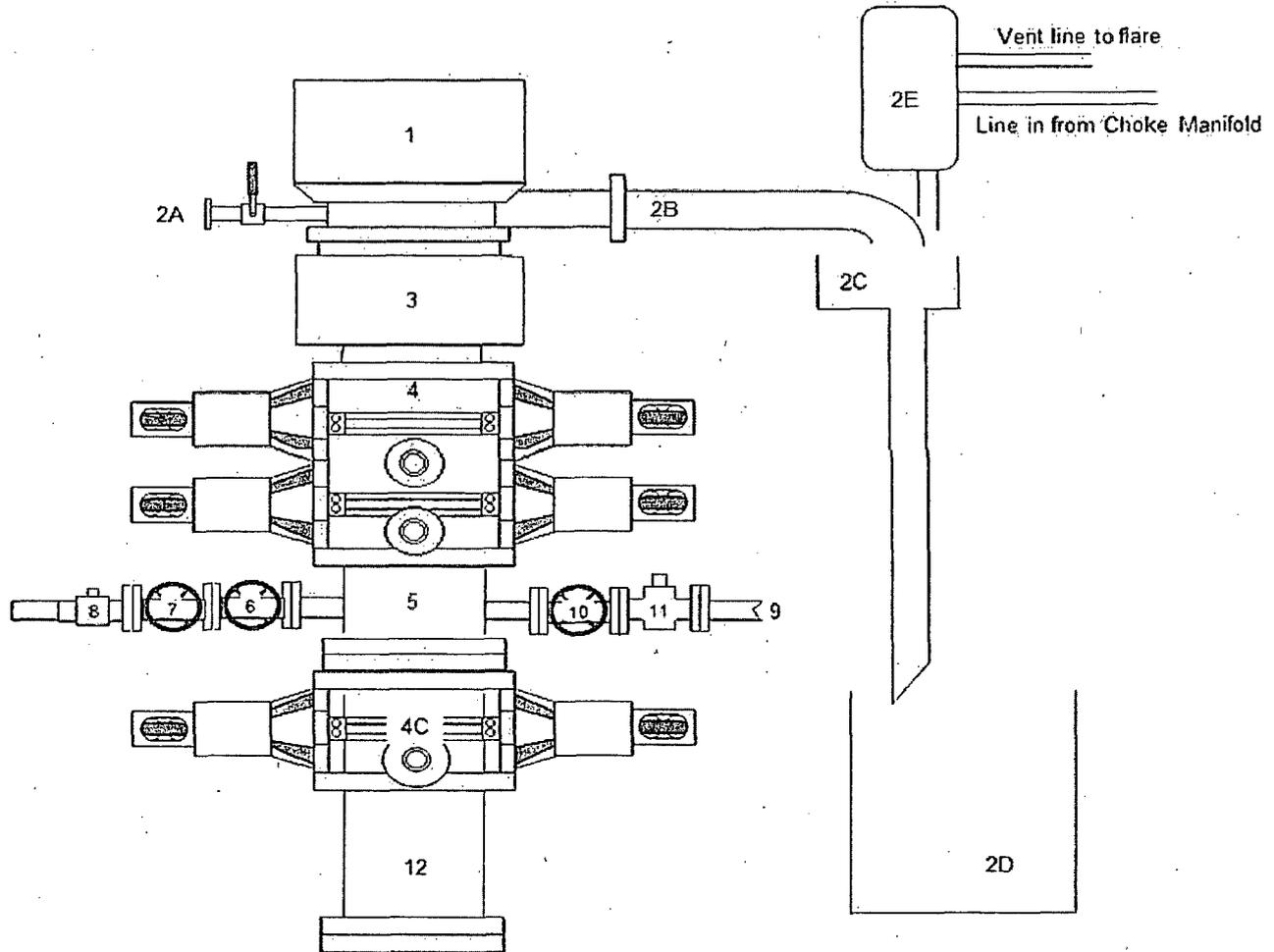
The 10M Choke Manifold & Valves will be tested to rated working pressure.

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

# Attachment # 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, Blind 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 hoek 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

January 28 2014



**Size:** 7.625 in.  
**Wall:** 0.375 in.  
**Weight:** 29.70 lbs/ft  
**Grade:** P110  
**Min. Wall Thickness:** 87.5 %

**Connection:** Wedge 523™  
**Casing/Tubing:** CAS

PIPE BODY DATA			
GEOMETRY			
Nominal OD	7.625 in.	Nominal Weight	29.70 lbs/ft
Nominal ID	6.875 in.	Wall Thickness	0.375 in.
Plain End Weight	29.06 lbs/ft	Standard Drift Diameter	6.750 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	940 x 1000 lbs	Internal Yield	9470 psi
Collapse	5350 psi	SMYS	110000 psi
WEDGE 523™ CONNECTION DATA			
GEOMETRY			
Connection OD	7.752 in.	Connection ID	6.800 in.
Critical Section Area	6.021 sq. in.	Threads per in.	3.29
		Make-Up Loss	4.420 in.
PERFORMANCE			
Tension Efficiency	70.5 %	Joint Yield Strength	663 x 1000 lbs
Compression Strength	768 x 1000 lbs	Compression Efficiency	81.7 %
External Pressure Capacity	5350 psi	Internal Pressure Capacity	9470 psi
		Bending	47 °/100 ft
MAKE-UP TORQUES			
Minimum	9900 ft-lbs	Target	11900 ft-lbs
		Maximum (Δ)	17300 ft-lbs
OPERATIONAL LIMIT TORQUES			
Operating Torque	52000 ft-lbs	Yield Torque	78000 ft-lbs
BLANKING DIMENSIONS			
<u>Blanking Dimensions</u>			

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

October 21 2014



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

**Size:** 5.000 in.  
**Wall:** 0.362 in.  
**Weight:** 18.00 lbs/ft  
**Grade:** P110  
**Min. Wall Thickness:** 87.5 %

**PIPE BODY DATA**

GEOMETRY			
Nominal OD	5.000 in.	Nominal Weight	18.00 lbs/ft
Nominal ID	4.276 in.	Wall Thickness	0.362 in.
Plain End Weight	17.95 lbs/ft	Standard Drift Diameter	4.151 in.
		Special Drift Diameter	N/A

**PERFORMANCE**

Body Yield Strength	580 x 1000 lbs	Internal Yield	13940 psi	SMYS	110000 psi
Collapse	13470 psi				

**BLUE® CONNECTION DATA**

GEOMETRY			
Connection OD	5.630 in.	Coupling Length	10.551 in.
Critical Section Area	5.275 sq. in.	Make-Up Loss	4.579 in.
		Connection ID	4.264 in.
		Threads per in.	5.00

**PERFORMANCE**

Tension Efficiency	100 %	Joint Yield Strength	580 x 1000 lbs	Internal Pressure Capacity	13940 psi
Compression Efficiency	100 %	Compression Strength	580 x 1000 lbs	Bending	101 °/100 ft
External Pressure Capacity	13470 psi				

**MAKE-UP TORQUES**

Minimum	6400 ft-lbs	Target	7110 ft-lbs	Maximum	7820 ft-lbs
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**OPERATIONAL LIMIT TORQUES**

Operating Torque	ASK	Yield Torque	17600 ft-lbs
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**SHOULDER TORQUES**

Minimum	1070 ft-lbs	Maximum	6040 ft-lbs
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**BLANKING DIMENSIONS**

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Blanking Dimensions

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Datasheet is also valid for Special Bevel option when applicable.

December 18 2014



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

**Size:** 5.000 in.  
**Wall:** 0.362 in.  
**Weight:** 18.00 lbs/ft  
**Grade:** P110  
**Min. Wall Thickness:** 87.5 %



PIPE BODY DATA			
GEOMETRY			
Nominal OD	5.000 in.	Nominal Weight	18.00 lbs/ft
Nominal ID	4.276 in.	Wall Thickness	0.362 in.
Plain End Weight	17.95 lbs/ft	Standard Drift Diameter	4.151 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	580 x 1000 lbs	Internal Yield	13940 psi
Collapse	13470 psi	SMYS	110000 psi
TENARISXP™ BTC CONNECTION DATA			
GEOMETRY			
Connection OD	5.720 in.	Coupling Length	9.325 in.
Critical Section Area	5.275 sq. in.	Threads per in.	5.00
		Connection ID	4.264 in.
		Make-Up Loss	4.141 in.
PERFORMANCE			
Tension Efficiency	100 %	Joint Yield Strength	580 x 1000 lbs
Structural Compression Efficiency	100 %	Structural Compression Strength	580 x 1000 lbs
External Pressure Capacity	13470 psi	Internal Pressure Capacity <sup>(1)</sup>	13940 psi
		Structural Bending <sup>(2)</sup>	101 °/100 ft
ESTIMATED MAKE-UP TORQUES <sup>(3)</sup>			
Minimum	N/A ft-lbs	Target	N/A ft-lbs
		Maximum	N/A ft-lbs
OPERATIONAL LIMIT TORQUES			
Operating Torque	ASK	Yield Torque	N/A 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.

**(2)** Structural rating, pure bending to yield (i.e no other loads applied)

**(3)** Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at [licensees@oilfield.tenaris.com](mailto:licensees@oilfield.tenaris.com). Torque values may be further reviewed.

For additional information, please contact us at [contact-tenarishydril@tenaris.com](mailto:contact-tenarishydril@tenaris.com)

# Attachment #6

## 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 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:  
James Chen  
SR Drilling Engineer  
Phone (281) 206-5244  
Cell (832) 768-1647  
Date: 05 May 2014

Attachment # 1

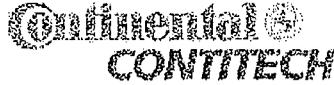
CONTITECH RUBBER Industrial Kft.	No: QC-DB- 45 / 2012
	Page: 9 / 50



Hose Data Sheet

CR# Order No.	516273
Customer	ContiTech Beattie Co.
Customer Order No	PO5438 STOCK
Item No.	3
Hose Type	Flexible Hose
<b>Standard</b>	<b>API SPEC 16 C</b>
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-16

Variance Request



QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°:	184
PURCHASER: ContiTech Beattie Co.				P.O. N°:	005438
CONTITECH ORDER N°:	518273	HOSE TYPE:	3" ID	Choke and Kill Hose	
HOSE SERIAL N°:	61477	NOMINAL / ACTUAL LENGTH:		10,87 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	
<b>NOT DESIGNED FOR WELL TESTING</b>				API Spec 16 C Temperature rate: "B"	
All metal parts are Seamless					
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.			ContiTech Rubber Industrial Kft. Quality Control Dept. (1) <i>[Signature]</i>		

Continental Rubber Industry Kft.  
 Budapest ul. 10, Szeged H-6720  
 PO Box 162 Szeged H-6701  
 Hungary

Fax: +36 62 565 737  
 Tel: +36 62 660 738  
 e-mail: info@contitech.com  
 Internet: www.contitech.com

The Court of Szeged County as  
 Registry Court  
 Registry Court No. HU 06 02 02500  
 EU VAT No. HU106202

Békés  
 Csorvácska Zrt.  
 Budapest  
 HU 06 09 2050003-0000000

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

No: 182, 184, 185

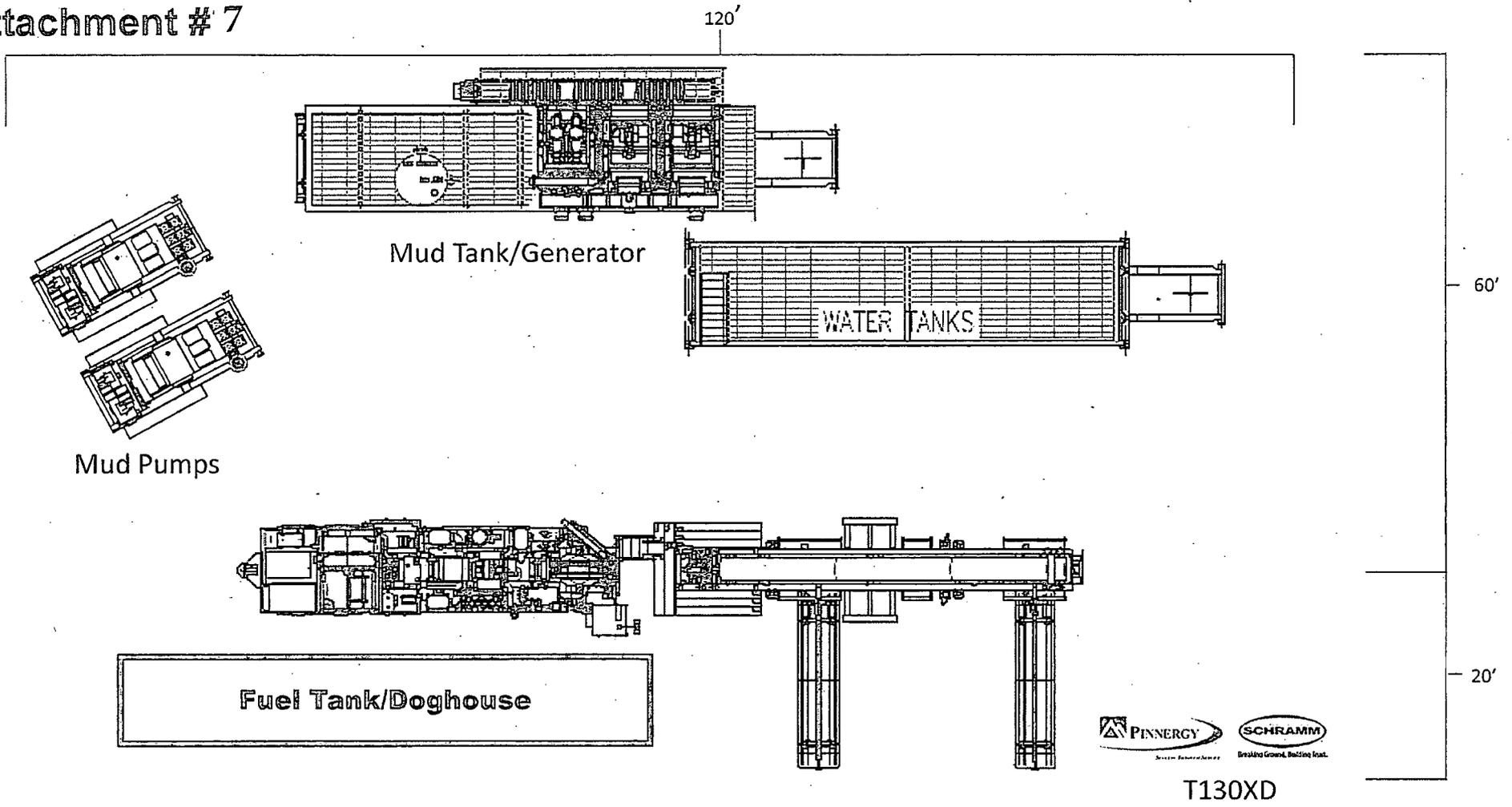
Page: 1/1



Sl. No.	Particulars	Spec.	Test Method	Result	Remarks
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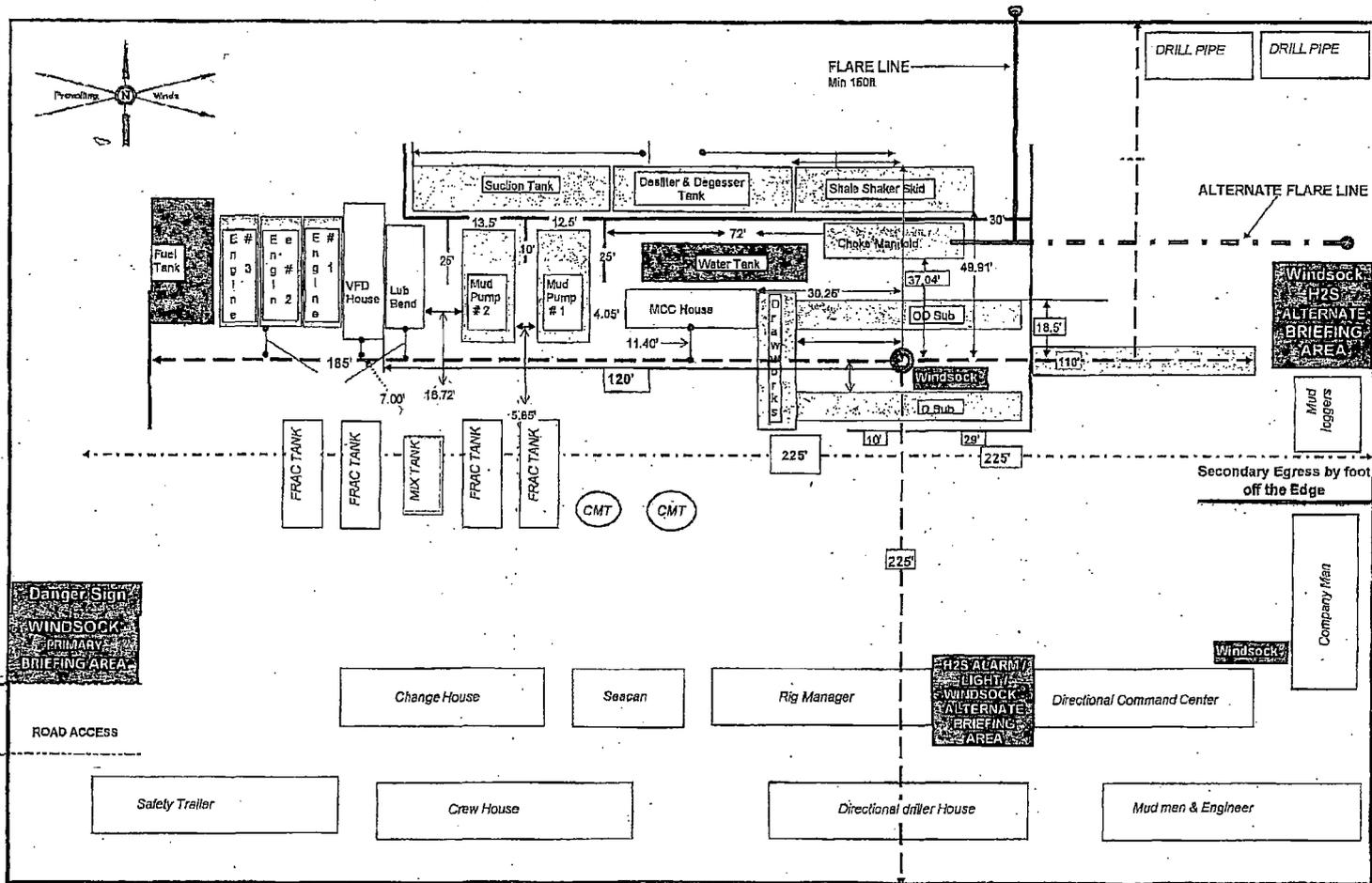
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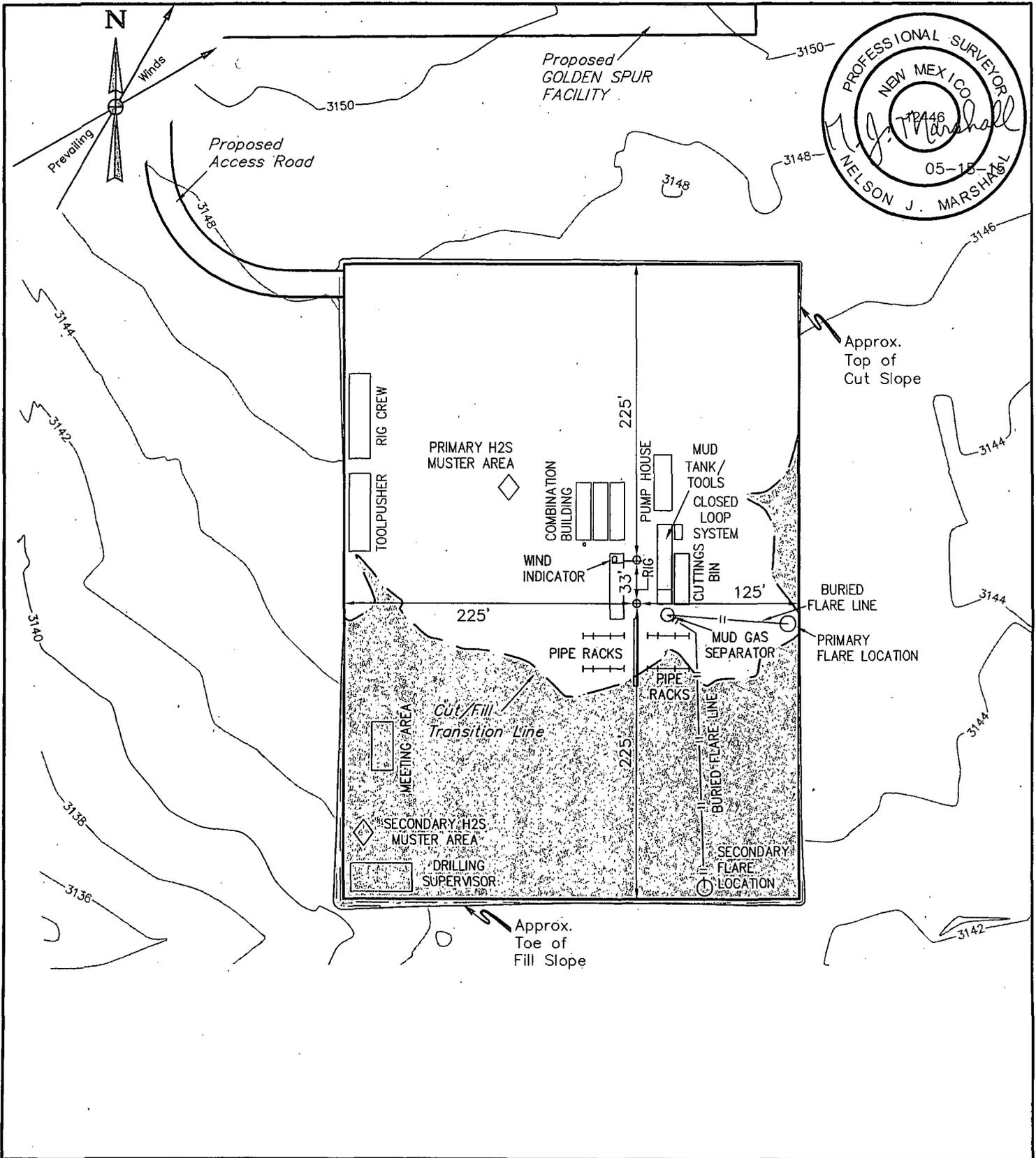
# Attachment # 7



## "Pinnergy #1" Spudder Rig Layout

# H&P FLEX 3 RIG LAYOUT





**NOTES:**  
 • Contours shown at 2' intervals.

**ConocoPhillips Company**

**GOLDEN SPUR 36 COM W1 1H & W1 2H  
 LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: B.A.	DATE DRAWN: 11-13-14
SCALE: 1" = 100'	REVISED: 05-07-15 H.W.
<b>TYPICAL RIG LAYOUT</b>	<b>FIGURE #3</b>

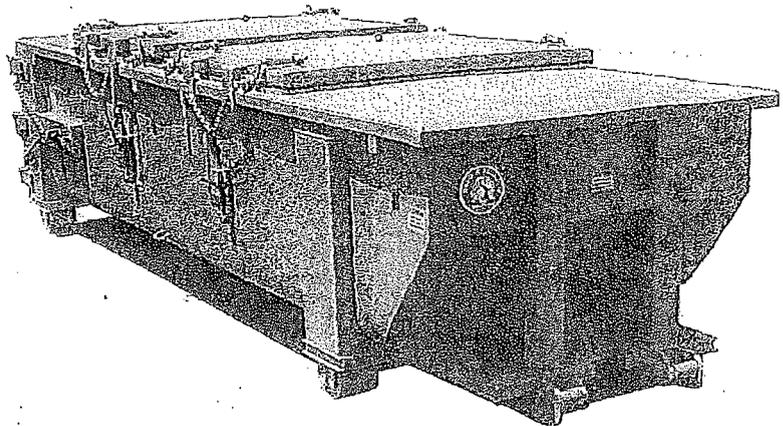


**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017

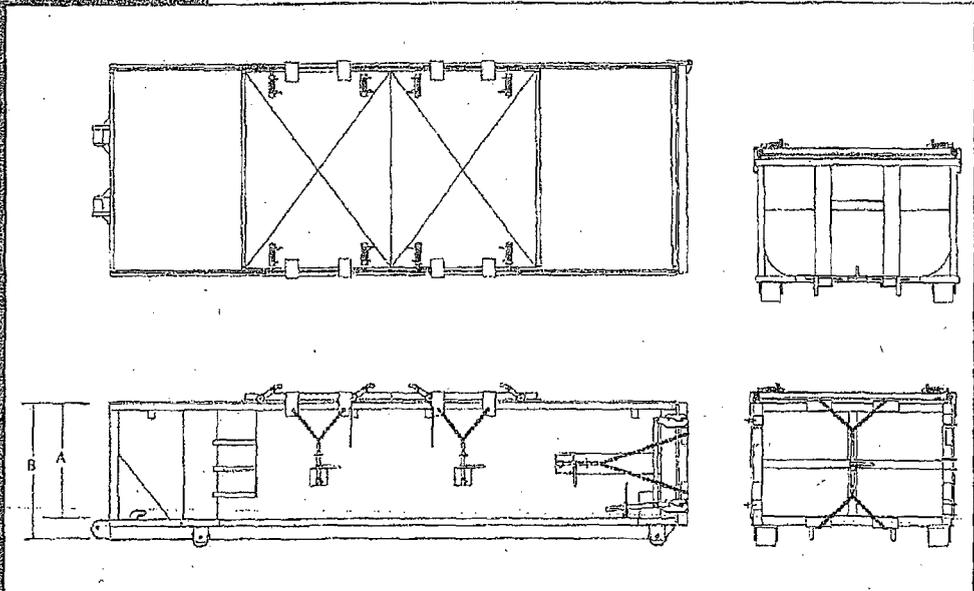
# SPECIFICATIONS

## Heavy Duty Split Metal Rolling Lid

FLOOR: 3/16" PL one piece  
 CROSS MEMBER: 3" x 4" I 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 grease 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, Hell 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: Golden Spur 36 COM W1 2H  
Location: Sec. 36, T26S, R31E  
Date: 6/25/2015

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, 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.

James Chen  
Drilling Engineer  
Office: 281-206-5244  
Cell: 832-768-1647



## H<sub>2</sub>S Contingency Plan

April 2015

H<sub>2</sub>S Contingency Plan Holders:

Attached is an H<sub>2</sub>S 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 Samarra at ConocoPhillips Company, 432.688.9173.

## Table of Contents

### Section

I. Purpose

II. Scope

III. Procedures

IV. Emergency Equipment and Maintenance

Emergency Equipment Suppliers

General Information

H2S Safety Equipment and Monitoring Systems

V. Emergency Call List

VI. Public/Media Relations

VII. Public Notification/Evacuation

VIII. Forms/Reports



# HYDROGEN SULFIDE (H<sub>2</sub>S) OPERATIONS

## Contingency Plan For Permian Drilling Operations

ConocoPhillips Company  
Mid-Continent Business Unit  
Permian Asset Area

**I. PURPOSE**

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H<sub>2</sub>S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of H<sub>2</sub>S release. Release of H<sub>2</sub>S must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

**II. SCOPE**

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H<sub>2</sub>S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H<sub>2</sub>S could exist under specific weather conditions.

### III. PROCEDURES

#### First Employee on Scene

\_\_\_\_\_ Assess the incident and ensure your own safety.

Note the following:

- \_\_\_\_\_ Location of the incident.
- \_\_\_\_\_ Nature of the incident.
- \_\_\_\_\_ Wind direction and weather conditions.
- \_\_\_\_\_ Other assistance that may be needed.

\_\_\_\_\_ Call local supervisory personnel (refer to Section V: Emergency Call List) until personal contact is made with a person on the list.

\_\_\_\_\_ Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).

\_\_\_\_\_ Secure the site.

\_\_\_\_\_ Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).

#### First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)

\_\_\_\_\_ Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.

\_\_\_\_\_ Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

**DETECT** the problem

**ESTIMATE** likely harm without intervention

**CHOOSE** response objectives

**IDENTIFY** action options

**DO** the best option

**EVALUATE** the progress

- \_\_\_\_\_ Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).
  
- \_\_\_\_\_ Call your supervisor (refer to Section V: Emergency Call List).
  
- \_\_\_\_\_ Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance).
  
- \_\_\_\_\_ Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).
  
- \_\_\_\_\_ Ensure site security.
  - \_\_\_\_\_ Set barricades and /or warning signs at or beyond the calculated 100 ppm H<sub>2</sub>S radius of exposure (ROE). All manned barricades must be equipped with an H<sub>2</sub>S monitor and a 2-way radio.
  
  - \_\_\_\_\_ Set roadblocks and staging area as determined.
  
- \_\_\_\_\_ Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:
 

Recording Secretary	_____
Public Information Officer	_____
Safety/Medical Officer	_____
Decontamination Officer	_____
  
- \_\_\_\_\_ Have the "Recording Secretary" begin documenting the incident on the "Incident Log" (refer to Section VIII: Forms/Reports).
  
- \_\_\_\_\_ If needed, request radio silence on all channels that use your radio tower stating that, until further notice, the channels should be used for emergency communications only.
  
- \_\_\_\_\_ Perform a Site Characterization and designate the following:
 

Hot Zone	--	Hazardous Area
Warm Zone	--	Preparation & Decontamination Area
Cold Zone	--	Safe Area

AND

On-Scene Incident Command Post	(Cold Zone)
Public Relations Briefing Area	(Cold Zone)
Staging Area	(Cold Zone)
Triage Area	(Cold Zone)
Decontamination Area	(Warm Zone)

\_\_\_\_\_ Refer all media personnel to ConocoPhillips' On-Scene Public Information Officer (refer to Section VI: Public Media Relations).

\_\_\_\_\_ Coordinate the attempt to stop the release of H<sub>2</sub>S. You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)

\_\_\_\_\_ Once the emergency is over, return the situation to normal by:

Confirming the absence of H<sub>2</sub>S and combustible gas throughout the area,

Discontinuing the radio silence on all channels, stating that the emergency incident is over,

Removing all barricades and warning signs,

Allowing evacuees to return to the area, and

Advising all parties previously notified that the emergency has ended.

\_\_\_\_\_ Ensure the proper regulatory authorities/agencies are notified of the incident (refer to Section V: Emergency Call List).

\_\_\_\_\_ Clean up the site. (Be sure all contractor crews have had appropriate HAZWOPER training.)

\_\_\_\_\_ Report completion of the cleanup to the Asset Environmentalist. (Environmentalist will report this to the proper State and/or Federal agencies.)

\_\_\_\_\_ Fill out all required incident reports and send originals to the Safety Department. (Keep a copy for your records.)

- Company employee receiving occupational injury or illnesses.
- Company employee involved in a vehicle accident while driving a company vehicle.
- Company property that is damaged or lost.
- Accident involving the public or a contractor; includes personal injuries, vehicle accidents, and property damage. Also includes any situation, which could result in a claim against the Company.
- Hazardous Material Spill/Release Report Form
- Emergency Drill Report

\_\_\_\_\_ Assist the Safety Department in the investigation of the incident. Review the factors that caused or allowed the incident to occur, and modify operating, maintenance, and/or surveillance procedures as needed. Make appropriate repairs and train or retrain employees in the use and operation of the system.

\_\_\_\_\_ If this incident was simulated for practice in emergency response, complete the Emergency Drill Report found in Section VIII: Forms/Reports and submit a copy to the Drilling Manager. (Keep one copy in area files to document exercising of the plan.)

## **Emergency Procedures** **Responsibility**

In the event of a release of potentially hazardous amounts of H<sub>2</sub>S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.
2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.
3. Advise each contractor, service company, and all others entering the site that H<sub>2</sub>S may be encountered and the potential hazards that may exist.
4. Authorize the evacuation of local residents if H<sub>2</sub>S threatens their safety.
5. Keep the number of persons on location to a minimum during hazardous operations.
6. Direct corrective actions to control the flow of gas.
7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard.

This should be used **ONLY AS A LAST RESORT**.

## IV. EMERGENCY EQUIPMENT and MAINTENANCE

### Emergency Equipment Suppliers

#### DXP/ Safety International – Odessa, Tx.

H<sub>2</sub>S monitors 432.580.3770  
Breathing air includes cascade systems  
First aid and medical supplies  
Safety equipment  
H<sub>2</sub>S Specialist

#### Total Safety US Odessa, Tx/ Hobs, NM

H<sub>2</sub>S monitors 432.561.5049 Odessa  
575.392.2973 Hobbs  
Breathing air includes cascade systems  
First aid and medical supplies  
Safety equipment

#### DXP/ Indian Fire & Safety – Hobbs, NM

H<sub>2</sub>S monitors 575.393.3093  
Breathing air including cascade systems trailer mounted  
30 minute air packs  
Safety Equipment

#### TC Safety – Odessa, Tx.

H<sub>2</sub>S monitors 432.413.8240  
Cascade systems trailer mounted  
30 minute air packs  
Safety Equipment  
H<sub>2</sub>S Specialist

#### Secorp Industries – Odessa, Tx.

H<sub>2</sub>S Monitor Systems 432.614.2565  
Cascade Systems  
H<sub>2</sub>S Specialist  
H<sub>2</sub>S, CPR, First Aid Training

## **Emergency Equipment and Maintenance (continued)**

### **General Information**

Materials used for repair should be suitable for use where H<sub>2</sub>S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H<sub>2</sub>S areas shall have received training on the hazards, characteristics, and properties of H<sub>2</sub>S, and on procedures and safety equipment applicable for use in H<sub>2</sub>S areas.

## H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

3 – Fixed H2S sensors located as follows:

- 1 – on the rig floor
- 1 – at the Bell Nipple
- 1 – at the Shale Shaker or Flowline

1 – Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

2 – Windsocks that are clearly visible.

1 – Audible warning system located on rig floor

2 – Visual warning systems (Beacon Lights)

- 1 – Located at the rig floor
- 1 – Located in the mud mixing room

**Note: All alarms (audible and visual) should be set to alarm at 10 ppm.**

2 - Briefing areas clearly marked

- 2 - SCBA's at each briefing area
- 1- SCBA located at the Drilling Reps office

**Note:**

- 1. All SCBA's must be positive pressure type only!!!**
- 2. All SCBA's must either be Scott or Drager brand.**
- 3. All SCBA's face pieces should be size large, unless otherwise specified by the Drilling Supervisor.**

5 – Emergency Escape Paks located at Top Doghouse.

Note: Ensure provisions are included for any personnel working above rig floor in derrick.

1 – Tri or Quad gas monitor located at the Drilling Reps office. This will be used to determine if the work area is safe to re-enter prior to returning to work following any alarm.

## V. EMERGENCY CALL LIST:

The following is a priority list of personnel to contact in an emergency situation:

<b>Supervisory Personnel</b>	<b>Office No.</b>	<b>Cellphone</b>
Drilling Supt. (Unconventional) <b>Scott Nicholson</b>	432.688.9065	432.230.8010
Field Superintendents: <b>Clint Case.</b> <b>Manuel Castillo</b>	432.242.7536 432.242.7536	940.231.2839 432.238.7145
Safety Support: <b>Tom Samarripa</b> <b>Dennis Martinez</b> <b>Joey Bell</b>	432.688.9173 432.688.9012 NA	432.556.9113 432.741.1818 903.952.3032
Permian Ops. Supt. (Unconventional) <b>James Buzan</b>	432.688.6860	832.630.4320
MCBU Safety Coordinator <b>Mickey Garner</b>	432.688.9139	432.260.9349
Manger D&C Unconventional <b>Lynn Dooley</b>	281.206.5385	281.435.3517

## EMERGENCY CALL LIST: State Officials

### Regulatory Agencies

Texas Railroad Commission (District 8)  
Midland, Texas

Office: 432.684.5581

New Mexico Oil Conservation Commission  
P. O. Box 1980  
Hobbs, New Mexico 88240-1980

Office: 575.393.6161

Bureau of Land Mngt.  
Carlsbad Field Office  
620 E. Greene St.

Office: 575.234.5972  
Fax: 575.885.9264

## **EMERGENCY CALL LIST: Local Officials**

Refer to the Location Information Sheet

Note: The LIS should include any area residents (i.e. rancher's house, etc)

### **VI. Public Media Relations**

The **Public Information Officer** becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and **only with facts**, do not speculate about the cause, amount of damage, or the potential impact of the incident of the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- "I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

**Note:**

**Do Not Say "No Comment."** (This implies a cover-up.)

**Do Not Disclose Names of Injured or Dead!** Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.

## VII. Public Notification/Evacuation

### Alert and/or Evacuate People within the Exposure Area

1. Public Notification – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person **first** observing the leak should take **immediate** steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

Note: Bilingual employees may be needed to assist in notification of residents.

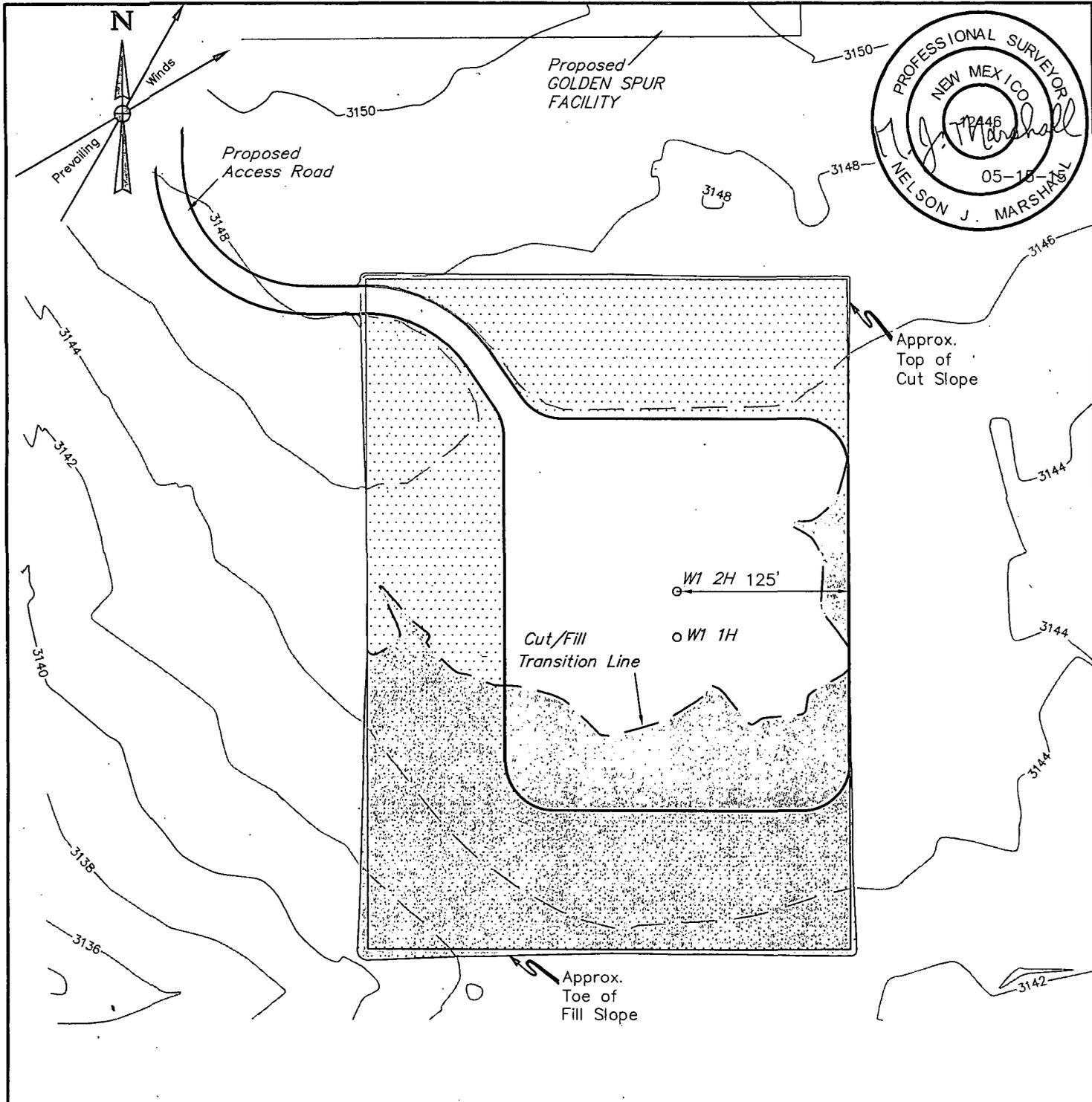
2. Evacuation Procedures – Evacuation will proceed upwind from the source of the release of H<sub>2</sub>S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

Roadblocks and the staging area should be established as necessary for current wind conditions.

**Note:** In all situations, consideration should be given to wind direction and weather conditions. H<sub>2</sub>S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

## VIII. FORMS & REPORTS

- I. Incident Log
- II. Preliminary Emergency Information Sheet
- III. Emergency Drill Report
- IV. Onshore Hazardous Material Spill/Release Report Form
- V. Immediate Report of Occupational Injury or Illness  
Report of Accident-Public Contractor  
Report of Loss or Damage to Company Property  
Report of Automotive Incident



**LEGEND:**  
 Reclaimed Area

APPROXIMATE PRODUCTION PAD ACREAGE = ±1.675 ACRES  
 APPROXIMATE RECLAIMED AREA ACREAGE = ±2.305 ACRES  
 TOTAL ACREAGE = ±3.980 ACRES

**NOTES:**  
 • Contours shown at 2' intervals.

**ConocoPhillips Company**

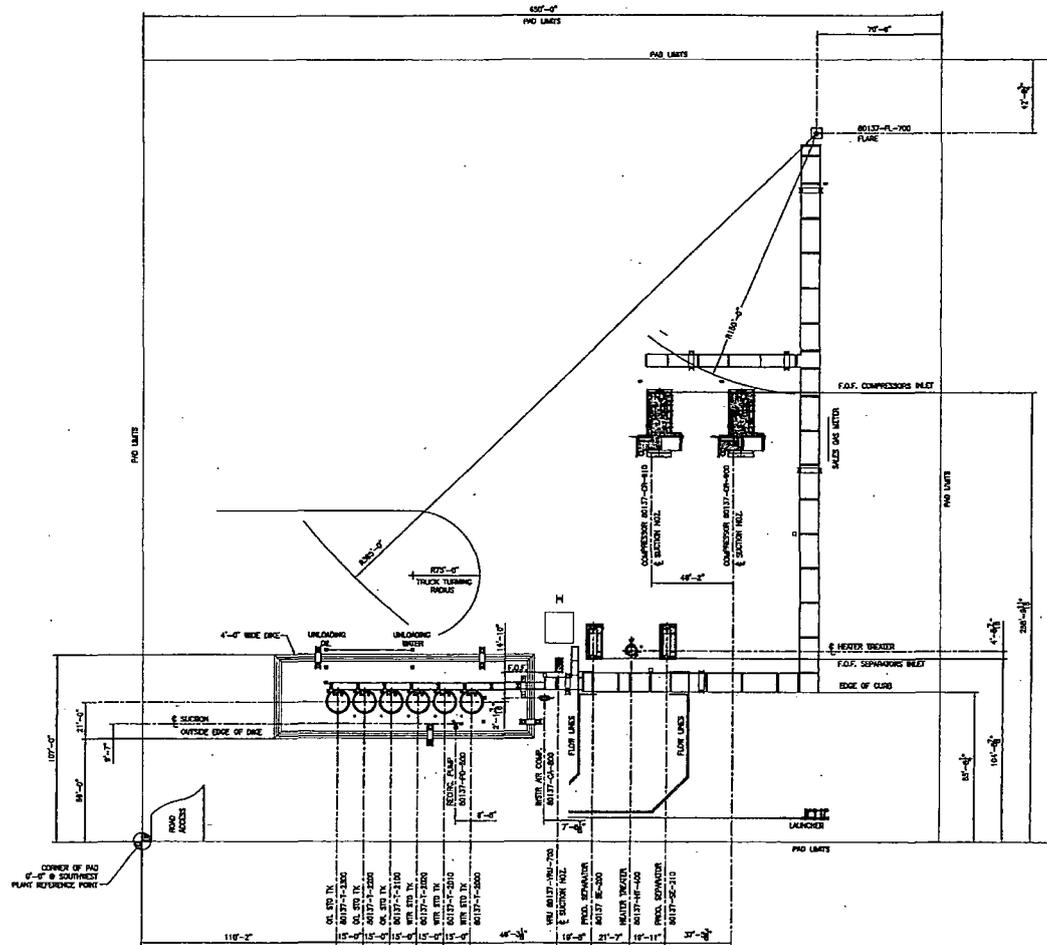
**GOLDEN SPUR 36 COM W1 1H & W1 2H  
 LOT 1, SECTION 36, T26S, R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

DRAWN BY: R.A.	DATE DRAWN: 11-24-14
SCALE: 1" = 100'	REVISED: 05-07-15 H.W.

**RECLAMATION DIAGRAM | FIGURE #4**



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



ISSUE FOR REVIEW  
1-16-15

NOTICE	DWG. NO.	REFERENCE DRAWINGS	NO.	DATE	REVISIONS	BY	CDD	APP.	DATE	APP.	DATE	NOTES	ENGINEERING ACTION		SCALE: 1"=30'	DWG. NO.	PRM-80137-00-020-0001	REV. A
													DATE	BY				
THIS DRAWING IS THE PROPERTY OF CONOCOPhillips COMPANY AND IS LOANED TO THE REVISIONS FOR HIS CONFIDENTIAL USE ONLY, AND IS LOANED TO REVISION YOUR REQUEST AND SHALL NOT BE REPRODUCED, COPIED, OR OTHERWISE DISCLOSED TO ANY OTHER PARTY, NOR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SPECIFICALLY PREPARED.				1-16-15	ISSUE FOR REVIEW	JCF							12-15-14	JCF				

**ConocoPhillips** MCBU, PERMAN, MIDLAND, TEXAS

**GOLDEN SPUR PRODUCTION FACILITY**  
PLOT PLAN

SCALE: 1"=30'



## Surface Use Plan of Operations

### Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soils storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

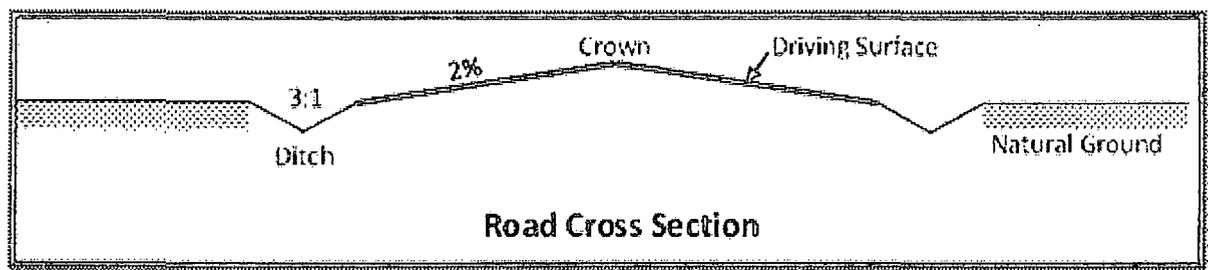
If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

### 1. Existing Roads

- a. No existing oil and gas road will be utilized because These are new wells on the lease and there are currently no existing roads Access Road Map Topo A & Access Road Map Topo B illustrate the proposed road from Highway 128.

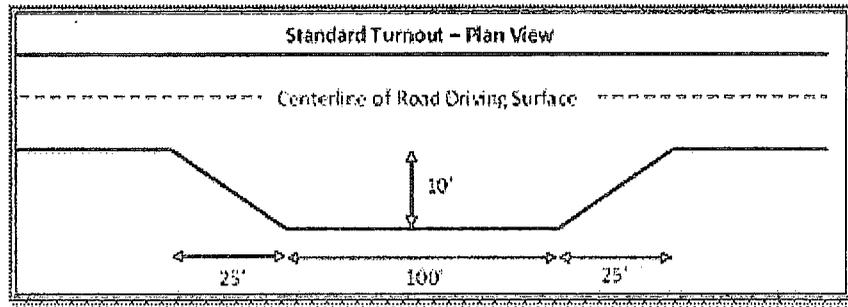
### 2. New or Reconstructed Access Roads

- a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.
- b. The length of access road needed to be constructed for this proposed project is about 1776 feet.
- c. The maximum driving width of the access road will be 20 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.
- d. The access road will be constructed with 6 inches of compacted Caliche.
- e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.



- f. The access road will be constructed with a ditch on each side of the road.
- g. The maximum grade for the access road will be 2 percent.

h. Turnouts will be constructed for the proposed access road and will be constructed to the dimensions shown in the diagram below. See survey plat or map for location of the turnouts.



- i. No cattleguards will be installed for this proposed access road.
- j. Since the proposed access road crosses lease boundaries, a right-of-way will be required for this access road. A right-of-way grant will be applied for through the BLM. The access road will not be constructed until an approved BLM right-of-way grant is acquired.
- k. No culverts will be constructed for this proposed access road.
- l. No low water crossings will be constructed for the access road.
- m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.
- n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.
- o. The road crosses a lease boundary. Row submittals will be provided under separate cover. Five feet of additional surface disturbance may be needed for construction purposes. The access road has 1741.59' on private surface, D K Farms and 34.38' on Federal BLM land totaling 1776' of road.

### 3. Location of Existing Wells

- a. Golden Spur 36 COM W1 2H, 1 Mile Radius Map of the APD depicts all known wells within a one mile radius of the proposed well.
- b. There is no other information regarding wells within a one mile radius.

### 4. Location of Existing and/or Proposed Production Facilities

- a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.
- b. If any type of production facilities are located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.
- c. A production facility is proposed to be installed off the proposed well location. Production from the well will be processed at this production facility. Golden Spur Facility, Location Lay Out Figure 1 depicts the location of the production facilities.

- d. The proposed production facility will have a secondary containment structure that is constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.
- e. Preliminary Plot Plan depicts the production facility as well.
- f. A pipeline to transport production from the proposed well to the production facility will be installed.
- i. We plan to install a 4 inch buried Coated Steel pipeline from the proposed well to the offsite production facility. The proposed length of the pipeline will be 267 feet. The working pressure of the pipeline will be about 1480 psi. A 40 feet wide work area will be needed to install the buried pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.
  - ii. Flow Line ROW depicts the proposed production pipeline route from the well to the existing production facility.
  - iii. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

**If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.**

### **Additional Pipeline(s)**

We propose to install 3 additional pipeline(s):

1. Buried Gas pipeline:

- a. We plan to install a 8 inch buried Coated Steel pipeline from Compressor to Nuevo Gas Pipeline. The proposed length of the pipeline will be 1811 feet. The working pressure of the pipeline will be about 1250 psi. A 40 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.
- b. Red Hills Central Facility West B, Pipeline R-O-W depicts the proposed Gas pipeline route.
- c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

2. Buried Water pipeline:

- a. We plan to install a 8 inch buried Polyline pipeline from Compressor to COP Water Line. The proposed length of the pipeline will be 1537 feet. The working pressure of the pipeline will be about 200 psi. A 40 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

- b. Red Hills Central Facility West B, Pipeline R-O-W depicts the proposed Water pipeline route.
  - c. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.
3. Buried Gas pipeline:
- a. We plan to install a 16 inch buried Coated Steel pipeline from Compressor to Red Hills Trunk line. The proposed length of the pipeline will be 1537 feet. The working pressure of the pipeline will be about 200 psi. A 40 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.
  - b. Red Hills Central Facility West B, Pipeline R-O-W depicts the proposed Gas pipeline route.
  - c. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

#### **Electric Line(s)**

- a. We plan to install an overhead electric line for the proposed well. The proposed length of the electric line will be 2317 feet. Power Line R-O-W depicts the location of the proposed electric line route. The electric line will be construction to provide protection from raptor electrocution.
- b. Since the proposed electric line crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed electric line.

#### **5. Location and Types of Water**

- a. The source and location of the water supply are as follows: The water will be trucked from Texas.
- b. The operator will use established or constructed oil and gas roads to transport water to the well site. The operator will try to utilize the identified access route in the surface use plan.

#### **6. Construction Material**

- a. Clean caliche will be from a BLM source or a third party provider.

#### **7. Methods for Handling Waste**

- a. Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.
- b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.
- c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.
- d. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.
- e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

## 8. Ancillary Facilities

- a. No ancillary facilities will be needed for this proposed project.

## 9. Well Site Layout

- a. The following information is presented in the well site survey plat or diagram:
  - i. reasonable scale (near 1":50')
  - ii. well pad dimensions
  - iii. well pad orientation
  - iv. drilling rig components
  - v. proposed access road
  - vi. elevations of all points
  - vii. topsoil stockpile
  - viii. reserve pit location/dimensions if applicable
  - ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)
  - x. existing structures within the 600' x 600' archaeological surveyed area (pipelines, electric lines, well pads, etc)
- b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.
- c. The submitted survey plat does depict all the necessary information required by Onshore Order No. 1.
- d. Topsoil Salvaging
  - i. Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respread evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

## 10. Plans for Surface Reclamation

### Reclamation Objectives

- i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- ii. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.
- iii. The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.

iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.

v. Interim reclamation will be performed on the well site after the well is drilled and completed. Reclamation Diagram, Figure 4 depicts the location and dimensions of the planned interim reclamation for the well site.

#### **Interim Reclamation Procedures (If performed)**

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.
2. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
3. The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
4. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.
6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

#### **Final Reclamation (well pad, buried pipelines, etc.)**

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.
2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation

of the surrounding area.

6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.

7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

## 11. Surface Ownership

a. The surface ownership of the proposed project is Private.

1. **Surface Owner:** David Kirk

**Phone Number:** (432) 853-2242

**Address:** 2713 Racquet Club Drive Midland, Texas 79705

a. ConocoPhillips Company is currently working on obtaining the surface use agreement from the private surface owner regarding the proposed project. Once completed ConocoPhillips will submit a letter stating the agreement has been acquired.

## 12. Other Information

a. The following well pad and facility location was staked with Ms. Bad Bear on October 29, 2014. Please review this application with the Golden Spur 36 COM W1 1H. This well is planned to spud January 2016.

Power line ROW's will be filed under separate cover. The Power Line has 1789.64' on private surface, D K Farms and 13.12' on Federal BLM land totaling 1803' of overhead electric lines.

The Surface Use and Compensation Agreement will be filed under separate cover.

The facility pad was originally staked for 600' x 600' but ConocoPhillips will only be building 450' x 100' at this time.

The Compressor site will have three buried lines. The 8" gas line will travel 1811'; 1612.47' is on private land, D K Farms and 198.84' on Federal BLM Land and will tie into the existing Nuevo line. The 16" gas line and an 8" water line are all on private land totaling 1,537'. The 16" gas line will tie into the proposed Red Hills Trunk line and the 8" water line will tie into the COP water line. The lines will follow the staked perimeter of the facility until it reaches the road where it will follow the road until the tie in point. The road and the portion of the staked facility will be used as temporary work space. A 40' R-O-W is proposed for 1612' of the line that connects to the Red Hills Trunk line and a 30' R-O-W is proposed for the 198.84' line that connects to Nuevo. The flow line ROW will be filed under separate cover.

ConocoPhillips respectfully request to defer the interim reclamation on the north side of the pad in order to use this area to access the future compressor site.

## 13. Maps and Diagrams

Golden Spur 36 COM W1 2H, 1 Mile Radius Map - Wells Within One Mile

Golden Spur Facility, Location Lay Out Figure 1 - Production Facilities Diagram

Preliminary Plot Plan - Additional Production Facilities Diagram

Flow Line ROW - Production Pipeline

Red Hills Central Facility West B, Pipeline R-O-W - Gas Pipeline

Red Hills Central Facility West B, Pipeline R-O-W - Water Pipeline

Red Hills Central Facility West B, Pipeline R-O-W - Gas Pipeline

Power Line R-O-W - Electric Line

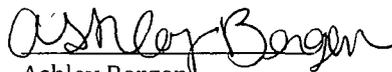
Reclamation Diagram, Figure 4 - Interim Reclamation

## Operator Certification

CONOCOPHILLIPS COMPANY

**CERTIFICATION:**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application with bond coverage provided by Nationwide Bond ES0085. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

 Date: 6/29/15  
Ashley Bergen  
Regulatory Specialist

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ConocoPhillips Co
LEASE NO.:	LC068281B
WELL NAME & NO.:	2H-Golden Spur 36 Com W1
SURFACE HOLE FOOTAGE:	315'/N & 570'/E
BOTTOM HOLE FOOTAGE:	50'/N & 1040'/E
LOCATION:	Section 36, T. 26 S., R. 31 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Communitization Agreement
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Drilling**
  - H2S Requirements-Onshore Order #6**
  - Medium Cave/Karst
  - Cement Requirements
  - Waste Material and Fluids
- Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

### **Communitization Agreement**

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

### **Avian Powerline Stipulation**

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. EXCLOSURE FENCING (CELLARS & PITS)**

**Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

**G. ON LEASE ACCESS ROADS****Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

**Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

**Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

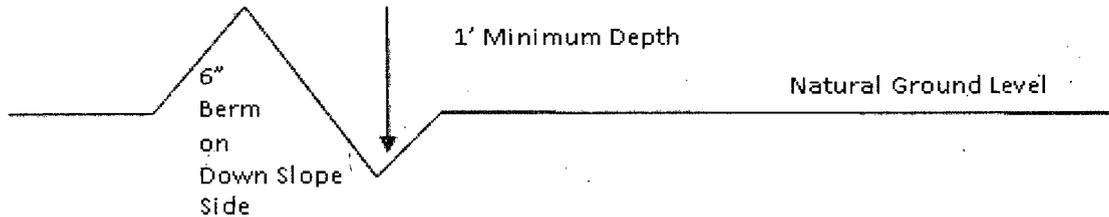
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

### Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

### Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

### Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

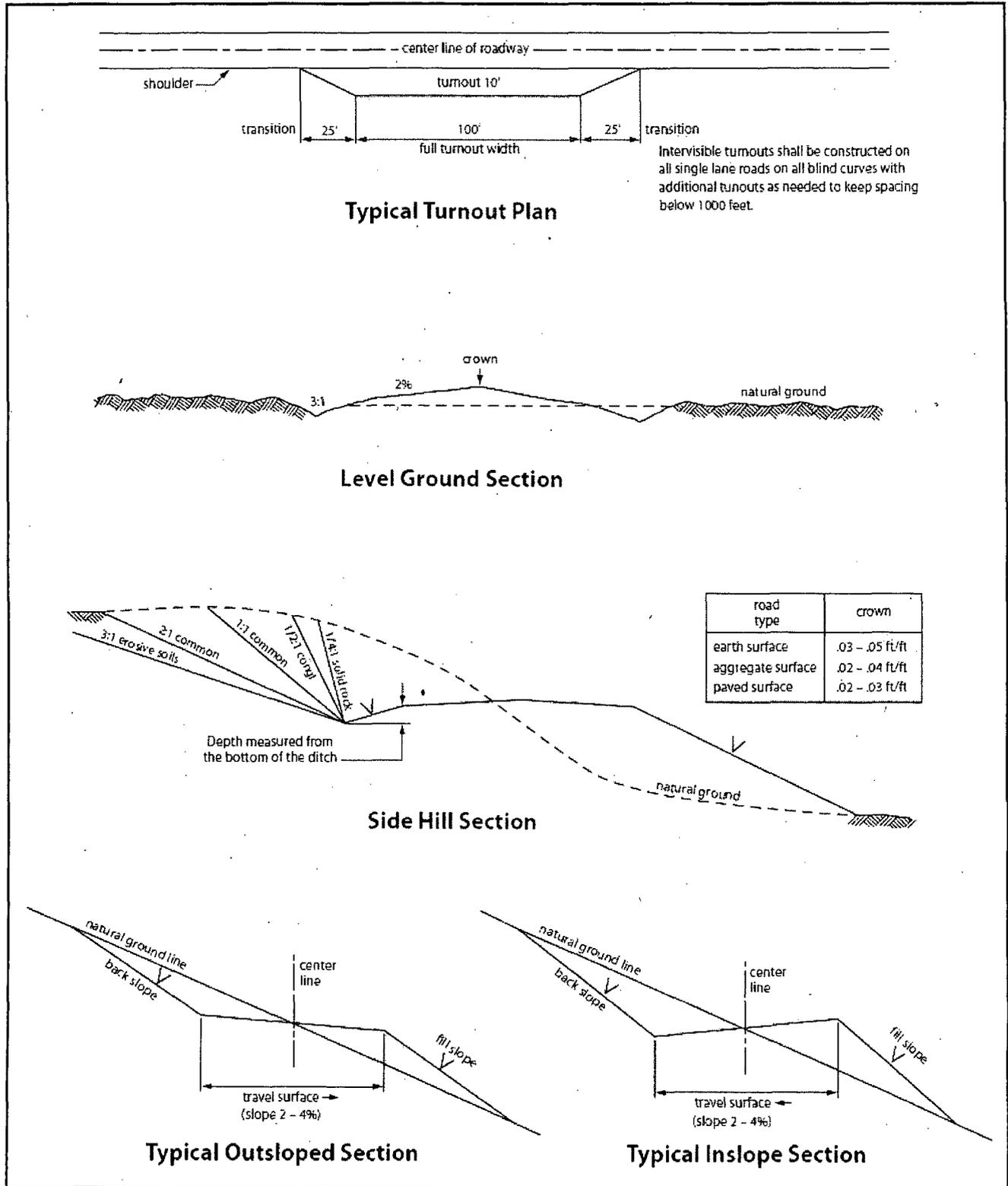


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

**copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

## **B. CASING**

**Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

### **Wait on cement (WOC) for Water Basin:**

**After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

### **Medium Cave/Karst.**

**Abnormal pressures may occur in the Wolfcamp.**

**Possible water flows in the Salt and the Castile.**

**Possible lost circulation in the Delaware.**

1. The **13-3/8 inch** surface casing shall be set at approximately **1040 feet** (**in a competent bed below the Magenta Dolomite, a Member of the Rustler**) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. **Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours**

after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.**

**Contingency Casing: The plan is to drill the well without the 9-5/8 inch intermediate casing, but if hole conditions decline then the 9-5/8 casing will be run.**

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.**

3. The minimum required fill of cement behind the 7-5/8 inch 2<sup>nd</sup> intermediate casing is:

**Option #1: Single stage**

Cement to surface. Operator shall provide method of verification.  
**Additional cement will be required as the excess calculates to -35%.**

**Option #2: Multi-stage**

**Operator has proposed DV tool at depth of 4500'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.**

- a. First stage to DV tool:

Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.

- b. Second stage above DV tool:

Cement to surface. Operator shall provide method of verification.  
**Additional cement will be required as the excess calculates to -35%.**

Formation below the 7-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

If cement does not circulate to surface on the the first two casings, the cement on the third casing must come to surface.

4. The minimum required fill of cement behind the 5 inch production casing is:
  - Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Additional cement may be required as the excess calculates to 3%.**
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

#### C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

Option 1 - BOP testing if wells are drilled conventionally- BOP is not removed between casing strings.

1. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of**

**the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 psi.**

- a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
- b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
- c. **Manufacturer representative shall install the test plug for the initial BOP test.**
- d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
- e. **Operator shall perform the 9-5/8" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.**
- f. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

**5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

Option 2 - BOP testing for Batch Drilling-BOP is removed between casing strings

2. **Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure. BOP/BOPE shall be tested after nipple up according to Onshore Order #2.**
3. **Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 7-5/8 inch shoe shall be 10,000 (10M) psi. 10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
4. **The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.**
  - a. **In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not**

hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

#### **D. DRILLING MUD**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

#### **E. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

**F. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**CRW 082415**

## **IX. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

## **B. PIPELINES**

### **BURIED PIPELINE STIPULATIONS**

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other

pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.
6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.
7. The maximum allowable disturbance for construction in this right-of-way will be 40 feet:
  - Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
  - Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 40 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
  - The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)
8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.
9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |                                                    |                                                  |
|----------------------------------------------------|--------------------------------------------------|
| <input type="checkbox"/> seed mixture 1            | <input type="checkbox"/> seed mixture 3          |
| <input checked="" type="checkbox"/> seed mixture 2 | <input type="checkbox"/> seed mixture 4          |
| <input type="checkbox"/> seed mixture 2/LPC        | <input type="checkbox"/> Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

#### STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

**A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (*see* 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.
4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:
  - a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;

b. Activities of other parties including, but not limited to:

- (1) Land clearing
- (2) Earth-disturbing and earth-moving work
- (3) Blasting
- (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No

permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

### **C. ELECTRIC LINES**

#### **STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on

public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

## **X. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed